

Center/Advanced Dental (CAD)**CAD 501 - Pain: Anat, Phys, Psy, & Trtmnt (1)**

Explores multiple topics of pain with special emphasis on head and neck pain and conditions and/or syndromes that mimic dental pain. Protocols for dealing with both dental and non-dental "pain patients" will be addressed. Offered every year.

CAD 503 - Advanced Oral Microbiology (0-2)

Examines the interface of human host and its microbial inhabitants converging to cause disease. Describes oral ecosystems resulting from interaction between human anatomy and physiology and microbial populations and their physiology with emphasis on the pulpal, periapical, and periodontal regions. Includes factors that maintain population balance and health or cause population imbalance and disease in these ecosystems. Includes management and prevention of oral microbial disease. Offered every year.

CAD 504 - Molecular Biology of the Cell (2)

Up-to-date cell and molecular biology of the tooth and supporting structures. Attention given to molecular structure and function of composite proteins of tooth and bone and to cellular and physiological mechanisms key to driving development and repair. Offered every other year.

CAD 505 - Intro to Statistical Inference (3)

Nature of measurement in graduate dentistry. Basic principles and techniques of research analysis, particularly in graduate dental research. Introduction to probability theory and sampling theory; criteria of reliability and validity. Fundamental concepts of descriptive and inferential statistics, introduction to levels of measurements and application of parametric and non parametric tests. Offered every year.

CAD 506 - Ethics & Dentistry (0)

In general, the course studies the cross-cultural context for ethics discourse in dental education and practice. In particular, the course considers relevant ethical methods, principles, and codes of professional conduct as well as ethical decision making processes to engage and resolve applied ethical issues in dentistry. Offered every year.

CAD 507 - Prac Mngt for New Practitioner (1)

The course will prepare the graduate dental resident to develop a high quality practice and run it in a responsible fiscal manner. Professional success should overflow into personal lives. Guidelines for personal money management and harmony between professional and personal lives will be emphasized. Offered every year.

CAD 508 - Multidis Diag & Trtmnt Plan I (1)

Diagnosis and treatment planning of various types of multidisciplinary dental problems through case studies. Various diagnostic and treatment modalities are discussed in order to render the most efficacious plan of patient treatment. Application of biomedical sciences to clinical oro-facial problems at the dental specialty level. Offered every year.

CAD 509 - Research in Graduate Dentistry (1)

Research planning, design and qualitative and quantitative methodologies are examined together with the steps taken in the preparation of a research proposal, the conducting of the research in an efficient and ethical manner, and the writing and defense of a thesis. A culminating course requirement is the oral delivery and defense of a research proposal and the preparation of the associated literature review. Offered every year.

CAD 510 - Dental Therapeutics (1)

A comprehensive review of the pharmacological considerations of clinical dentistry. Special emphasis is placed on dentally prescribed medications and their effects on systemic disease and associated systemic drugs. Offered every year.

CAD 511 - Principles of Practice Mangmnt (1)

This second of two practice management courses will cover a broad range of business-management topics with an emphasis on application of concepts. Offered every year.

CAD 513 - Multidis Diag & Trtmnt Plan II (0)

Diagnosis and treatment planning of various types of multidisciplinary dental problems through case studies. Various diagnostic and treatment modalities are discussed in order to render the most efficacious plan of patient treatment. Application of biomedical sciences to clinical oro-facial problems at the dental specialty level. Continuation of Multidisciplinary Diagnosis and Treatment Planning I. Offered every year.

CAD 514 - TMJ Disorders (0-1)

A lecture series to improve the understanding of TMJ disease and related disorders and to provide a rationale for differential diagnosis and treatment. Offered every year.

CAD 516 - Advanced Oral Medicine (1)

Material on oral diagnosis and oral medicine is presented to develop the ability to make an accurate diagnosis of oral and general diseases. Special emphasis is placed on treatment of the medically compromised patient. Offered every year.

CAD 517 - Advanced Oral Pathology (1)

Oral diseases with similar clinical appearances are presented. A differential diagnosis will be developed. For each entry, the etiology, biologic history, clinical features, histologic characteristics, progress, and current treatment will be identified. Offered every other year.

CAD 518 - Business Law II (1)

A discussion of the legal, professional, and ethical aspects of dental practice with consideration of practice acquisition, location, promotion, personnel issues, contract and tort liabilities, practice format and administration, taxes, insurance and estate planning. A continuation of CAD-G515. Offered every year.

CAD 519 - Advanced Head & Neck Anatomy (2)

Discussion and laboratory demonstrations of the anatomy of specific areas of the head and neck that relate to dental practice. Emphasis will be placed upon the interrelationships, clinical significance, and variation of the structures studied. Offered every year.

CAD 522 - Clinical Immunology (1)

A comprehensive review of inflammation and immunity and how they harm or protect the host with special emphasis on clinical dentistry. Offered every year.

CAD 523 - Business Law (2)

A discussion of the legal, professional, and ethical aspects of dental practice with consideration of practice acquisition, location, promotion, personnel issues, contract and tort liabilities, practice format and administration, taxes, insurance, and estate planning. (Offered every year.)

CAD 524 - Implants/Temp Anchorage Device (1)

To introduce the orthodontic and periodontic resident to prosthetic implants and to miniscrews and mini-boneplates for orthodontic anchorage; toward evaluation of the patient holistically, the site, the local physiology, and biocompatibility in anticipation of implant-surgery; to become familiar with placement-surgery, loading the implant (or temporary anchorage-device), maintenance, implant-removal surgery, and bone - regeneration; to review the biomechanics involving use of temporary anchorage devices in orthodontic therapy; and to discuss autotransplantation for various dental purposes.

Endodontics (ENDG)**ENDG 500 - Preclinical Endodontic Techniq (1)**

A didactic and laboratory introduction to basic endodontic clinical principles and techniques. A format to experience alternate clinical treatment methods. Offered every year.

ENDG 520 - Literature Review I (1)

Provides a format for reviewing and presenting significant clinical and contemporary endodontic literature published in related journals. Offered every academic term.

ENDG 530 - Preclinical Teaching Practicum (0)

Supervised teaching participation in the instruction of undergraduate dental students in the preclinical endodontic technique course. Offered every year.

ENDG 531 - Clinical Teaching Practicum (0)

Supervised teaching participation in the clinical instruction of undergraduate dental students. Offered every year.

ENDG 541 - Pulp Biology (1)

Normal and diseased pulp conditions and their relationship to periapical tissues. Emphasis is placed on pulpal neural and vascular supply; pulpal defense mechanisms; injury, aging, and retrogressive changes; healing and repair of periapical tissues; and histopathology of periapical lesions. Offered every year.

ENDG 547 - Concepts in Biomedical Science (1)

A lecture/discussion series designed to integrate the student's didactic and clinical experiences in the specialty area with other dental and medical specialty subjects. Offered every other year.

ENDG 551 - Principles of Endodontic Surgery (1)

A comprehensive consideration of endodontic surgery is presented. Instruction and training in the application of relevant biomedical science to meet surgical and clinical requirements is emphasized. Offered every year.

ENDG 552 - Amrcn Brd of Endodontics Rview (1)

Preparation for certification by the American Board of Endodontics. Course includes information on board protocol, case presentation format, and a review of prior board materials to give a foundation for continued preparation to achieve diplomate status. Offered every year.

ENDG 560 - Clinical Endodontics I (1)

Clinical and didactic course relating the biomedical sciences to clinical endodontic problems in order to gain a level of knowledge necessary to manage the various modalities of endodontic therapy. Includes the therapeutic management of routine, complex, and surgical clinical cases. Offered every academic term.

ENDG 591 - Endodontic Journal Club (0-1)

A consideration of recent developments and current literature in endodontics and related fields.

Orthodontics (ORTH)**ORTH 501 - Fundamentals of Orthodontics (2)**

Team-taught by the orthodontic faculty during the first summer and fall terms of the graduate program. Course is based upon a respected, comprehensive, graduate text in the specialty. Applied science and techniques of diagnosis, treatment-planning, active therapy, and retention are overviewed. (Offered every year.)

ORTH 503 - Facial Development (2)

An overview of current thought in the field of craniofacial biology. The graduate student is exposed to the changes that take place in the face from embryo to adult. Hypothetical control mechanisms, clinical application of facial growth principles, and the experimental evidence are explored in a critical review of relevant literature. Offered every year.

ORTH 510 - Biomechanics (2)

Concepts of orthodontic displacement and force. Kinematics and biomechanics of tooth movement. Deformable-body mechanics, materials science, mechanical analyses, and selection of orthodontic-appliance components. Instantaneous and dynamic analyses of example appliances and clinical mechanics. Offered every year.

ORTH 525 - Clinical Cephalometrics (2)

Introduction to the use of cephalometric radiographs in clinical orthodontics. Overview of cephalometric analyses of historic importance. Lectures and demonstrations with a laboratory component that includes cephalometric tracing technique, visualization of treatment objectives for orthodontic and surgical orthodontic cases, analysis of growth pattern, and treatment results. Offered every year.

ORTH 531 - Oral Biology (1)

Attention is focused on the relationship between the observed clinical events in tooth movement and the nature of the associated physiological events. Emphasis is placed on those responses that may occur on the tissue, cell and macromolecular levels of organization. In particular, the physiology of mineralized connective tissue and the process of tooth eruption are used as models to explore the biology of orthodontic tooth movement. Offered every year.

ORTH 535 - Surgical Orthodontics (1)

Acquaints the graduate student with those surgical procedures that directly relate to orthodontic treatment plans. The lecture series encompasses a review of diagnostic procedures, surgical techniques for the treatment of maxillary and/or mandibular skeletal excess and deficiency as well as laterognathism, Class II malocclusion and adjunctive techniques of genioplasty for correction of microgenia and macrogenia. In addition to surgical consideration of jaw deformities, time is allocated for miscellaneous pathological conditions. Offered every year.

ORTH 537 - Ortho Probs with Cleft-Palate (1)

A study of the various aspects of the congenital cleft-lip-and-palate condition with a consideration of the several professional areas concerned with the total habilitation of the cleft-tip-and-palate patient. Coursework includes diagnosis and treatment of patients at the Cardinal Glennon Hospital Cleft Palate Center. Offered every year.

ORTH 539 - Speech Probs & Oral Mechanism (1)

Basic anatomy and physiology of the speech mechanism. Introduction to phonetics and speech sound production. Survey of communication disorders; significance of the disorder for the orthodontist, and orthodontic treatment plan. Offered every fall semester.

ORTH 540 - History of Orthodontics (1)

Evaluating concepts in pre-specialization disciplinary organization, ethical considerations, and humanist aspects of the profession. Offered every year.

ORTH 549 - Diag Procedures in Orthodontic (1)

An introduction to diagnostic procedures including the taking of the prospective patient's medical and dental history, conducting the clinical examination, and an evaluation of dental and oral function. the analysis of orthodontic study-casts. (Offered every year)

ORTH 550 - Diagnosis & Treatment Plan I (1)

Evaluation and treatment planning of various types of malocclusion. Offered every year.

ORTH 551 - Diagnosis & Treatment Plan II (1)

Continuation of Diagnosis and Treatment Planning I. Offered every year.

ORTH 553 - Clinical Diagnosis I (1)

The clinical application of the various diagnostic procedures and philosophies of orthodontic diagnosis and a presentation of practical procedures to help in the management of unusual problems that can arise during the course of treatment. Offered every year.

ORTH 554 - Clinical Diagnosis II (1)

Continuation of Clinical Diagnosis I. Offered every year.

ORTH 555 - Ortho Anlys & Trmt Modalities (1)

An in-depth presentation of specific and complex problems that can and do arise in orthodontic practice. Recognition, precautions, and various treatment modalities for each problem are discussed. Advances in orthodontic technology will be presented utilizing diagrams, photographs, clinical aids, and actual demonstrations to further enhance knowledge in dealing with difficult situations. Offered every year.

ORTH 556 - Clinical Case Conferences (0-1)

In a seminar format, each class-meeting features the presentation by one of the students of the work-up and diagnosis of an active orthodontic patient. The other students and faculty propose and critically evaluate possible treat-plans and modalities. The presenting student then reviews the actual treatment-plan being followed and the progress in therapy to date. (Offered every year.)

ORTH 558 - Clinical Specialty Seminars (1)

Individual clinical faculty members present their personal philosophies of diagnosis, treatment -planning, active therapy, and retention. These sessions serve also to introduce the students to a diversity of techniques and appliances and therapy for unusual and exceptional categories of patients and cases perhaps not routinely seen in the mainstream of orthodontic care. (Offered every year.)

ORTH 560 - Intro to Clinical Orthodontics (1)

A didactic and laboratory introduction to basic clinical principles and techniques. Initially, instruction covers the policies and procedures of the orthodontic clinic and later, the development of a patient diagnostic data base including study casts, photographs, cephalograms, and clinical evaluation of the patient. Offered every year.

ORTH 561 - Intro to Clin. Orthodontics II (1)

A continuation of Orth560. A concentrated, didactic course that addresses in some depth the procedures of diagnosis, treatment-planning, and application of clinical therapy toward the solutions of orthodontic problems in patients of various ages and dental development. (Offered every year.)

ORTH 562 - Prin of Ortho Techniques I (2)

Course includes typodont setup in normal occlusion before banding; philosophy of treatment; and a coordination of lectures and seminars with laboratory demonstration on archwire fabrication and reasons for each bend. Offered every year.

ORTH 563 - Prin of Ortho Techniques II (2)

Course includes treatment of Class II, Division 1 non-extraction case and treatment of Class I bimaxillary-protrusion case, requiring removal of permanent teeth. Offered every year.

ORTH 564 - Tip Edge Brckt & Str Arch Tech (1)

The differential straight-arch technique is a fixed-appliance method of orthodontics utilizing pre-angled brackets that let the teeth move yet provide accurate three-dimensional final control. The light, continuous forces are physiologically compatible. Course includes complete instruction in theory, fabrication and manipulation of the appliance through lectures, laboratory exercises, and the treatment of patients. Offered every year.

ORTH 570 - Clinical Procedures (1)

Introduction of the first-year students to the policies, personal, and protocol of the orthodontic clinical and the ancillary facilities that complement the clinic. (Offered every year.)

ORTH 571 - Clinical Orthodontics I (0-2)

Supervised patient treatment in the Orthodontic Clinic. Offered the first fall semester and every academic term thereafter.

ORTH 580 - Sem: Child & Adol Psychology (1)

The personal-social development of the adolescent from the perspective of life-span psychology is presented and discussed in the context of orthodontics, which includes the psycho-social impact of malocclusion, patient-parent-doctor motivations, communication and interpersonal relationships, patient cooperation and behavior modifications, and the psychology of the orthodontist. Offered every year.

ORTH 584 - Diag Sem: Mixed & Adult Dentit (0-1)

Philosophy and techniques in treatment of the mixed-dentition patient. Discussions include considerations of growth trends, criteria for extraction, treatment mechanisms. Offered every year.

ORTH 589 - Review for the ABO Examination (0)

The second year-students attend a series of seminars with various members of the faculty toward preparation for the phase-two, written examination administered periodically by the American Board of Orthodontics. Passing the examination is a required step toward Board certification. (Offered every year.)

ORTH 591 - Literature Review (0-1)

A consideration of recent developments and current literature in the orthodontic field and in related fields.

Periodontics (PERI)**PERI 500 - Principles of Periodontics (1)**

An overview of critical didactic and clinical information in the field of periodontology to the incoming periodontal resident. Offered every year.

PERI 501 - Periodontal Lit Review I (1)

A format for reviewing and presenting significant classical and contemporary periodontal literature published in related journals. Offered every semester.

PERI 510 - Conscious Sedation I (1)

Course is designed to provide knowledge required to manage pain and anxiety in the conscious, sedated patient and training in the various sedation techniques. Offered every year.

PERI 511 - Conscious Sedation II (1)

Continuation of PER-G510. Offered every year.

PERI 520 - Intro to Grad Implant Dent I (1)

A comprehensive course to prepare knowledge necessary for clinical dental implant treatment; all phases of surgical and prosthetic treatment are discussed. Offered every year.

PERI 521 - Intro to Grad Implant Dent II (1)

Continuation of PER-G520. Offered every year.

PERI 522 - Advanced Implant Surgery I (1)

A comprehensive overview of implant dentistry, with an emphasis on surgical methods and techniques. Special topics are presented and current literature is reviewed. Offered every year.

PERI 523 - Advanced Implant Surgery II (1)

Continuation of PER-G522. Offered every year.

PERI 530 - Clinical Teaching Practicum (0)

Supervised participation in the instruction of clinical periodontics to undergraduate dental students and participation with faculty in the development of treatment plans for new patients. Offered every year.

PERI 540 - Perio Case Presentation Sem (0-1)

Resident presentations of patient treatment for critical review and discussion. Residents organize clinical case information and records for presentations of patient diagnosis, treatment planning, and surgical therapy. Gives each resident the opportunity to observe and evaluate periodontal treatment by other residents and provides a basis of preparation for the American Board of Periodontology oral examination. Offered every academic term.

PERI 560 - Clinical Periodontics I (1)

Clinical course consisting of patient treatment for periodontal diseases and other associated conditions in the field of periodontics. Students treat patients with various periodontal diseases to a level that periodontal health is achieved, etiologic factors are controlled, and a schedule for supportive periodontal therapy is organized for patients. The clinical experience also consists of dental implant treatment and other adjunctive methods in the management of patients referred for periodontal treatment. Offered every academic term.

PERI 570 - Perio Systematic Interrelation (0)

Explores the complex interaction between oral and systemic health. Evidence shows that a number of human diseases are associated with opportunistic infections in periodontal medicine. These diseases are discussed together with the oral manifestations and management. Offered every year.

PERI 580 - Ortho-Perio Interrelationships (0)

Designed to explore the interrelationships between the disciplines of orthodontics and periodontics. In-depth discussion of special topics to improve patient treatment of interdisciplinary problems in clinical practice. Offered every year.

PERI 591 - Current Lit in Periodontics (1)

An ongoing review of current literature in periodontics taken from various journals. Residents present abstracts and review articles. Critical evaluations are made of current published research, and new concepts and techniques are discussed in a seminar format.

African American Studies (AAM)

AAM 200 - Introduction to African American Studies (3)

An interdisciplinary survey course that introduces the discipline through the examination of the African diaspora and its impact on the Americas. The course focuses on the movement, conditions, and experiences that shaped the development of the African American Society.

AAM 201 - Contemporary Black America (3)

A study into the current issues and problems facing and impacting the African American society from the 1960's through today. This course also examines the present leadership in Black America and delves into a treatment of future directions and problems facing the society. Spring semester.

AAM 212 - Survey of Art in Africa since Prehistory (3)

This course explores visual culture in Africa from prehistory through present-day. We will look at rock art, ancient Nubia, the nomadic Wodaabe, Christian Ethiopia, and various sub-Saharan cultures. Students will learn about architecture, ceramics, textiles, metal arts etc. Students graded on two Exams and two short quizzes.

AAM 220 - Blacks & the Mass Media (3)

This course is designed to provide a critical analysis of the portrayal of African Americans by mass media industries. It also examines the mass communication systems and their relationship to society and the shaping of societal images of African Americans. Offered occasionally.

AAM 222 - Introduction to African-American Art (3)

We discuss visual art created by African-American artists from 1600s to present-day. We cover the themes, artists, and artworks from important movements like the Harlem Renaissance, WPA period, and Black Arts Movement, etc. Students graded on four short formal analysis papers and a final project.

AAM 226 - African American Religious Traditions (3)

This course can fulfill the Cultural Diversity core requirement. History of Afro-American religious thought and the Black churches of the United States, contributions of Black theologians in articulating Afro-American values and religious experience. Offered during the Fall semester.

AAM 232 - Art of the African Diaspora (3)

We will discuss the visual and performing arts of artists of African descent from prehistory (Aksum) through the present-day (UK, Latin, America, US, Caribbean, & Africa). Students will be graded on three short essays, two formal analyses and one final project.

AAM 250 - Intergroup Dialogue (3)

In a culturally and socially diverse society discussion of differences is needed to facilitate understanding and build relationships among people. Intergroup dialogue is designed to provide a space for such discussion and for learning about issues of difference, conflict and community through dialogue. Through this course students will explore their own and others' perspectives from the practice of dialogue. Students will also explore ways of taking action to create change and bridge differences at both the interpersonal and the social/community levels. In-class learning will be enhanced through readings, films, weekly journal writing, a final reflection paper and in-class activities designed to develop competence in dialogue facilitation.

AAM 252 - Intro to African Politics (3)

A study of governments and political processes. Examines salient themes such as the nature of African traditional heritage; colonial experience; nationalism and independence; the challenge of nation building; African political parties; role of the military and contributions of difference theories to the understanding of African politics. Offered every third semester.

AAM 255 - Political Systems of Sub-Saharan Africa (3)

Examines governmental institutions and political processes in selected nations of Africa south of the Sahara. The emphasis is on nationalism and independence, types of civilian regimes, modernization, the role of military and transition to democracy.

AAM 295 - Intergroup Dialogue: Black Male Identity (3)

This course deconstructs notions of the black male identity. Intergroup Dialogue is designed to provide a space for difficult discussions and for learning about issues of difference, conflict, and community through dialogue. Students will learn how to create change and bridge differences at both the interpersonal and the social/community levels. Students will be admitted upon the completion of a brief survey and with the approval of the professor.

AAM 298 - Independent Study (3)

Independent study topics are assigned which deal with selected problems in the African America experience. Offered every semester.

AAM 320 - African American Culture (3)

This course provides an interdisciplinary approach to the study of the origins and practice of African American cultural traditions and rituals. Topics covered include religion, literature, language, death and dying, food, popular culture and music.

AAM 323 - History of Africa to 1884 (3)

Examines population movement, interaction, and development of institutions and ideas in African civilization; varying types of politics and revolutionary changes; slavery and the Atlantic encounter; impact of Christianity and Islam.

AAM 324 - History of Africa since 1884 (3)

Examines political, economic, and social developments in Africa since 1884. Includes European scramble for and partition of Africa; African initiatives and reaction to imposition of colonial rule; the colonial state and history of colonial rule; independence movements; Nationalism and nation building.

AAM 331 - Intercultural Communication (3)

Introduces the role of culture in the process of human interaction and encourages in-depth analysis of the unique challenges posed by intercultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups.

AAM 333 - African Diaspora Writing (3)

An introduction to the fiction and poetry of Black African & African-American writers.

AAM 335 - African American Religious Traditions (3)

The purpose of this class is to expose the student to the historical and social nature of African American Religion. The course will cover the historical development of African American Religion from its African origins up to and including the Civil Rights Movement with some attention given to contemporary black liberation theology. Fall semester.

AAM 336 - Race & Ethnicity (3)

Examines the impact of racial, cultural, national, and religious differences on social processes. Emphasis on current data.

AAM 337 - African Amer History & Music (3)

The history and evolution of African-American music is as rich and complex as the history of African Americans themselves. African-American music has the ability to enhance a social and cultural understanding of race, class, and gender in American society. Black music genres will be explored within the historical time frame to fully understand the origins, growth and development of black music and the manner it reflects the experiences of African Americans.

AAM 350 - Social Inequality (3)

The different forms of inequality will be examined from different theoretical perspectives. The course examines the causes and consequences of inequality in society as well as alternative approaches to dealing with the inequality.

AAM 358 - American Slavery (3)

American slavery as a social, political, and economic institution. Themes include the introduction and institutionalization of slavery in America; the slave experience(s); evolving perceptions of slavery; how events changed perceptions and how perceptions influenced events; and slavery as the ultimate cause of the Civil War.

AAM 373 - African Diaspora Writing (3)

An introduction to the fiction and poetry of Black African and African American writers. Offered every semester.

AAM 385 - Intro to Post Colonial Lit (3)

This course examines representative works and major literary, historical, and cultural developments in the post-colonial literature of Asia, Africa and the Caribbean. Gives special attention to students' writing about literature. Strongly recommended for students considering study in English beyond the 300-level.

AAM 395 - Human Sexuality in the Black Community (3)

In addition to providing general knowledge about human sexuality, this course assists students with gaining an insight into their sexuality and relationships. In addition to examining sexual issues at the personal and relational level, the course focuses on increasing general knowledge and understanding of human sexuality.

AAM 398 - Readings (3)

This course is designed as an independent study for students to engage in selected readings/study in Africana Studies. Offered alternate semesters.

AAM 400 - Field Service - Community Activism in St. Louis

In collaboration with the Urban Financial Services Coalition, students will engage with finance professionals to assist in a financial literacy program. After four weeks of teaching at local high schools on money management, students will prepare presentations on topics that range from college 101, African American History and Studies.

AAM 420 - History of African American Cinema (3)

Traces the history of African-Americans in the motion picture industry. Topics cover "black-face," minstrel stereotypes, wages, social and political opposition, organizing for representation, Blaxploitation, interracial casting and subject matter, and documentaries. A comparative study of Hollywood versus the Independent Filmmaker looks at "Race Movies" and the first African-American film companies.

AAM 427 - U.S. Anti-Black Racism (3)

This course deals with the history of Black Americans from their arrival in North America in 1619 to the end of the 20th century, with the focus on the racism that they have endured through slavery, Jim Crow and segregation, and repression in the midst of legal desegregation.

AAM 433 - Psychology of Oppression (3)

The course teaches students how to understand the mechanisms that undermine the appreciation of multiculturalism and other forms of diversity in society. The perspective emphasizes how socially constructed definitions of various groups are used to distinguish sameness and difference among people. Topics include micro- and macro-level theories of oppression, the importance of ideology in oppressive systems, and theories of social change and liberation. This course will satisfy the Cultural Diversity component of the Arts and Sciences Core.

AAM 434 - African American Psychology (3)

The course reviews some of the theoretical perspectives in the psychological study of African Americans, examines some of the biases in past research, reviews current research in the field, and applies current theory and research to other areas of psychology (clinical, organizational, etc.). Fall semester. This course will satisfy the Cultural Diversity component of the Arts and Sciences Core.

AAM 461 - Contemp African Theatre (3)

This course is dedicated to the study of accomplishments made by African-American playwrights, actors, musicians, historians, and technicians to theatre. Documenting their contributions from 1865 to present.

AAM 480 - Civil Rights Era/Leaders (3)

This course is designed to provide an interdisciplinary analysis of the contemporary Civil Rights Movement and the leadership that emerged. The course will examine selected primary works of the local and national events of the 1950's to 1970's. Students will engage in oral history interviews to collect local history. Offered occasionally.

AAM 481 - Philosophy and Race (3)

A critical examination of the philosophical bases of multiculturalism; the biological and socio-cultural significance of race; varied philosophical approaches to racial identity; the epistemic and ethical dimensions of interracial interpretation and prejudice; and the questions posed about the philosophical tradition by its relationship to victims of racial prejudice.

AAM 482 - Pre-1900 African American Literature (3)

An exploration of African American writings from the beginning of the twentieth century to the present through a reading of a variety of literary, critical and historical texts, notably slave narratives and poetry.

AAM 483 - Post 1900 African American Literature (3)

An exploration of African American writings from the beginning of the twentieth century to the present through a reading of a variety of literary, critical, and historical texts from the Harlem Renaissance to Afrocentrism.

AAM 490 - Black Women in Society (3)

This course is designed to provide an interdisciplinary approach for the study of Black women in a changing society and the impact of social, historical, cultural, political, and economic forces. Attention will be devoted to Black women's relationships as a result of societal conditions. Fall Semester.

AAM 494 - Research Methods in African American Studies

Through the reading of major scholarly monographs and articles, students will learn and analyze methodological approaches to African American Studies. Students will then design independent research projects utilizing methodologies appropriate to the field. This course is open to African American Studies majors and by permission of the instructor.

AAM 496 - Capstone Course (3)

This synthesizing course provides an opportunity to integrate key concepts of African American Studies in a specific area of interest. Capstone projects are expected to demonstrate competence in critical thinking, inquiry skills, and the synthesis of knowledge through original research or field service project or artistic endeavor. Offered every semester.

AAM 498 - Advanced Independent Study: Research (3)

Independent study topics are assigned that deal with selected problems in the African, African American, or Caribbean experience. Research topics may be integrated with student's major. This course will serve as the capstone course for students pursuing the certificate in African American Studies.

Arabic (AR)**AR 110 - Communicating in Arabic I (0-3)**

This course will cover all four language skills (speaking, listening, reading, and writing) of Modern Standard Arabic, at an elementary level. Emphasis placed on active use of the language. Students master the Arabic alphabet and basic pronunciation of all the Arabic sounds, learn to read elementary texts and converse in day to day situations.

AR 115 - Communicating in Arabic II (0-3)

A continuation of Arabic I. This course enables students to deepen their knowledge of the four basic language skills (speaking, listening, reading, and writing) and further fosters and understanding and appreciation of Arabic literature and Arabic cultures.

AR 210 - Communicating in Arabic III (3)

AR-210 is designed to continue building working knowledge of Modern Standard Arabic established up to a pre-intermediate stage in AR-110 and AR-115. Students continue developing vocabulary and are introduced to sentence structures of more complexity using intermediate grammar to increase reading and listening comprehension as well as written skills. Students also gain greater knowledge of the Middle Eastern Arab culture and customs.

Art (ART)

ART 200 - Drawing I (0-3)

An introduction to the basic elements in drawing. Line and mass as a means to explore objective and spatial concepts in various media. A lab fee is required. Satisfies core requirement in Fine Arts.

ART 210 - Design (3)

An introduction of the basic formal concepts in the two-dimensional arts; line, shape, value, color, texture, and balance as interdependent units. A lab fee is required. Satisfies core requirements in Fine Arts.

ART 212 - Three Dimensional Design (3)

An introduction to the design elements in three-dimensional forms and space. A variety of construction methods will be used in developing visual acuity. A lab fee is required.

ART 215 - Color Theory (3)

An exploration of the theory and visual effects of color within the framework of fundamental design concepts that demonstrate the properties and interaction of color. A lab fee is required.

ART 220 - Painting I (3)

An introduction to the fundamentals of painting from observation: color, shape, spatial relationships, and materials related to the traditional practice of painting in oil. A lab fee is required.

ART 230 - Printmaking I (3)

An introduction to basic printmaking with emphasis on intaglio and relief processes. Students learn how to work indirectly through reverse images. The mechanics of printing multiple prints in edition will be taught. A lab fee is required.

ART 240 - Ceramic Sculpture I (3)

Clay is an ideal material for fundamental approaches in both sculpture and traditional ceramic applications, including throwing on a potter's wheel, modeling, and constructing, along with the development of perceptual skills. Utilized throughout human history, clay continues to be a vital material for artistic creation. A lab fee is required.

ART 245 - Sculptural Materials I (3)

This course is an introduction to the fundamentals of sculpture. Students will practice the use of additive and subtractive processes in various materials, including wood, plaster, and metal. Communicating ideas and evoking meaning through form, presentation and site-specificity will be explored. There are no prerequisites.

ART 248 - Fibers and Textiles (3)

This course will introduce students to the basics of surface design (dyeing and patterning fabric) weaving cloth on a portable loom, book arts, and felt making. Emphasis is on developing safe and successful methods for working in a studio environment and developing student's technical and design concepts into artistic works. Guided individual studio projects will culminate into a small coherent body of work. In addition to technical development, research will be done of historical and cultural traditions and functions of cloth and fibers.

ART 249 - Jewelry and Metalsmithing (3)

This course is designed to introduce the student to the basic techniques of traditional and non-traditional metalsmithing. Includes reviews of current and historical jewelry concepts. Class time will be spent on demonstrations, critiques, project and concept development towards creating an individual direction in metals.

ART 250 - Computer Art I (3)

An introduction to the computer as an artistic medium. Students develop skill and fluency with graphic software as well as explore the distinct aesthetics of computers. Lectures and research will strengthen students aesthetic vocabulary and deepen their understanding of political and cultural implications of electronic art. A lab fee is required. Satisfies core requirement in Fine Arts.

ART 260 - Photography I (3)

An introduction to black and white photo technique: camera, film, and darkroom procedures including film processing and printing. Coursework will cover a range of technical and aesthetic topics including: exposure, contrast, and composition. Students must have a 35mm SLR camera with manual control of shutter speed and f-stop. A lab fee is required. Satisfies core requirement in Fine Arts.

ART 270 - Graphic Design I (3)

This course is an introduction to the basic principles and concepts of graphic design. Projects will develop idea generation, problem solving and technical skills. The use of type, image and visual style as components of communication will be introduced. Students will use industry standard software. A lab fee is required.

ART 280 - Studio Foundation Seminar (1)

Support for students beginning majors in Studio Art. Discussion topics cover strategies for making art, looking at art, and exhibiting art. Students will gain an overview of the studio art program, learn the role of creating independent work, and discuss issues dealing with inspiration, research, and community.

ART 294 - Foundations Portfolio Review (0)

Required of all studio art majors. Completion of three studio art courses (studio art foundation classes and other 200-level art classes) and concurrent registration in a fourth studio art course; review is conducted at the conclusion of the semester in which the student is enrolled in ART 294. Prerequisites: Completed three studio art courses or instructor approval

ART 298 - Independent Study (1-6)

Permission of studio faculty required prior to registration.

ART 300 - Drawing II (3)

Building on foundation concepts and skills, this course examines the subjective modes of drawing by exploring the extended use of materials, formal concepts and organizing strategies, and expressive responses to observed subjects. A lab fee is required.

ART 301 - Drawing Studio II (3)

A continuation of ART300. A lab fee is required.

ART 320 - Painting II (3)

A continuation and elaboration of Painting I with a greater opportunity to employ individual choices while working within project guidelines that explore the relationship of image/idea with conceptual approaches to the medium. A lab fee is required.

ART 321 - Painting Studio II (3)

A continuation of ART320. A lab fee is required.

ART 330 - Printmaking II (3)

A continued exploration into printmaking processes with an emphasis on intaglio and relief. Students develop imagery that is more personal and exploits the properties of the print process. A lab fee is required.

ART 335 - Monoprints (3)

An exploration of various procedures and techniques associated with printing single images on paper. A lab fee is required.

ART 340 - Ceramic Sculpture II (3)

Larger, more complex forms will be created by hand and on the wheel. Mastery of technical skills, including firing techniques and clay/gaze formulations, will allow students to pursue their aesthetic and conceptual goals, increasing their level of personal investigation and expression. A lab fee is required.

ART 345 - Sculptural Materials II (3)

A continued exploration of sculptural processes in various materials, including wood, plaster, and metal. A greater emphasis will be placed on the development of concept and content. Prerequisite: ART-245 (Sculptural Materials I). A lab fee is required.

ART 350 - Computer Art II (3)

A continuation of Computer Art I in which students explore the computer as an artistic medium, expand existing software skills, and gain new web-based skills. A lab fee is required.

ART 351 - Computer Art II (3)

A continuation of ART350.

ART 370 - Graphic Design II (3)

This course addresses the anatomy, history, basic principles and creative possibilities of typography. Students investigate how type functions as a system of communication and as an abstract visual element. Projects emphasize legibility, readability and expression. Experimentation with form and communication will be stressed. Lab fee is required. Prerequisite: ART 270

ART 375 - Introduction to Web Design (3)

Introduction to basic principles of web site design. Emphasis on technical skills, content development, interactivity and navigation. There will be an emphasis on developing strong, appropriate visuals for each project. Students will be introduced to industry standard web design software. Lab fee is required. Prerequisite: ART 250 or ART 270.

ART 380 - Studio Art Internship (1-6)

Studio Art Internship provides University credit for internships in or related to Studio Art. Mentor approval is required for registration; course is for Studio Art majors and minors only. This course may be repeated for credit.

ART 394 - Portfolio Review for the Visual Communication

Portfolio Review for the Visual Communication Certificate provides students the opportunity to create a pre-professional portfolio of their graphic design work with the guidance of a Studio Art or Communication faculty member. Workshop opportunities will give students tips and feedback. Prereq: 18 hours of Visual Communication coursework.

ART 400 - Drawing Studio (3)

Artistic expression will be developed through the continued exploration of drawing as a discipline. Concepts, skills, and methods of working will be utilized to foster the identification and advancement of individual goals. Prior to registration students must meet with the instructor to discuss objectives and goals.

ART 401 - Studio Project (3)

A continuation of ART400.

ART 420 - Painting Studio (3)

Artistic expression will be developed through the continued exploration of painting as a discipline. Concepts, skills, and methods of working will be utilized to foster the identification and advancement of individual goals. Prior to registration students must meet with the instructor to discuss objectives and goals.

ART 430 - Printmaking Studio (3)

Artistic expression will be developed through the continued exploration of printmaking as a discipline. Concepts, skills, and methods of working will be utilized to foster the identification and advancement of individual goals. Prior to registration students must meet with the instructor to discuss objectives and goals.

ART 440 - Ceramic Sculpture Studio (3)

Artistic expression will be developed through the continued exploration of ceramic sculpture as a discipline. Concepts, skills, and methods of working will be utilized to foster the identification and advancement of individual goals. Prior to registration students must meet with the instructor to discuss objectives and goals.

ART 450 - Computer Art Studio (3)

Computer Art Studio provides an opportunity for students to integrate skills gained in Computer Art I, Computer Art II, and other Studio Art classes. Students will work independently to create advanced projects that exhibit an individual aesthetic and reflect a sophisticated understanding of Photoshop and Illustrator. Prereq: ART 350.

ART 470 - Graphic Design Studio (3)

Further exploration into the relationship between type and image in printed communication. Multiple piece projects focus on developing a consistent concept and visual strategy from piece to piece. Special attention will be paid to research, problem definition and concept development. Lab fee required. Prerequisites: ART 370

ART 480 - Studio Senior Seminar (2)

Support for students about to graduate with a B.A. in Studio Art. Discussion topics cover optimizing their senior year and preparing for careers and graduate study. Course will be divided between discussions and group critiques of student artwork created independently. Prerequisites: ART 294 and senior status.

ART 494 - Senior Portfolio Review (0)

Senior Portfolio Review is a culminating course for Studio Art majors and requires students to develop a comprehensive portfolio of their studio artwork prior to graduating. Portfolios are useful for applying to graduate programs and for careers in Studio Art. Prereq: Satisfactory grade in ART 294 and senior status.

ART 498 - Adv. Independent Study (1-6)

Permission of studio faculty prior to registration.

Art History (ARTH)**ARTH 100 - Approaching the Arts (3)**

Presents an introduction to the world of the visual arts with the goal of developing an understanding of important themes, functions, media, principles of design, and visual characteristics found in art.

ARTH 101 - History of Art (3)

Presents a chronological survey of the major periods of art history (ancient, medieval, early modern, and modern) and introduces students to key concepts, terminology, analytical strategies, and critical questions relevant to understanding art.

ARTH 102 - History of Architecture (3)

This course introduces students to the history of architecture from the ancient world to the present, survey major movements and concepts, important monuments and influential design within a chronological framework. Students will gain competence in analyzing architecture as well as familiarity with basic issues and concerns.

ARTH 104 - App the Arts: Art & Film (3)

This course will focus on the relationship between film and modern art. Motion picture making is a distinctly modern art form and shares characteristics found in modern art. Through art and film, we will examine impressionism, symbolism, expressionism, cubism, futurism, dadaism, abstract art, pop art and performance art.

ARTH 108 - Masterpieces in Art (3)

This course presents students with the opportunity to investigate 16 major artworks of the western world. Artworks will be chosen from at least four specific periods of art. Each will be discussed in a multi-contextual approach so that the students learn various methodologies including: formalism, social history, iconography, and semiotics.

ARTH 109 - Masterpieces of Global Art (3)

This course presents students the opportunity to investigate major works of art and artists from around the world, chosen for their renown as pinnacles of cultural achievement. Students will learn about the culture, artistic characteristics, and political, social, and/or economic concerns facing these works/artists.

ARTH 111 - History of Western Art I (3)

This course will present the development of western art and architecture from pre-historic times to the Middle Ages. Students will study artworks within the framework of art history methods such as formalism and social history.

ARTH 112 - History of Western Art II (0-3)

This course will present the development of western art and architecture from the Renaissance period to the present. Students will study artworks within the framework of art history methods such as formalism and social history.

ARTH 150 - Life & Times of Michelangelo (3)

Students will be introduced to Renaissance genius Michelangelo as painter, sculptor, architect, and poet. The artist and his art, including the Sistine Ceiling paintings and his Pieta, will be studied within the contexts of several methodologies including patronage, formalism, and social history.

ARTH 180 - Approaching Abstract Art (3)

This course introduces students to the history, analysis, and appreciation of abstract art, beginning with its origins in the Nineteenth century and continuing through its flowering in Twentieth-century European and American art.

ARTH 202 - Sculpture in Saint Louis (3)

This course will take advantage of the sculptural offerings in the city and suburbs of Saint Louis, and we will study these examples through site visits and reading assignments. We will also learn about the impact that three-dimensional art can have on both the individual and the community at large.

ARTH 205 - Controversy in Art (3)

Introduces students to the primary controversial issues affecting the visual arts in recent years. The course will deal largely with contemporary issues, with key historical precedents providing some contextual perspective. Through readings, class discussions, and research, students will become fluent in the predominant divisive issues in the arts today.

ARTH 206 - Feminism in Art (3)

This course will present an overview of issues concerning feminism as it pertains to the visual arts. In addition to identifying the obstacles faced by feminist artists and the strategies they have used to overcome them, the course will also look at contributions of feminist critics and historians.

ARTH 209 - Topics in Art History (3)

This course allows students to examine specific themes and topics in the history of art, such as "Exhibiting Cultures: St. Louis Museums" or "Art and Pilgrimage," from a variety of discipline-based perspectives, including formal, iconographic, reception, and/or social history.

ARTH 210 - Art of Jerusalem and Three Faiths: Past and P

Jerusalem has long been revered by the three faiths of Judaism, Christianity, and Islam. This class examines Jerusalem's ancient to modern art and architecture as an articulation of holiness for three faiths; its connections among the three cultural traditions; and its past culture as a framework to comprehend contemporary situations.

ARTH 212 - Survey of Art in Africa since Prehistory (3)

This course explores visual culture in Africa from prehistory through present-day. We will look at rock art, ancient Nubia, the nomadic Wodaabe, Christian Ethiopia, and various sub-Saharan cultures. Students will learn about architecture, ceramics, textiles, metal arts etc. Students graded on two Exams and two short quizzes.

ARTH 213 - Pre-Columbian Art (3)

The course will examine developments in architecture, sculpture, painting, ceramics and textiles of the many cultures in North, Central, and South America from the earliest settled societies to sixteenth century. The course emphasizes multidisciplinary approaches within Art History such as religious beliefs, social customs, and theoretical frameworks.

ARTH 214 - Islamic Art and Society (3)

A survey of the major architectural monuments and traditions, schools of painting, and principle media and techniques employed in the decorative arts of the Islamic World from about 700 to 1700. This course includes visits to the Islamic Collections of the Saint Louis Art Museum.

ARTH 215 - Saints in Art (3)

Through paintings, sculptures, and civic dedications of buildings, chapels, and cities, students will learn about the role of saints in the Catholic Church. Saints in art will be presented in a chronological plan, beginning with Early Christian virgins and martyrs, then following the waves of sainthood in the middle ages and early modern periods, to saints being canonized by Pope John Paul II. Saints and their art will be placed within art historical methods, especially social history and iconography, in order to understand saints' diverse roles within the society.

ARTH 218 - History of Spanish Art (3)

This course presents a survey of Spanish Art from Altamira cave paintings to the work of Spanish masters, including El Greco, Velazquez, Goya, Gaudí and Picasso. Artworks will be studied using aesthetic theories and approaches relevant to them. Museum visits to the Reina Sofia and The Prado will be included.

ARTH 219 - Art and History of Madrid (3)

The course studies the Art and History of Madrid since its foundation till today in relation with the different historical periods and the dynasties that ruled Spain. Prominent highlights in architecture like El Escorial and Palacio Real and masterpieces of painting by the great geniuses such as El Greco, Velazquez, Goya and Picasso will be studied in depth. - Selected readings will be posted in Blackboard - Visits to Prado and Reina Sofia museums will be announced

ARTH 222 - Introduction to African-American Art (3)

We discuss visual art created by African-American artists from 1600s to present-day. We cover the themes, artists, and artworks from important movements like the Harlem Renaissance, WPA period, and Black Arts Movement, etc. Students graded on four short formal analysis papers and a final project.

ARTH 230 - Ancient Art Survey (3)

This course will focus on the art and architecture of the great civilizations of antiquity, including Mesopotamia, Egypt, Greece, and Italy. Emphasis will be placed on understanding the formalistic, historical, and theoretical aspects of artworks.

ARTH 232 - Art of the African Diaspora (3)

We will discuss the visual and performing arts of artists of African descent from prehistory (Aksum) through the present-day (UK, Latin America, US, Caribbean, & Africa). Students will be graded on three short essays, two formal analyses and one final project.

ARTH 235 - Excavating Culture of 3 Faiths (3)

Students dig into the material and artistic culture of Judaism, Christianity, and Islam using modern scholarship and media to study ancient to medieval cultural remains around the world. They delve critically into the history of key issues, excavations, artifacts, and books that shaped art and history of the three faiths.

ARTH 240 - Medieval Art Survey (3)

Examining artworks from the 4th to the 14th centuries, this course introduces students to the society and culture of the European middle ages. The religious, political, and social importance of images is examined within the broader themes of monasticism, feudalism, and scholasticism. Subtopics include pilgrimage, crusade, and literacy.

ARTH 250 - Renaissance Art Survey (3)

Students will be introduced to the art and architecture of the Renaissance, 1300-1600. The artworks will be presented as products of the combined efforts of wealthy patrons, such as the Medici family and Pope Julius II, and talented artists, such as Botticelli and Michelangelo. Works of art will also be examined from formal, theoretical, and historical perspectives.

ARTH 260 - Baroque & Rococo Art Survey (3)

Introduces students to the arts of Europe and the Americas between 1560 and 1740. Celebrated artists presented include Bernini, Caravaggio, the Gentileschi, Rembrandt, Rubens, and Velazquez, with attention paid to the religious functions of art, art's role in the Protestant and Catholic Reformations, art and monarchy, art and nobility, and art as social commodity.

ARTH 270 - American Art: Colonial to WW II (3)

Introduces students to the arts of Europe and the United States from approximately 1780 to 1900, with an emphasis on major movements such as Neoclassicism, Romanticism, Realism, Impressionism, and Art Nouveau.

ARTH 271 - American Art Survey (3)

This course introduces students to American Art from the colonies through the art being produced now. Special emphasis will be to understand the arts within European traditions that fostered them as well as the international exchange of ideas through the arts.

ARTH 275 - Nineteenth Century Art (3)

Introduces students to the arts of Europe and the United States from approximately 1780 to 1900, with an emphasis on major movements such as Neoclassicism, Romanticism, Realism, Impressionism, and Art Nouveau.

ARTH 280 - Modern Art Survey (3)

Introduces students to the major movements in art in Europe from approximately 1850 to the present. Beginning with an analysis of late nineteenth-century Impressionism and Symbolism, the course proceeds through the major twentieth-century movements, including Expressionism, Cubism, Abstraction, Surrealism, Dada, Pop Art, Installation Art, Performance Art, and Postmodernism.

ARTH 282 - Contemporary Art Since 1980 (3)

This course offers an in depth look at visual art from the last quarter of the 20th Century to today. Students will explore artists' diverse approaches to materials and techniques within the structure of a thematic focus. Theoretical concepts including postmodernism, feminism, and multiculturalism are also raised.

ARTH 290 - Art: Materials and Methods (3)

This course is designed to explore a wide range of materials used by artists throughout the history of art. While the emphasis is on the studio practices of artists, the class is not designed as a studio art course. Rather, it is an art history class that involves two key components; specific materials and individual artists and their practices.

ARTH 301 - Women in Art (3)

Examines the role of women in art from multiple perspectives, including their role as symbols, artists, and patrons.

ARTH 314 - Islamic Art & Society (3)

A survey of the major architectural monuments and traditions, schools of painting, and principle media and techniques employed in the decorative arts of the Islamic World from about 700 to 1700. This course includes visits to the Islamic Collections of the Saint Louis Art Museum.

ARTH 330 - Classical Art: Greece & Rome (3)

The first half of the course analyzes the Greek experience from the Pre-Greek society of Minoans through the Classical moment of the Parthenon to the rise and decline of Alexander the Great and Hellenistic culture. The second half will present the art and architecture of the Roman Empire as political and cultural statements.

ARTH 340 - Art of Pilgrimage and Crusades (3)

This course examines art and architecture in Western Europe and the Mediterranean region from the 8th-12th centuries. The course focuses on how the spread of Christianity and Islam, the rise of monasticism, the development of pilgrimage, and the conflict of the Crusades informed the art and architecture of the era.

ARTH 341 - Art of Cathedrals and Kings (3)

This course examines art and architecture of Western Europe from the 12th-14th centuries. Students will study key monuments from the great age of cathedrals and how the "three estates" or classes—especially royalty and nobility, but also the religious community and the peasantry—took part as patrons, viewers, and producers.

ARTH 350 - Early Renaissance Art & Culture (3)

Presents the major artists and patrons of the 13th through 15th centuries by examining the art and architecture produced in the great cities of Florence, Padua, Mantua, Siena, and others. The artworks by such noted artists as Giotto, Duccio, Masaccio, Donatello, Brunelleschi, and many others, will be placed within formal, social, and theoretical frameworks.

ARTH 351 - High/Late Renaissance Art & Culture (3)

Presents the major artists and patrons of the 16th century by examining the art and architecture produced in the cultural capitals of Florence and Rome. The artworks by Leonardo da Vinci, Michelangelo, Raphael, Brammante, and many others, will be placed within formal, social, and theoretical frameworks.

ARTH 352 - Northern Renaissance Art (3)

The end of the Gothic through the mid-renaissance, covering Robert Campin, Jan Van Eyck, Rogier van der Weyden, Dieric Bouts, Hugo van der Goes, Hans Memling, Gerard David, Hieronymous Bosch, Albrecht Durer and others.

ARTH 360 - Italian Baroque Art (3)

Students will study the artworks of the 17th century Italian masters such as Caravaggio, the Carracci brothers, and Bernini. Patrons, artists, and artworks will be placed within the cultural framework of Counter-Reformation Rome and other important cities.

ARTH 363 - Golden Age of Spanish Art (3)

Recent Special Topics courses include: Art from Michelangelo to Goya: Great European Masters, Catalan Modernismo and the Spanish Avant Garde, Museums and Palaces: The Art and Architecture of Madrid, Spanish Masters from Goya to Dalí, The Art and History of Madrid, The Golden Age of Spanish Art: Fifteenth through Eighteenth Centuries.

ARTH 365 - Northern Baroque Art (3)

The course analyzes 17th century art in the northern centers of Holland, The Netherlands and Germany with such great artists as Rembrandt, Rubens and Vermeer. Emphasis will be placed on understanding the artworks within formal, theoretical, and historical viewpoints.

ARTH 370 - American Art: Colonial to WWII (3)

Examines American art from the colonial era through the nineteenth- and early twentieth centuries.

ARTH 371 - American Art: WWII to Present (3)

A study of the painting and sculpture since World War II. The origins and influences on our cultural environment reflected in the development of modern art movements and trends.

ARTH 373 - Realism & Impressionism (3)

Examines the major figures in and critical debates surrounding two of the nineteenth century's two most influential art movements. In addition to major figures, including Courbet, Manet, Monet, Cassatt, Renior, Degas, Morisot, Cezanne, Caillebotte, the course analyzes the concept of the avant-garde, plein air painting, modernity, and class and gender as they relate to art.

ARTH 374 - American Art Between The World Wars (3)

This course focuses on the art of the United States between the First and Second World Wars. Critical moments in this course include the introduction of European modernism, the impact of Dada, the rise of Social Realism and Regionalism, the flight of the Surrealists, and the triumph of Abstract Expressionism.

ARTH 375 - Nineteenth Century Art Survey (3)

ARTH 375 is a survey of nineteenth-century European and American art, with a particular emphasis on several artists who had an especially powerful impact on the art and culture of this era. Students may not take both ARTH 275 and ARTH 375.

ARTH 380 - Twentieth Century Art (3)

An examination of the major trends and stylistic innovations occurring in the art of the 20th century such as Cubism, Fauvism, Expressionism, and Surrealism.

ARTH 382 - Modern Architecture (3)

Examines monuments and concepts related to the history of European and American architecture from 1750 to the present, including the relationship between architecture and history, architecture as communication, urbanism, architecture and social progress, class and architecture, functionalism, the role of technology, and the rise of modernity.

ARTH 388 - History of Photography (3)

This course is a survey of the history of photography from its beginnings in the nineteenth century to today. In its fledgling years as a mixture of art and modern science, photography was viewed by the art world with a skeptical eye. Today, few question the standing of photography among art media and the talent and training required to produce an image of outstanding aesthetic and technical merit. Students will be introduced to the primary technical developments and aesthetic achievements in photography since the 1820s, as well as the major figures in photography's brief but rich history. This course will take advantage of the considerable holdings in photographic media at the Saint Louis Art Museum; several trips will be made to the museum's Study Room for Prints, Drawings, and Photographs.

ARTH 401 - Christian Iconography (3)

An evaluation of the sign, symbols and content of religious art from the early Christian period into Modern times. Additional emphasis will be on the traditions and how they emerged.

ARTH 430 - Greek Art (3)

The art of Greece will be presented from the time of the pre-Greeks, the Minoans, through the Hellenistic world. Students will learn about the creation of such noted artworks as the Spearbearer, the Discus Thrower, and the Parthenon, by examining the society that produced them. Artworks will be presented within the major perspectives of the field of Art History.

ARTH 440 - Illuminated Manuscripts (3)

The relationship between text and image in a moderately literate society is the focus of this course. From the great Irish/Celtic bibles to romances and behavioral manuals owned by late medieval noblewomen, the course addresses questions of practicality, accessibility, and literacy in relation to medieval manuscript illumination.

ARTH 452 - Renaissance Women and Art (3)

Renaissance Women as artists, patrons and subjects of art will be studied within the context of the social and religious culture of the Renaissance. Students will learn how women were depicted as well as how women who controlled their own dowries could become great patrons of art.

ARTH 470 - 19th Century French Painting (2-3)

Analyzes themes and topics related to French Painting between 1780 and 1890, including but not limited to major figures such as Vigee-Lebrun, David, Ingres, Delacroix, Courbet, Manet, Monet, Degas, and Cezanne.

ARTH 480 - Contemporary Art (3)

A study of art from the 1960's to the present.

ARTH 481 - Modern Art in Latin America (3)

Recent Special topics courses include: Dalí-Warhol: Twentieth century European and American Art, Modern Art in Latin America: Kahlo, Rivera, Surrealism and the Avant Garde, and Modern and Contemporary Art in Spain.

ARTH 485 - Religious Dimension in Mod Art (3)

An examination of the works of those modern and contemporary artist who have made the religious dimension of reality a major concern in their art. Some reflect particular religious traditions and others have integrated images, devotions, and rituals from several sources in their work.

ARTH 490 - Research Methods (3)

Introduces students to the major methodologies that have shaped recent art historical practice, including connoisseurship, iconography, social history, feminism, and cultural studies. Students produce a polished research paper on a topic of their choosing that forms a capstone to the art history major and minor.

American Studies (ASTD)**ASTD 120 - Investigating America (3)**

Introduces methods of interdisciplinary inquiry and original research in primary and secondary sources. Develops library, bibliographic, archival, and writing skills, building to an independent research project.

ASTD 220 - Memoir and Life-writing in American Culture (3)

This course is an interdisciplinary examination of autobiography in the United States. Students draw from the methodologies of cultural studies, history, and literature to understand how Americans' impulse to tell stories about themselves changes, in terms of both form and medium.

ASTD 230 - Studies in American Photography (3)

This course introduces students to methodologies for studying American photography. Using foundational texts about photography and American Studies approaches to visual culture, we examine the cultural and political work that photographs perform at particular historical moments. We explore how photographs shape ideas about race, gender, class, nation, and citizenship.

ASTD 240 - American Homefronts, Global Wars (3)

This interdisciplinary course considers American social experiences during times of war from World War I to the "War on Terror". Throughout, we will study not the battles and factors that determined military outcomes, but the domestic struggles and international changes that have shaped American identity in a global context.

ASTD 250 - Introduction to Museum Studies (3)

In this class, we will study the history, politics, and design of museums. We will trace museums' development from private cabinets of curiosity to public educational institutions in the twentieth-first century. We will especially focus on the politics of display, that is, controversies over how museum interpret cultures and nature.

ASTD 260 - American Places (3)

Through interdisciplinary analysis, research, and writing, this course examines the role of place in shaping American culture, including race and ethnicity, gender, and class. Places may include regions (like the South, Midwest, or West), cities or suburbs, sites like interment camps or reservations, or conceptual places like frontiers and borderlands.

ASTD 310 - American Decades (3)

Close examination of a brief span of time in America as a way to reflect on intertwining currents in social, political, and intellectual life. Students explore changes and continuities in religion, philosophy, consumption, popular culture, architecture, and daily life. Course provides intensive focus on primary sources and their interpretation.

ASTD 320 - Making the American City: Culture, Space, & 2

Course examines the cultural history of the U.S. city, 1880s-present. Using numerous primary sources, students will learn how urban cultures and representational practices are shaped by the changing city environment.

ASTD 322 - The Urban Crisis (0-3)

This course examines the roots and dimensions of the urban crisis that has transformed American metropolitan areas since World War II. Students investigate major urban problems such as racial segregation and poverty, white flight and suburban sprawl, public housing and urban renewal, riots and insurrections, job loss, and industrial change.

ASTD 324 - Workshop in the City (3)

Provides unique opportunity to study urban environments up close. The metropolitan region of St. Louis is an excellent case study, with its complex interplay of people, processes, neighborhoods, geographies, and natural features. Students will undertake individual and group projects, tours, and fieldwork exercises in consultation with the instructor.

ASTD 330 - Prisons in American Culture (3)

Using history, social theory, film, fiction and autobiography, the course surveys the cultural history of incarceration in America, and examines the place of incarceration in American culture.

ASTD 340 - Religion & American Culture (3)

This course uses historical, literary, and popular culture sources to explore the relationship between diverse religious beliefs, values, and practices and American cultural formation. Topics may include church and state, social questions, and lived religious experience.

ASTD 350 - American Food and Culture (3)

This course investigates American foodways through the lens of agriculture, labor, landscape, festival, the body, ethnicity, ethics, and gender. Its goals are to teach students about the meaning of food and how the simple act of eating can reveal interconnections among so many diverse aspects of society and the environment.

ASTD 355 - America in the Global Age (3)

This course examines America's role in the era of rapid globalization, from the late 19th century to the present. It also considers the impact of major global events and processes on American society and culture, such as labor and capital mobility, third world insurgency, technological and environmental change.

ASTD 358 - Americans Abroad (3)

This course explores the history of the modern United States's changing relationship with the world by tracing American activities on the global stage: as travelers, consumers, teachers, students, missionaries, soldiers, and workers. Students will examine global encounters and exchanges through a variety of primary sources, including film, photography, and memoir.

ASTD 360 - History and Fiction (3)

Interrogates the boundary between history and fiction. The course considers literary questions of "historical" texts, and historical questions of "literature" for the purpose of deepening our understanding of both history and fiction.

ASTD 365 - Women's Lives (3)

Examines the historical experiences and literary productions of women from diverse racial, ethnic, and religious backgrounds. Topics and sources considered may include: novels, diaries, letter-writing, temperance, abolition, suffrage, and political leadership.

ASTD 370 - Mixed-Race America (3)

Despite popular images of American as a "melting" both of races and ethnicities, our institutions, values, and practices have often tried to create or maintain spatial and social distance between groups defined as racially different. This course will explore that ways in which Americans have transgressed those boundaries or found other ways of interacting across cultural lines, primarily in the 19th and 20th centuries. We will examine popular cultural perceptions of people of mixed ancestry, their social experiences, the development of various mixed-ancestry communities, and historical attempts to limit interracial socializing, relationships, and marriage. These issues were and are deeply imbedded in debates over the meaning of race, gender expectations and ideas about sex and sexuality. We will also pay close attention to how minority communities have understood people of mixed ancestry in the United States, and how mixed-race identities intersect with African American, Native American, Asian, White, and Latino identities.

ASTD 394 - Service Learning Internship (3)

Designed to enable students to make intellectual connections between scholarship and the wider world. Enrolled students intern with local non-profit organizations, government agencies, activist groups, or foundations. Students develop projects consistent with American Studies inquiry and concerns, methods of accountability, relevant mediographies, and final reports.

ASTD 395 - Service Learning Project (3)

Convened for students interested in collaborative community service projects. Students must meet on a weekly basis, define their work in consultation with instructor, and develop a semester project. Instructor and students devise a reading list and class schedule. Students give reports, engage one another's work, and produce results in various media.

ASTD 410 - Senior Seminar (3)

This course brings the major to a coherent end, through which students gain a broad understanding of the field and their path within it. Readings will concentrate on the development of major American Studies questions. The seminar will serve as a workshop for the independent senior projects. Senior major only.

ASTD 420 - Ethnic Groups in the U.S. (3)

The purpose of this course is to explore the ethnic diversity that has from the beginning been the material of American society, and to examine the implications of this diversity.

ASTD 425 - American Mosaic: Literature & Diversity (3)

This course examines sites of actual and imagined geographies: tenements, reservations, fields, factories, ethnic enclaves that produce ethnic literatures and articulate ethnic identities. The purpose of this course is to present a broad spectrum of ethnic American literature, and to put ethnic experiences and texts into dialogue with one another.

ASTD 510 - Perspectives in American Studies (3)

Survey of theoretical frameworks for the interpretation of American culture over time. Examines the intersection of history and theory in the interdisciplinary study of the American experience from colonial encounters to the present. Critical readings in Marxism, feminism, semiotics, post-structuralism, post-colonialism, race theory, and queer theory. Offered every year.

ASTD 515 - Early American Photography (3)

Introduces students to early American photographers, diverse photographic trends and technologies of the nineteenth and early twentieth centuries, and the visual culture analysis of major scholars in American Studies. Critical attention to representations of race and gender is emphasized throughout. Offered every other year.

ASTD 520 - Material Culture Studies (3)

In this course, students study the theory and practice of material culture studies. Students learn how to use objects as primary sources and to decipher ideas and meanings embedded in a variety of artifacts. Students will put theory to practice by working with material objects and creating an exhibition.

ASTD 523 - Cultures of the American South (3)

Using fiction, film, history, literary criticism, music, and autobiography, the course identifies and investigates elements of the South's distinctiveness as well as the relation between the region and the Nation of which it forms a part. Specific topics include Southern fiction, race and slavery, and images of the South in American cultural expression. Offered every other year.

ASTD 525 - Tocqueville's America (3)

This course studies the culture of pre-Civil War America with emphasis on the 1830's and 1840's. The central text is Tocqueville's Democracy in America through which the course investigates his perspectives on American culture. Other assigned readings help the student to understand the politics and culture of this era in more detail. Offered occasionally.

ASTD 535 - American Autobiographies (3)

Because the autobiographical act itself is essentially an interdisciplinary one, an examination of American autobiographies from the past several hundred years can be an especially intimate way to get inside the ongoing reality of American culture. Contemporary theories of autobiography are studied and critiqued in this course. Offered occasionally.

ASTD 537 - America: Readings of Mid Passage (3)

Undoubtedly, all who experienced the Middle Passage were changed irreversibly. This course explores how this passage participated in the invention of both blackness and whiteness. Topics include the ongoing importance of the transatlantic experience to current American discussions of race, culture, migration, exile, holocaust and memory, and nation and citizenship. Offered every other year.

ASTD 540 - Metropolitan America (3)

Introduction to the study of American urban and suburban life. Course examines American cities, their cultures, and their built environments as these change over time. Students engage scholarship, develop visual literacy for "reading" the metropolis, and analyze the ways in which built environments shape and reflect American cultural meaning.

ASTD 542 - Workshop in the American Metropolis (3)

This course provides an opportunity for graduate students to conduct intensive field study in the metropolis. St. Louis provides an excellent case study, with its complex interplay of people, processes, neighborhoods, industries, and natural features. Students undertake individual and group projects, tours, and fieldwork exercises in consultation with the instructor.

ASTD 550 - Practice of American Studies (3)

Facilitates sound professional development to accompany graduate work in American Studies. Students analyze universities as diverse social institutions, review key aspects of academic labor, examine the purposes and stages of graduate training, and survey the broad range of professional options available with the M.A. and the Ph.D.

ASTD 557 - African American Politics, Culture & Identity (3)

This interdisciplinary seminar explores politics, culture, and identity in African American experiences and public movements. Covering the mid-nineteenth century to the present, we will focus on activism, representation, and the multiple strategies within a diverse community, paying attention to issues of gender, class, religion, region, and national identity.

ASTD 572 - Crss-Ctrrl Encntrs Amer Fron (3)

Examines the diverse meanings of the "frontier" in American culture: as a physical and metaphorical site of cultural exchange, ambiguity, and conflict. The course focuses on the interactions between European explorers, traders and settlers, Native Americans, and African migrants to North America.

ASTD 574 - Women's Lives (3)

Examines the historical experiences and literary productions of women from diverse racial, ethnic, and religious backgrounds. Topics and sources considered may include: novels, diaries, letter-writing, temperance, abolition, suffrage, and political leadership.

ASTD 594 - Graduate Internship (3)

Specific requirements vary depending on the site of the internship and the individual contract for that internship. Grading is the same as for a seminar.

ASTD 595 - Special Study for Exams (0)

Students enroll in this course in the semester when they expect to take their Master's oral exams. Students may enroll in the course during their last semester of classes. May be taken no more than twice. Grade is Pass/Fail. The student can pass (or fail) even if she doesn't take the orals in the semester of her first enrollment. Students must make appointments to meet their faculty advisors at least twice in the semester of Special Study enrollment.

ASTD 598 - Graduate Reading Course (1-3)

Graded as a seminar course

ASTD 599 - Thesis Research (0-6)

6 hours for students writing a Master's thesis. Required while students are working on their research and writing. Students must meet with advisor at least once per semester when taking thesis hours. Grade is either IP or U, except for the semester in which the student graduates, when the grade is S. Students aren't always enrolled in 599 in the semester when they graduate, but normally they would be.

ASTD 605 - Mythbusting and Mythmaking in Recent Ameri

In this seminar we examine two areas of American mythmaking, one surrounding the Vietnam War, the other concerning the Civil War and its aftermath. We also visit other precincts of Mythland; and students identify one mythic construct and critique it their own original scholarship.

ASTD 612 - Dissertation Colloquium (3)

This course is designed to facilitate the dissertation-writing process. Seminar discussions will focus on peer review of student generated works-in-progress. Required of all Ph.D. students. May be repeated for credit at adviser's discretion.

ASTD 615 - Visual Culture Theory (3)

Introduction to the theoretical models and questions that inform the wide-ranging critical practices of visual culture studies. Course examines foundational texts in visual theory as well as many different cultural forms available to visual cultural analysis such as vision itself, material culture, museums, photographs, films, and television. Offered every other year.

ASTD 620 - Jazz, Cities, and Social Movements (3)

Explore jazz's significance to American cultural, social, and political history, with particular attention to various musical communities' engagements with race, gender, artistic hierarchies, and economic systems. Within this framework, participants examine in detail two relationships: that between jazz and particular urban spaces; and that between jazz and U.S. social movements.

ASTD 627 - Transnational America (3)

This graduate course introduces students to the history, the intellectual trajectories, and the institutional impact of the "transnational turn" in American Studies and related scholarship. Focusing on 19th- 20th-century cultural, economic, political, and religious encounters in Africa, Asia, and Europe, we will investigate the varied manifestations of U.S. global engagement in the world.

ASTD 637 - Visions of U.S. Empire (3)

This course will familiarize students with theoretical approaches to, and key studies of, empire and imperialism in U.S. history and culture from the nineteenth century to the present. We will explore the imperial at home and abroad, and pay particular attention to literature, gender, policy, and visual culture.

ASTD 642 - Topics in American Urbanism (3)

Intensive study of a topic in American urban culture, society, theory, or criticism. The course is framed as an interdisciplinary inquiry, with a mix of scholarly texts and primary sources. Through focus on a single topic, students consider basic questions about the nature, experience, and quality of American urban life.

ASTD 644 - From Satchmo to Strangelove: Cold War Cultu

This graduate seminar explores the culture of the Cold War era in the United States from 1947 to 1963. In particular, we will examine the ways in which political and international forms of conflict shaped American society in areas ranging from shifting gender configurations to new forms of youth culture, artistic ideologies to the transformation of urban a suburban space, evolving racial formations to the politics of mass culture.

ASTD 645 - Edibles are Fun to Think With: American Food

This class studies food production and consumption through themes such as labor, environment, gender, ethnicity, globalization, identity, and power. The course's goal is to learn about the meaning of food and how the simple act of eating can reveal interconnections among so many diverse aspects of society and the environment.

ASTD 651 - Public Art & Memory (3)

This course investigates the politics and aesthetics of public art. Students learn to use art and commemoration to explore broader political and community issues, to understand how history and art have been used to create, perpetuate, or fight for national and/or cultural identities, and to interpret and identify artistic styles.

ASTD 660 - Amer Studies Interdiscip. Sem (3)

This course examines topics of American social history from an interdisciplinary perspective. Past topics: Utopian Communities; United States at the Turn of the Century (1880-1912). Offered every year.

ASTD 670 - American Political Thought (3)

This course focuses on selected ideas, issues, and institutions that have been central to the U.S. Constitution and the practice of American constitutionalism, from the founding era to the present. Readings emphasize seminal works in American political thought, which are supplemented by historical accounts, illustrative literature, and contemporary analyses. Offered every year.

ASTD 671 - Leadership & Culture (3)

Focuses on how culture both constrains and empowers leaders as they attempt to influence various publics. Students examine political leaders and leaders of social movements, primarily in U.S. history, with an eye toward the connections between their policies, their rhetoric, and the institutional and cultural contexts in which they acted.

ASTD 693 - Spec Topic in American Studies (3)

While the Mid-West as a region has received relatively little scholarly attention, Mid-Western city and local studies have shown its significance. This course will use both regional and local approaches to examine Midwestern race relations, struggles over citizenship including civil rights movements, and demographic patterns throughout the 20th-Century U.S.

ASTD 694 - Graduate Internship (1-3)

Specific requirements vary depending on the site of the internship and the individual contract for that internship. Grading is the same as for a seminar.

ASTD 695 - Special Study for Exams (0)

Students enroll in this course in the semester when they expect to take their PhD oral exams. May be taken no more than twice. Grade is Pass/Fail. The student can pass (or fail) even if she doesn't take the orals in the semester of her first enrollment. Students must make appointments to meet their faculty advisors at least twice in the semester of Special Study enrollment.

ASTD 698 - Graduate Reading Course (1-3)

Graded as a seminar course

ASTD 699 - Dissertation Research (0-9)

12 hours for students writing a dissertation. Required while students are working on their research and writing. Students must meet with advisor at least once per semester when taking dissertation hours. Grade is either IP or U, except for the semester in which the student graduates, when the grade is S. Students aren't always enrolled in 699 in the semester when they graduate, but they may be.

Biology (BIOL)**BIOL 101 - Essentials of Biology (3)**

Essentials of Biology is a non-majors general biology course without a laboratory. The topics that will be covered include biological molecules, cell structure and function, cellular metabolism, cell division, genetics, evolution, the diversity of life, and ecology.

BIOL 104 - Principles of Biology I (0-4)

First semester of the two-semester Principles of Biology sequence (followed by BIOL 106). Course content includes principles of: nature of science, defining properties of living systems, biological macromolecules, structure and function of cells, cellular metabolism, heredity, and animal structure, function and development. Lecture & Laboratory course.

BIOL 106 - Principles of Biology II (0-4)

Second semester of the two-semester Principles of Biology freshman sequence (preceded by BIOL-104). Course content includes evolution, phylogenetics, diversity of life, ecology and plant biology.

BIOL 109 - Biodiversity & Conservation (4)

Introduction to aspects of conservation of natural and managed ecosystems, as well as human environments. Foundations and applications of genetics and ecology of populations. Population growth and demographics, with special emphasis on human population and the implication on the sustainable use and management of resources and ecosystems. A continuation of BIOL-104 for Conservation Biology students.

BIOL 110 - Introduction to Biology (0-4)

This course will examine an introduction to the biochemistry of life, cellular biology and energy metabolism, development, genetics, and evolution. These biological principles will be introduced with an emphasis on the inquiry nature of the scientific process and the relevance of biology to students lives.

BIOL 114 - Our Living Environment (3)

Environmental problems treated within a framework of fundamental ecological principles. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 115 - Genetics and Human Diversity (3)

Genetics and evolution, emphasis on human populations and forces acting to change the genetic structure of human populations; mutation and natural selection. Satisfies Arts and Sciences Core Science requirement.

BIOL 120 - Ecological Issues and Society (3)

This SLU Inquiry course provides scientific insights into a variety of popular press topics and everyday decisions about ecological issues. Topics include population harvesting, lawn and garden decisions, and global warming. For non-science majors. Satisfies Arts and Sciences Core requirement.

BIOL 134 - Diversity of Life (3)

This SLU Inquiry course will provide an overview of the diversity of life on Earth, as well as the diversity of the human species. Important local, national, and international issues and policies related to biodiversity and conservation will be discussed. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 136 - Concepts of Biology (3)

A one-semester course covering scientific methodology and the basic concepts of biology ranging from the chemical to the ecological levels of organization. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 140 - Biology of Health and Disease (3)

Topics include: nature of life, chemical basis of life, basic foodstuffs, vitamins, diseases caused by microbes, plants, and animals, drugs and the mind, and biology and the future of humanity. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 141 - Biological Basis of Health (3)

This SLU Inquiry course examines relationships between basic biological information and a wide range of health-related topics and issues. Topics include: the chemistry of life and nutrition; molecules, cells and metabolism; diseases caused by bacteria and viruses; effects of drugs. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 145 - Drugs we use and abuse (3)

This course surveys the effects that legal and illegal biologically/pharmacologically-active compounds/drugs have on the brain, central nervous system, and other organ systems. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 146 - Exercise and Health (3)

The course will explore exercise metabolism, how the body responds and adapts to exercise, and the health implications of physically active and sedentary lifestyles. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 150 - Plants and People (3)

This SLU Inquiry course will give students an appreciation of the importance of plants in human society. An overview of plant form and function, investigates economic and social aspects of plants, and cultural aspects of human plant use. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 151 - Exploring Animal Behavior (3)

This course introduces non-majors to the science of animal behavior. Topics include understanding how animals decide where to eat, where to live, how to fight, and with whom to mate. For non-science majors. Satisfies Arts and Sciences Core Science requirement

BIOL 164 - Microbes, History and Society (3)

This SLU Inquiry course will take an integrative/exploratory approach to examine how microbes have shaped world history, impacted our food chain, posed health threats (bioterrorism and AIDS), and how microbes may guide our future. For non-science majors. Satisfies Arts and Sciences Core Science requirement.

BIOL 170 - Plants and Cultural Diversity (3)

An introduction to economic botany and ethnobotany through the uses of plants in medicine, nutrition, religion, and recreation in different cultures, including a minimum of three field trips to the Missouri Botanical Garden. For non-science majors. Satisfies the Arts and Sciences Cultural Diversity and the Science Core requirement.

BIOL 195 - First-Year Mentoring (0)

The objective of First-Year Mentoring is to familiarize students with the requirements for the biology major, the degree concentrations, and opportunities for research and internships. This session will meet one time only during the semester. No prerequisites.

BIOL 196 - Inquiry-Based Principles of Biology (5)

Lecture three hours, laboratory three hours per week. This SLU Inquiry course is designed for first year students who are interested in an inquiry-based approach to the study of biodiversity, form and function, and ecology.

BIOL 215 - Genetics and Human Diversity (3)

Genetics and evolution, emphasis on human populations and forces acting to change the genetic structure of human populations; mutation and natural selection. Satisfies the Science Core requirement.

BIOL 236 - Concepts of Biology (3)

A one-semester course covering scientific methodology and the basic concepts of biology ranging from the chemical to the ecological levels of organization. Satisfies the Science Core requirement.

BIOL 256 - Evolution & Christian Theology (3)

A student successfully completing this course will be able to articulate, in speaking and writing, why biological evolution and Christian theology are not mutually opposed to each other, but may benefit from dialog with one another. The student will be able to support his/her position with knowledge gained in biblical scholarship, basic biology, complexity hypothesis, critical-analytical reading of creationism-based refutations of evolution, and modern theology. Credit not given for both BIOL-256 and THEO-356. Prerequisites: 6 hours of theology.

BIOL 280 - Biology for Education Majors (0-4)

Three hours lecture, three hours of laboratory per week. This course is offered for elementary education majors. A variety of teaching methods will be used so that students with different learning styles may master the material. Curiosity and creativity are encouraged.

BIOL 295 - Second-Year Mentoring (0)

The objective of Second-Year Mentoring is to familiarize students the details of the BA and BS degree concentrations, as well as opportunities for research and internships. This session will meet one time only during the semester. No prerequisites.

BIOL 301 - Evolutionary Biology (3)

This course explores the principles of evolutionary biology through a discussion/lecture format. Topics covered include the theory of evolution, origin of new species, genetics of populations, relative roles of selection, drift, mutation, and migration in the evolutionary process, evolutionary rates, and pre-biotic evolution.

BIOL 302 - Biochemistry&Molecular Biology (0-3)

This is a sophomore-level course on cellular/molecular biochemistry including the synthetic flow of genetic information from DNA to RNA to protein (replication, transcription and translation), RNA and protein structure and function, enzymology, and energy flow (metabolism). It is designed as a foundation course for subsequent upper division cellular/molecular biology courses, including Molecular Cell Biology II (BIOL 304) and Genetics (BIOL 303). Fall semester. Pre-requisites: BIOL 104 and BIOL 106 and CHEM 163 & 164.

BIOL 303 - Principles of Genetics (0-3)

This course covers the basic principles of genetics, including transmission genetics, molecular genetics, gene regulation, recombinant DNA technology and genomics. Throughout the course, there is an emphasis on the application of genetics to experimental and problem-solving situations. Prerequisites: BIOL 302 OR CHEM 464.

BIOL 304 - Cell Structure & Function (3)

Building on the principles introduced in BIOL-302, this course explores how specific proteins, lipids, sugars and nucleic acids contribute to cellular processes and structure. The material covered here provides a good foundation for upper-level courses in Development, Physiology, Microbiology and Immunology. Pre-requisite: BIOL-302 or CHEM-462; Co-requisite: CHEM-343/345.

BIOL 306 - Cell Structure & Function Laboratory (1)

Laboratory four hours per week. Basic concepts in cell biology stressed in a laboratory setting. Protein and lipid components of biological membranes, DNA comparison of prokaryotic and eukaryotic organisms, principles of protein synthesis, establishment of primary cell cultures, analysis of the cytoskeleton and the extracellular matrix. Techniques stressed will include microscopy (light/fluorescent), SDS-PAGE and protein determination, thin layer chromatography, receptor analysis and the application of sterile culture to the study of cells. Spring semester.

BIOL 310 - Experiments in Genetics Lab (1)

Laboratory four hours per week. Advanced experiments in classical and molecular genetics will be conducted by the students. Data will be collected, analyzed, and reported.

BIOL 322 - Biology of Invertebrates (4)

Lecture three hours, laboratory three hours per week. This course surveys the invertebrate phyla with emphases on evolution, comparative morphology, life cycles, physiology, and ecology.

BIOL 326 - Biology of Plants & Fungi (0-4)

Lecture three hours, laboratory four hours per week. An introduction to algae, fungi, and true plants comparing life cycles (alternation of generations) and functional anatomy/morphology. Half of the course emphasizes the four developmental stages in the life of seed plants: germination, establishment, maturation, and reproduction.

BIOL 328 - Ethnobotany (3)

A modern synthesis of plant biology and the principles of cultural anthropology to compare the use of domesticated and wild plants. A comparison of tropical and temperate zone 'cases' requires four field trips to the Missouri Botanical Garden. Satisfies the Arts and Sciences Cultural Diversity requirement.

BIOL 342 - Comparative Anatomy of the Vertebrates (0-5)

Lecture two hours, two three-hour laboratories per week. Evolution of chordate morphology. Laboratory consists of the study of the structures of each major group of chordates with emphases on the dogfish shark and cat.

BIOL 344 - Embryology (0-5)

Lecture three hours, and two two-hour laboratories per week. Development of the vertebrate embryo from a single cell into a multicellular organism. Topics include: fertilization, changes in shape and form, increase in complexity and diversity, organ formation, processes by which cells with the same genetic endowment become different from one another.

BIOL 345 - Economic Botany (3)

Overview of plant form and function, followed by investigations into economic and social aspects of plants, including origin of important crops and health impacts. Learn how foods and spices drove world exploration, and develop your ability to critically assess modern agricultural practices, including ethics of bioprospecting and genetically modified foods. Satisfies upper-division plant biology requirement. Prerequisites: BIOL-106

BIOL 347 - General Physiology Laboratory (2)

Laboratory three hours per week. This stand-alone laboratory course is designated to supplement and reinforce material presented in the BIOL-454, but also covers topics beyond the scope of that syllabus, largely through computer-based interactive physiology programs, and the acquisition and analysis of cardiovascular, neuromuscular, and respiratory systems data using the PowerLab human physiology teaching system. Problems involving inquiry-based learning are also assigned. Prerequisites or Co-requisite: BIOL-454

BIOL 348 - Exercise Physiology (3)

Using exercise biochemistry as a foundation, this course will examine the responses and adaptations to physical exercise and /or inactivity, with special emphases on health, energy metabolism, and endocrinology.

BIOL 349 - Plant Physiology (3)

Principles of plant physiology: growth, phytohormones, flowering, photosynthesis, water relations, mineral nutrition, translocation in higher plants.

BIOL 350 - Biodiversity of Africa I (0)

Lecture three hours per week. An introduction to the biodiversity of the tropical rainforest of equatorial Africa and the role this biodiversity plays in the culture of the native peoples of Gabon and Cameroon.

BIOL 351 - Biodiversity of Africa II:Field Trip (3)

A field trip to study the biodiversity of the tropical rainforest and the role this biodiversity plays in the culture of the native peoples of Gabon and Cameroon. Satisfies the Arts and Sciences Cultural Diversity requirement.

BIOL 395 - Transfer Student Mentoring (0)

The mentoring session covers material presented in BIOL 195: First Year Mentoring and BIOL 295: Second Year Mentoring and is designed for transfer students or students not in residence when the other mentoring sessions were held. This course will be offered each semester and there are no prerequisites.

BIOL 398 - Independent Research (0-3)

The course provides an opportunity for first and second year students to carry out independent study and research. Permission of the Instructor required. Course goals, content and meeting times to be determined by the instructor.

BIOL 401 - Sex, Evolution, and Behavior (3)

This course is an in-depth examination of evolutionary theories concerning the sexual reproduction, parthenogenesis, mate choice, sexual selection, life history strategies, and sex allocation. Specialized topics such as pheromone communication will also be covered.

BIOL 402 - Vertebrate Reproductive Physiology (3)

This course is an in-depth examination of reproduction in the vertebrates. Topics include the development of the sex organs, gametogenesis, hormone function, and regulation of gonadal function, pregnancy, and parturition.

BIOL 404 - Pollination Biology (3)

The function and evolution of the reproductive organs of seed plants based on their morphology, biochemistry, breeding system, genetics, and ecological relationships between flowers and such pollinators as insects, vertebrates, and air currents. Includes two field trips to the Missouri Botanical Garden.

BIOL 405 - Molecular Technique Lab (2)

Lecture 1 hour, laboratory 3 hours per week. This course will provide students with experience in the theory and practice of molecular biology techniques. Topics to be covered include DNA isolation, cloning, PRC, DNA sequencing, and bioinformatics. Prerequisites: BIOL302 and BIOL303.

BIOL 406 - Structure and Function of Ecosystems (3)

Principles of ecology developed through an understanding of the nature and properties of ecosystems.

BIOL 407 - Advanced Biological Chemistry (3)

This course is designed to increase students' understanding of biochemical principles, current research questions, and biochemical strategies to answer these questions. Topics covered will include protein structure and function, enzymology, protein engineering, experimental design and interpretation of results. Prerequisites: BIOL 302, BIOL 304 and Senior-standing.

BIOL 408 - Advanced Cell Biology (3)

This course is designed to deepen students' understanding of cell biology principles, experimental strategies, and current research questions. Topics covered will include how different categories of molecules regulate cellular activity and literature, experimental design and interpretation of results. Prerequisites: BIOL 302, BIOL 304 and either BIOL 301 or BIOL 303.

BIOL 409 - Plant Ecology (3)

Principles of plant autecology and synecology. The nature and properties of plant communities - structure, development, and distribution. The interaction of the individual plant with its environment.

BIOL 410 - Natural History of Vertebrates (0-4)

Lecture three hours, laboratory three hours per week. Prominent morphological, behavioral, physiological and ecological features of fishes, amphibia, reptiles, birds, and mammals. Week-end field trips are required.

BIOL 411 - Natural History (1)

An extended field trip to study the ecology of vertebrates, and the ecological features of fishes, amphibians, reptiles, birds, and mammals. Week-end field trips are required. This course does not fulfill a B.Sc. area requirement.

BIOL 412 - Field Botany (5)

This field-based course introduces students to the diversity of plant communities in the Ozark Mountain region of Missouri and to the tools scientists use to quantify that diversity. Class and laboratory activities will be conducted at Reis Biological Field Station and at nearby parks and natural areas. Prerequisite: BIOL-106.

BIOL 413 - Field Mammalogy (5)

This course examines the evolution, physiology, ecology and behavior of mammals. Emphasis on field identification and field methods used to study the behavior and ecology of mammals. The course is taught at the Reis Biological Field station. Students cannot receive credit for this course and Biology of Mammals (BIOL 438). Prerequisite: BIOL 106.

BIOL 414 - Field Ornithology (5)

This course examines the evolution, physiology, ecology and behavior of birds. Emphasis on field identification and field methods used to study bird behavior and ecology. The course is taught at the Reis Biological Field station. Students cannot receive credit for this course and Biology of Birds (BIOL 431). Prerequisite: BIOL 106.

BIOL 415 - Nerve Cell Mechanisms in Behavior (3)

A comprehensive introductory neuroscience course which covers electrophysiology of action potentials and synapses, channels, neurotransmitters, sensory and motor systems, development, neuroanatomy, and integrative brain function.

BIOL 416 - Microbial Ecology and Molecular Evolution (4)

This course will actively engage students in the creative process of scientific inquiry, provide skills necessary for success in the modern research laboratory, and foster excitement about the discovery process central to research in microbial ecology and molecular evolution. Discussions will include critical evaluation of primary literature in the field. Prerequisite:BIOL302

BIOL 417 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping.

BIOL 418 - Intermediate Geographic Information Systems (

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography. Each part is instructed by a professor specialized in the particular area. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-418, BIOL-418, or SOC-466.

BIOL 419 - GIS in Biology (3)

This course provides an introduction to the application of Geographic Information System (GIS) techniques to research in organismal biology. The goal of this course is to provide training in the spatial analysis of biodiversity using GIS software. The course will involve an integration of lectures, group discussions, and computer exercises.

BIOL 420 - Aquatic Ecology (0-4)

Lecture three hours, laboratory three hours per week. An exploration of freshwater ecosystems in Missouri including springs, rivers, and lakes. The course will explore the diversity of living organisms, both animals and plants, found in these ecosystems. A major goal will be to understand how the physical and chemical properties of water affect the abundance and diversity of aquatic organisms. Week-end field trips are required. This course is also taught during the summer at the Reis Field Station.

BIOL 421 - Biology and Classification of Orchids (3)

An introduction to the evolution, classification, and distribution of the Orchidaceae (the largest family of flowering plants). The course will cover how their functional anatomy/morphology encourages their unique interactions with trees, fungi, and a range of insects. Includes one field trip to the Missouri Botanical Garden.

BIOL 422 - Aquatic Biology Fieldtrip (3)

A companion course to BIOL 420 (Aquatic Ecology). Explores the diversity of lakes of Western North America through a one-month fieldtrip. Ten lakes from California to the Northwest Territories, Canada will be compared in terms of physical properties, water chemistry and biotic diversity.

BIOL 424 - General and Medical Entomology (0-4)

Lecture three hours, laboratory four hours per week. This course is a survey of the natural history, classification, and phylogeny of insects, with an emphasis on common insects. Field trips during laboratory hours.

BIOL 426 - Biology of Amphibians and Reptiles (0-4)

Lecture three hours, laboratory four hours per week. This course is a survey of the diversity, natural history, evolution, and biology of amphibians and reptiles. Week-end field trips are required.

BIOL 427 - Field Studies with Amphibians and Reptiles (1)

An extended field trip to study the ecology of amphibians and reptiles. This course does not fulfill a B. Sc. area requirement.

BIOL 428 - Biology of Fishes (0-4)

Lecture three hours, laboratory three hours per week. Introduction of the study of fishes: systematics, ecology, behavior, evolution, and the economic importance of freshwater and marine fishes. Laboratory acquaints students with 80 of the 400 fish families. Week-end field trips are required to study the Missouri fish fauna.

BIOL 429 - Biology of Fishes: Field Trip (1)

An exploration of the freshwater fishes of Florida. Offered as a 10-day Field trip during Spring Break. This course does not fulfill a B. Sc. area requirement.

BIOL 431 - Biology of Birds (0-4)

Lecture three hours, laboratory three hours per week. Introduction to the study of birds including discussion of ecology, structure and function, evolution, behavior, and systematics. Laboratory includes field trips to the St. Louis Zoo, Missouri Botanical Garden, and other birding areas. Also, taught occasionally at the Reis Field Station.

BIOL 432 - Cave Biology (4)

An introduction to the study of caves. Emphasis will be placed on the systematics of cave organisms and on the adaptations that cave organisms possess to exist in an energy poor environment. Field work will involve studying cave systems in the Ozarks of Missouri. This course is taught during the summer at the Reis Field Station.

BIOL 433 - Spring Flora of the Ozarks (4)

A field-based course designed to acquaint students with the spring flora of the Ozarks. Students will learn to recognize common Missouri plant families and to identify plant species using taxonomic keys. Includes discussion of the major phytogeographic areas of Missouri and the biotic and abiotic factors that define them. Course is offered in May and is based at the Reis Field Station, but also includes off-site trips to state parks and conservation areas.

BIOL 434 - Systematic Biology (3)

This course is a general survey of the principles of systematics and taxonomy. Topics to be covered include a history of taxonomic and systematic methods, classification, species and speciation; population variation and its analysis; taxonomic publications; and rules of zoological nomenclature.

BIOL 435 - Biology of Parasitic Organisms (4)

Lecture three hours, laboratory three hours per week. Discussion of symbiotic relationships between animal and plant parasites and their hosts, evolution of parasitism, and current approaches to chemotherapy. In the laboratory, parasite form and function will be studied.

BIOL 436 - Animal Behavior (3)

This course surveys the vast diversity of behaviors among all taxa of animals, including humans. Topics covered: the mechanisms that produce and modify behavior at the genetic, endocrine, and neural levels; and how the environment interacts with the biology of species in order to modify behaviors that lead to optimized evolutionary fitness.

BIOL 437 - Animal Behavior Lab (1)

Laboratory three hours per week. This laboratory course will introduce hypothesis testing, techniques, designing protocols, and statistical analyses used in the study of animal behavior in the laboratory and in the field.

BIOL 438 - Biology of Mammals (0-4)

Lecture three hours, laboratory three hours per week. This course surveys the evolution, morphological characteristics, physiology, ecology and behavior of mammals.

BIOL 439 - Systematic Biology Lab (1)

This laboratory course provides a series of hands-on experiences applying the principles of taxonomy and systematics to biological diversity. Topics include homology and formulation of data matrices; species boundaries and modes of speciation; population taxonomy, variation and analysis; taxonomic publications; rules of nomenclature; and applications of systematic results.

BIOL 440 - Applied Ecology (3)

This course will concentrate on the identification and possible solutions of ecological problems faced by managers today. Introduction to general methods of ecological risk assessment. Special emphasis on sustainable use of land, marine, and aquatic resources.

BIOL 441 - Comparative Animal Physiology (3)

Functional adaptations of vertebrates and invertebrates to their environment (e.g. desert, arctic, high altitude, etc.).

BIOL 444 - Vertebrate Histology: Structure and Function o

Lecture two hours, laboratory four hours per week. Function and microscopic morphology of vertebrate tissues.

BIOL 445 - Ecological Risk Assessment (3)

This course will review the federal laws pertaining to environmental protection, including NEPA, RCRA, CERCLA, and the Clean Water and Clean Air Acts. The course will also examine the sources of risk for ecological entities and discuss how to determine and manage those risks. The main focus will be on risk determination and management of wild populations, ecosystems, and landscapes.

BIOL 447 - Electron Microscopy (3)

A techniques-based course in the fundamentals of transmission and scanning electron microscopy. The theory of electron microscopy and related techniques will be covered in lectures and the labs will provide the practical skills required for tissue preparation, sectioning, microscope operation and photography.

BIOL 448 - Conservation Biology (3)

Fundamental principles of biodiversity maintenance through the management of ecosystems and populations. This course will examine conservation at the level of species, population, and ecosystems.

BIOL 450 - Introductory Endocrinology (3)

General principles of vertebrate endocrinology, including biochemistry, metabolism, cellular activity, and organismal and behavioral effect of systemic hormones and neurotransmitters.

BIOL 451 - Behavioral Endocrinology (3)

The effects of hormones and neurotransmitters on reproductive, parental, aggressive, and social behavior; as well as on homeostasis, biological rhythms, learning, and mood. Introductory Endocrinology and Animal Behavior recommended but not required.

BIOL 454 - Human Cellular Physiology I (3)

This course focuses on the cellular/molecular underpinnings and integration of human systems physiology, including the general principles of homeostasis, endocrinology, neurophysiology, muscle, cardiac, pulmonary and renal physiology including fluid and electrolyte balance. Prerequisite: BIOL 304

BIOL 455 - Biology of Aging (3)

A review and discussion of the theories associated with aging with a survey of the mechanisms of aging and a discussion of age-related changes in animals and humans.

BIOL 458 - Applied Population Genetics (3)

Population genetics is the study of the origin, amount, and distribution of genetic variation in populations, and the fate of this variation over time and across space. This course integrates population genetic theory, empirical studies derived from contemporary literature, and hands-on experience with software applications.

BIOL 460 - Developmental Biology (3)

This course investigates cellular and molecular mechanisms responsible for building multicellular organisms. Topics include fertilization, cleavage, gastrulation, axis specification, and organogenesis, with particular attention devoted to the experimental basis for current models. The connections between developmental biology and medical and environmental issues will also be considered. Textbook reading assignments will be supplemented by selected articles from the scientific literature. Prerequisite: BIOL-302 or BIOL-304

BIOL 461 - Developmental Biology Lab (2)

Laboratory six hours lab per week. This laboratory course is designed to supplement and reinforce material presented in BIOL 460 through observation and experimental manipulation of developing organisms. Living invertebrate and vertebrate model organisms will be used. Approximately two hours for observations will be required outside of scheduled lab times to be arranged at the mutual convenience of each student and the instructor. Co-requisite or Pre-requisite: BIOL 460.

BIOL 462 - Biochemistry I (3)

An upper-level, one semester, undergraduate course focusing on biomolecules. Topics to be covered include biological buffers, thermodynamics, amino acids, proteins, carbohydrates, lipids, membranes, nucleic acids, recombinant DNA, enzymes, and molecular motors.

BIOL 463 - Foundations of Immunobiology (3)

The cellular and molecular basis of immune function. Topics include receptors on T, B, and antigen presenting cells, cytokine networking, complement, function of the major histocompatibility complex, hypersensitivity of the immune system, and infection by HIV.

BIOL 464 - General Microbiology (3)

General introduction to the diversity, bioenergetics, growth, genetics, and ecology of microorganisms. Special emphasis will be placed on molecular and genomic methods used in the characterization of microorganisms.

BIOL 465 - General Microbiology Laboratory (2)

Two two-hour laboratories per week. Basic techniques in handling bacteria, identifying microorganisms and investigating microbial growth and metabolism.

BIOL 467 - Population Biology (3)

This course covers theoretical and empirical investigations at the population level. Major topics include population and growth dynamics, population regulation, the evolution of life, histones, ecological interactions between populations, and the evolutionary ecology of populations.

BIOL 468 - Landscape Ecology (3)

This course will concentrate on the ecology and management of landscapes. Topics will include formation of spatial patterns, flux of materials and organisms across space, and natural and human-mediated disturbance; as well as the relevance of scale in identifying patterns and how it relates to management decisions. Case studies with relevance to state and federal lands will be covered.

BIOL 470 - Molecular Biology (3)

A study of genes and genomes, and the processes that control their expression. Special emphasis will be placed on techniques used to analyze and manipulate nucleic acids and proteins, including bioinformatic approaches.

BIOL 472 - Cancer Biology (3)

This course focuses on the molecular, cellular, and genetic characteristics of cancerous tissues; cancer epidemiology, diagnosis, and therapies will also be discussed. The course is in lecture format with some classes reserved for student presentations and discussion of primary research articles. Pre-requisites are BIOL-302 and BIOL-304; BIOL-303 is recommended.

BIOL 475 - General Ecology (0-4)

Lecture three hours, laboratory three hours per week. An introduction to the science of ecology: study of general theories, models, and problems in population, community, and ecosystem levels.

BIOL 476 - Plant Biochemistry (3)

A comparative survey of higher plant anabolic and catabolic processes. Topics include: carbohydrates, lipids, proteins, polyketides, terpenoids, aromatics, tetrapyrroles and alkaloids.

BIOL 479 - Biometry (0-4)

This course is intended for students pursuing a biology major or minor. College-level algebra and general biology are required. The course will cover biological distributions and probabilities; the application of hypothesis testing; the relationship between biological and statistical hypothesis; the nature of biological data and sampling regimes, and how these fit within the scientific method.

BIOL 480 - Internship in Conservation (1-3)

Students will work with professional conservation/environmental biologists to get practical experience. Students may work with conservation biologists associated with the EPA, Missouri Conservation Department, Corps of Engineers, or private environmental consulting firms. Environmental problems treated within the framework of fundamental ecological principles.

BIOL 481 - Integrated Bioinformatics Int. (0-3)

Students will work with laboratories conducting molecular biology/bioinformatic research to gain practical experience. Internships will include research and development laboratories of local biotechnology companies, and in the departments of Biology, Chemistry, or Mathematics & Computer Science. Prerequisite: Permission of instructor required.

BIOL 482 - Internship in Plant Science (1-3)

Students work with professional plant scientists to gain practical experience. Students may work with scientists at botanical gardens or arboreta, the EPA, Missouri Department of Conservation, the Donald Danforth Plant Sciences Center, Monsanto, or other biotech firms. Prerequisites: Biol 104/106; Chem 163/164.

BIOL 484 - Senior Inquiry: Library Project and Thesis (0-3)

Permission of instructor required.

BIOL 488 - Senior Inquiry: Research Project (1-3)

Permission of instructor required.

BIOL 489 - Senior Inquiry: Comprehensive Examination (0)

Permission of department chairperson required.

BIOL 495 - Senior Residency (0)

Required of all graduating seniors.

BIOL 496 - Independent Research (0-3)

This course provides an opportunity for first and second year students to carry out independent study and research. Permission of the Instructor required. Course goals, content and meeting times to be determined by the instructor.

BIOL 497 - Library Project (0-3)

Permission of Instructor required.

BIOL 498 - Advanced Independent Research (0-4)

Individual study and research. Permission of instructor required. Prerequisite: a minimum of 6 credit hours of upper-division (300-level or above) coursework in biology.

BIOL 500 - Problems in Vertebrate Morphol (2-5)

Studies of the gross and microscope anatomy of the organs and organ systems of vertebrates. Gross dissection and histological preparation of selected structures in typical vertebrates of different classes. Offered occasionally.

BIOL 501 - Ecology of Vertebrate Reproductn (3)

A study of life history traits that lead to the evolution of sexual selection, parthenogenesis, viviparity, sex ratios, and environmental and genetic sex determination. Offered every other Fall.

BIOL 502 - Comparative Vertebrate Reproductn (3)

Lecture two hours, laboratory two hours per week. Advanced study of reproductive anatomy and physiology of the vertebrates. Offered every other Fall.

BIOL 504 - Prbm-Experimental Embryology (2-4)

Laboratory work conducted on an individual basis in selected areas of experimental embryology. Offered occasionally.

BIOL 505 - Molecular Techniques Lab (2)

2 credits Prerequisite: An undergraduate course in molecular biology (equivalent to BIOL-302 and 304) or permission of the instructor. Students will learn principles of molecular biology and recombinant DNA technology, and will gain hands-on experience with nucleic acid isolation, cloning, sequencing, and analysis.

BIOL 506 - Adv. Topics in Molecular Biol (0-4)

This course encompasses the central roles of DNA and RNA in molecular biology and the technologies used to analyze and manipulate nucleic acids in biomedical research. Topics to be covered are the structure, topology, and arrangement of nucleic acids in genomes, recombinant DNA technology, bioinformatics, and current research in molecular biology. Offered every Fall semester.

BIOL 507 - Adv Biological Chemistry (3)

An in-depth analysis of selected topics in biological chemistry. Topics may include for example, protein structure and function, and nucleotides and nucleic acids. Offered every other year.

BIOL 508 - Advanced Cell Biology (3)

This course is designed to deepen students' understanding of cell biology principles, experimental strategies, and current research questions. Topics covered will include how different categories of molecules regulate cellular activity and literature, experimental design and interpretation of results. Format: 3 hours lecture/discussion per week. Prerequisites: no prerequisites for students in Biology graduate programs; undergraduates by permission of the instructor only.

BIOL 509 - Biometry (0-4)

This course is intended for graduate students in biology. The course will cover the description of biological distributions and probabilities; the application of hypothesis testing, including the relationship between biological and statistical hypothesis; the nature of biological data, samples and sampling regimes, and how these fit within the scientific method. Central to the course is the use of biological models and experiments.

BIOL 510 - Cellular and Molecular Genetic (3)

The cellular and molecular basis of genetically controlled biological phenomena from microorganisms to complex, multicellular organisms. Topics considered are transcriptional regulation in prokaryotes and eukaryotes, chromatin structure and function, sporulation, yeast mating types, pattern formation in *Drosophila*, sex determination, and genetic control of development in *C. elegans*. Experimental methods used to study these events will be stressed. Offered every year.

BIOL 512 - Signal Transduction (3)

Mechanisms by which cells receive and respond to external signals; properties of the cell membrane; receptor structure and function; G protein-regulated transmembrane signaling; intercellular communication; first and second messengers. Experimental methods used to study these phenomena will be emphasized. Offered every year.

BIOL 517 - Intro to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: IAS 517, BIOL 517, or SOC 565.

BIOL 518 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS biography. Each part is instructed by a professor specialized in the particular area. Students may only apply credits towards their graduation requirements from one of the following courses: IAS 518, BIOL 518, or SOC 566.

BIOL 530 - Prblms/Vertebrate Physiology (2-4)

Laboratory research on current problems in organ system physiology. Offered every semester.

BIOL 533 - Systematic Biology (3)

General survey of the principles of systematics and taxonomy. Topics covered include a history of taxonomic and systematic methods, classification, species and speciation, population variation and its analysis, taxonomic publications, and rules of zoological nomenclature. Offered every other year.

BIOL 534 - Problems in Cell Biology (1-2)

Laboratory experimentation to answer specific questions concerning DNA replication and cell division. Students design and carry out experiments to test a specific hypothesis. Offered occasionally.

BIOL 540 - Problems in Genetics (1-4)

Advanced experimental work in selected areas of genetics. Offered occasionally.

BIOL 541 - Ecological Genetics (3)

Lectures and discussion on the genetic factors determining the abundance and distribution of protista, animals and plants, including the Hardy-Weinberg Equilibrium, community interactions and genetic polymorphisms. Offered every other year.

BIOL 542 - Problems in Evol Biology (1-4)

Laboratory and field research on contemporary problems in evolutionary Biology. Offered occasionally.

BIOL 545 - Biogeography (3)

A discussion of the major distribution patterns of plants and animals and the mechanisms responsible for these patterns. Offered every other Fall semester.

BIOL 546 - Exercise Physiology (3)

Using exercise biochemistry as a foundation, this course will examine the responses and adaptations to physical exercise and/or inactivity, with special emphases on nutrition, energy metabolism, and endocrinology; and their relations to health.

BIOL 548 - Conservation Biology (3)

Fundamental principles of biodiversity maintenance through the management of ecosystems and populations are explored. Begins with the philosophical underpinnings of the conservation movement as developed in the writings of Leopold and moves on to extensive treatment of modern conservation practices directed toward preservation of imperiled systems. Offered every other year.

BIOL 550 - Problems in Ecology (2-4)

Independent laboratory or field study on a specific problem in ecology. Offered occasionally.

BIOL 551 - Plant Ecophysiology (3)

A treatment of environmental effects on the physiology of vascular plants with reference to the whole organism and ecological interactions. Offered occasionally.

BIOL 555 - Advanced Ecology (3)

An in-depth treatment of the relationships between organisms and their environment via lecture, discussion and seminar formats plus occasional laboratory and field exercises. Offered occasionally.

BIOL 556 - Advanced Evolution (3)

This course explores aspects of natural selection, adaptation, gene flow, speciation, and evolutionary hypothesis testing at a level consistent with a modern graduate education containing a component of evolutionary theory. The format of the course includes both lecture and discussion of the topics outlined in the topical syllabus. Each week will include a set of readings from both historical/seminal writings in an area as well as current papers that treat the topics

BIOL 558 - Applied Population Genetics (3)

Population genetics is the study of origin, amount, and distribution of genetic variation in populations, and the fate of this variation over time and across space (Templeton, 2006). This course examines the primary concepts of population genetics through an integrated approach involving basic theory, empirical studies derived from primary contemporary literature, and hands-on experience with software application.

BIOL 560 - Developmental Genetics (3)

Exploration of genetic mechanisms by which genomically equivalent cells generated from the fertilized egg become different during development. The role of cytoplasmically located determinants and progressive cell interactions on differential gene expression. The genetic basis of pattern formation in the vertebrate limb and nervous system, particularly during *Drosophila* development emphasizing the role of maternal effect, segmentation, and homeotic selector gene expression. Offered every other year.

BIOL 561 - Principles of Develop Biology (3)

This course investigates cellular and molecular mechanisms responsible for building multicellular organisms. Topics include fertilization, cleavage, gastrulation, axis specification, and organogenesis, with particular attention devoted to the experimental basis for current models. The connections between developmental biology and medical and environmental issues will also be considered.

BIOL 564 - Concepts of Immunology (3)

The cellular and molecular basis of immune function. Topics include receptors on T, B and antigen presenting cells, cytokine networking, complement, function of the major histocompatibility complex, hypersensitivity of the immune system, and infection by HIV. Offered every other year.

BIOL 567 - Advanced Population Biology (3)

This course covers the theoretical and empirical investigations of population ecology and genetics. Major topics will include population growth and dynamics, population regulation, evolution of life histories, ecological interactions between populations, and evolutionary ecology of populations. Offered every other year.

BIOL 570 - Advanced Molecular Biology (3)

Current problems in plant morphology and systematics. Library/laboratory phase stressed. (Offered occasionally.)

BIOL 576 - Problems in Botany (3)

Offered Occasionally

BIOL 577 - Coevolution (3)

This seminar course focuses on reading and discussion of primary literature related to coevolution. Students will gain improved understanding of interspecific interactions (e.g. predation, parasitism, competition, pollination, mimicry) that led to interdependent evolution of species. Study and discussion of these interactions will demonstrate the essential link between ecology and evolution.

BIOL 578 - Molecular Phylogenetic Anlysis (3)

This course is designed to give students the knowledge and technical competence necessary for working with molecular phylogenetic data. Students will learn how to edit and align sequence data, and will explore how alternative alignments affect phylogenetic reconstructions. They will learn how to access and download data from online databases such as Genbank and Tree Base. Differing analytical approaches will be presented and discussed, including current and ongoing controversies in the primary literature. Students will gain experience using numerous software packages for analyzing data, testing constraints, choosing likelihood models, assessing support and exploring character evolution.

BIOL 580 - Research Colloquium (0-1)

The course is designed to provide practice with oral communication of scientific studies. The format involves the design and execution of an oral presentation and students will be assessed by the instructor and classmates. Presentations on student research projects and proposals will be open to all members of the department. No prerequisites.

BIOL 582 - Graduate Seminar/CMR (1-2)

In depth analysis of one or two topics of current importance to cellular and molecular biology and the regulation of biological processes will be developed each semester. Students will present a lecture building on some aspect of the topic being analyzed. The focus is on skills of literature analysis, lecture organization, and oral presentation as well as on learning about a specific discipline related topic. Offered every semester.

BIOL 584 - Graduate Seminar in Ecology, Evolution and S

Readings and discussions of current literature in areas related to ecology, evolution, and systematics. Students are encouraged to present research plans and report on research progress. Each semester several topics will be examined in depth. Offered every year.

BIOL 585 - Floristic Taxonomy (1)

This weekly seminar provides an overview of Vascular Plants. The seminar will cover several crown orders of the monocots, including grasses and relatives, and begin the Eudicots. Weekly presentations include a summary of all relevant information (molecular, chemical, anatomical, embryological, morphological, ecological, geographical, historical/paleontological, etc.) about the plant group under consideration, review of the classification/phylogeny of the group, examination of fresh and/or preserved specimens, and discussion of relationships, human uses, and other relevant aspects of the biology of that group.

BIOL 586 - Scientific Communication Practicum (1)

The course is designed to provide practice with written communication of scientific studies. The course includes assignments of documents that are commonly used in scientific discourse. The objectives of each assignment will be discussed in group meetings, and students will meet with the instructor individually to review the documents. No prerequisites.

BIOL 587 - Advanced Biometry (3)

Graduate level course that will cover major aspects of the design and analysis of research studies in the life sciences. The purpose of the course is to provide the student with sufficient knowledge as to be able to design and analyze experiments that will most properly answer relevant questions in their fields. Topics will include, but not limited to, historical, philosophical, and ethical issues, statistical techniques, and computer applications. Students enrolling in this course must have at least one semester of calculus and one semester of statistics or probability and are familiar with analysis of variance techniques.

BIOL 591 - Department Seminar (0-1)

Selected topics in Biology. Attendance and participation required for all M.S. and M.S.(R) students in Biology. Offered every semester.

BIOL 597 - Research Topics (1-3)

Prior permission of guiding professor and department/program chairperson required. Offered every semester.

BIOL 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor and department/program chairperson required. Offered every semester.

BIOL 604 - Current Top:Developmental Bio (3)

Review and discussion of recent literature dealing with selected areas in developmental biology, including pattern formation, cell communication, cell differentiation, and molecular basis of development. Offered occasionally.

BIOL 615 - Neural Basis of Behavior (3)

Topics to be discussed include molecular biology and genetic analysis of channels, electrophysiology of synapses and transmitter amines, second messenger systems, molecular genetics of color vision, color blindness, sensory transduction, and development of neural circuitry. Offered every other year.

BIOL 630 - Spec Std:Cmprtv Physiology (1-4)

Conferences and library or laboratory problems dealing with specific functions of animals from the comparative viewpoint. Offered every semester.

BIOL 631 - Comparative Immunobiology (3)

Discussion of defense reactions of invertebrates and non-mammalian vertebrates from textbooks and current literature. Offered every other Fall semester.

BIOL 632 - Comparative Endocrinology (3)

Survey of endocrine functions in invertebrates and vertebrates. Discussion of current models of mechanisms of action of hormones. Offered occasionally.

BIOL 633 - Spc std:Insect Physiology (1-4)

Library of laboratory study on a specific question. Offered every semester.

BIOL 646 - Exercise Biology (3)

Course will examine the responses and adaptations to physical exercise and/or inactivity with special emphasis on nutrition, energy metabolism, and endocrinology, and their reaction to health. Offered at least every other year.

BIOL 651 - Plant-Water Relationships (3)

An in-depth treatment of the water relationships of vascular plants via lecture, discussion and seminar formats. Offered occasionally.

BIOL 691 - Departmental Seminar (0-1)

Selected topics in biology. Attendance and participation required for all Ph.D. students in Biology. Offered every semester.

BIOL 697 - Research Topics (1-3)

Prior permission of guiding professor and department/program chair required. Offered every semester.

BIOL 698 - Graduate Reading Course (1-3)

Prior permission of guiding professor and department/program chair required.

Catholic Studies (CATH)**CATH 490 - Catholic Studies Capstone (3)**

In order to synthesize the interdisciplinary Manresa program, students do an independent study, research paper or practicum in conjunction with seminar meetings (the seminar is contingent on the number of capstone participants).

Chemistry (CHEM)**CHEM 100 - Chemistry and the Environment (3)**

This course presents an introduction to the basic principles of chemistry and how these impact important environmental issues. Topics include critical issues in energy use and sustainability, elemental cycles in the environment, atmospheric chemistry and pollution, the hydrosphere and water pollution, and the biosphere and persistent organic compounds.

CHEM 101 - Basic Chemistry (3)

Designed for students who intend to take CHEM-163 but do not have the background or mathematical skills required to enter directly into CHEM-163. Topics include nomenclature, the scientific method as applied in chemistry, basic atomic theory, gas laws, equilibrium and chemical calculations and important classes of chemical reactions. Fall semester.

CHEM 102 - Intensive Basic Chemistry (0)

This course is a condensed version of CHEM 101. This course is offered for the second half of the fall semester only. Registration is by invitation only. Students who start the fall term in CHEM 163, and make C-, D, or F at mid-term, are invited to drop CHEM 163 and enroll in CHEM 102. These students will learn some basic skills that will improve their foundation in chemistry and allow them to move on to CHEM 163 the next semester.

CHEM 151 - Engineering Chemistry (3)

For Parks College students; others need special permission. Fundamental chemical concepts; atomic theory; nomenclature; stoichiometry; thermodynamics and thermochemistry; gases, liquids, solids, phase diagrams and solutions; chemical equilibrium; bonding in ionic, covalent, and organic compounds and in plastics, polymers, and composite materials; kinetics. Fall and Spring semesters.

CHEM 152 - Engineering Chemistry Laboratory (1)

For Parks College students, others need special permission. Laboratory experiments to illustrate and supplement material in CHEM-151. Fall and Spring semester.

CHEM 153 - Principles of Chemistry I (0-4)

Lecture three hours, laboratory three hours per week. Fundamental concepts and principles of inorganic chemistry. For students in the Schools of Nursing and Allied Health Professions and Education. Offered Fall semester.

CHEM 154 - Principles of Chemistry II (0-4)

Lecture 3 hours, laboratory 3 hours. This course covers fundamentals of organic chemistry with an introduction to biomolecules and biochemistry. Primarily directed to students in Allied Health, Nursing, and Education. Prerequisite: Chemistry 153.

CHEM 163 - Introduction to Chemistry I - Lecture Only (3)

Introduction to the theoretical and mathematical models of chemistry, including periodic table and the elements, naming compounds, basic atomic structure, principles of chemical bonding, gas laws, chemical reactions. Prerequisites: CHEM 101 or CHEM 102 and MATH 120 or equivalent. MATH ACT 24+ one year high school chemistry satisfies CHEM 101 or 102 requirement.

CHEM 164 - Introduction to Chemistry II-Lecture Only (3)

Continuation of Chemistry 163 covering redox reactions and electrochemistry, chemical kinetics and thermodynamics, nuclear chemistry, transition metal chemistry, and descriptive chemistry of the elements. Prerequisites: CHEM 163 or CHEM 167 with grade of C- or better

CHEM 165 - Introduction to Chemistry I - Laboratory Only (

The laboratory course to complement CHEM-163 and CHEM-167. Recommended only for students who have completed or are completing an adequate lecture course equivalent to CHEM-163 or 167.

CHEM 166 - Introduction to Chemistry II-Laboratory Only (

The laboratory course to complement CHEM-164 and CHEM-168. Recommended only for students who have completed adequate lecture courses equivalent to CHEM-163 or CHEM-167 and a lab course equivalent to CHEM 164 and who have completed or are completing an adequate lecture course equivalent to CHEM-165 or CHEM 168.

CHEM 167 - General Chemistry I, Chem & Biochem Majors

Introduction to the theoretical and mathematical models of chemistry, including periodic table and the elements, naming compounds, basic atomic structure, principles of chemical bonding, gas laws, chemical reactions. For students majoring in Chemistry or Biochemistry. Prerequisites: CHEM 101 or CHEM 102 and MATH 120 or equivalent. MATH ACT 24+ one year high school chemistry satisfies CHEM 101 or 102 requirement.

CHEM 168 - Gen Chem II, Chem/Bchem Majors (3)

Continuation of Chemistry 167 covering redox reactions and electrochemistry, chemical kinetics and thermodynamics, nuclear chemistry, transition metal chemistry, and descriptive chemistry of the elements For students majoring in Chemistry or Biochemistry

CHEM 178 - General Chemistry for the Advanced Student (

Registration is by invitation of the Department. Lecture two hours per week. A continuation of general principles including coordination chemistry, concepts of chemical equilibria, acid-base equilibria, thermodynamics, electrochemistry, nuclear chemistry and selected topics in inorganic descriptive chemistry. Spring semester.

CHEM 195 - First-Year Mentoring (0)

The First Year Mentoring program is designed to familiarize students with the chemistry and biochemistry majors. This not only includes an overview of curriculum requirements, but opportunities for research, internships, and their professional development. The program meets one time in the semester. No pre-requisites.

CHEM 208 - Introduction to Research Methods in Chemist

Laboratory three hours per week, lecture one hour per week. Introduction to modern instrumentation methods used in chemical research, including nuclear magnetic resonance (FT-NMR), ultraviolet-visible (UV-VIS), infrared (FT-IR), and mass spectroscopy (GC-MS). Synthesis and spectroscopic characterization of chemical compounds will be emphasized. Spring semester.

CHEM 220 - Chemistry and Crime (3)

This course, for non-specialist, will introduce the student to some principles of the field of Forensic Science with an emphasis on the role chemistry plays in this science. Among other topics, we will discuss a variety of chromatographic and spectroscopic techniques and their applicability to the investigation of crime.

CHEM 295 - Second-Year Mentoring (0)

The Second Year Mentoring program is designed to familiarize students with all aspects of doing research in the department. This includes how to select an advisor, expectations for earning credit, opportunities external to the department, and writing a senior thesis. The program meets one time in the semester. No pre-requisites.

CHEM 320 - Analytical Chemistry I (2)

Lecture two hours, laboratory six hours per week. Introductory gravimetric and volumetric analysis, Calibration and use of quantitative apparatus, theories underlying analytical procedures, calculations involved with analysis. Fall and Spring semester.

CHEM 322 - Analytical Chemistry Lab (2)

Calibration and use of quantitative apparatus including analytical balances, spectrophotometers, potentiostats, and chromatographic instrumentation.

CHEM 333 - Physical Chemistry I (3)

Topics include kinetic theory, chemical thermodynamics and equilibria. Fall semester.

CHEM 334 - Physical Chemistry II (3)

Topics include chemical kinetics, quantum chemistry and spectroscopy. Spring semester.

CHEM 335 - Physical Chemistry Lab (1-6)

Arranged laboratory, six hours per week. Experiments include physical chemistry techniques, phase diagrams, calorimetry, surfaces analysis, spectroscopy, kinetics, molecular modeling. For B.S. in Chemistry students. Spring Semester. Prerequisites: CHEM 333 & Corequisites: CHEM334. General Requirements: 2 courses (Course or Test: CHEM 333 may not be taken concurrently.)

CHEM 342 - Principles Organic Chemistry I (3)

Lecture three hours per week. Modern organic chemistry of aliphatic and aromatic compounds. Offered for students in the biological sciences and preprofessional health studies. Chemistry majors who are also in Preprofessional Health Studies should take CHEM-346. Fall and Summer semesters.

CHEM 343 - Prin Organic Chemistry II (3)

Lecture three hours per week. A continuation of CHEM-342. Spring and Summer semesters.

CHEM 344 - Organic Chemistry Lab I (1)

Laboratory three hours per week. An introduction to organic laboratory techniques. For chemistry majors in the B.A. program and students in the biological sciences and preprofessional health studies. Fall and Summer semesters.

CHEM 345 - Organic Chem Lab II (1)

Laboratory three hours per week. A continuation of CHEM-344 with an emphasis on the synthesis and reactions of organic compounds. For chemistry majors in the B.A. program and students in the biological sciences and preprofessional health studies. Spring and Summer semesters.

CHEM 346 - Organic Chemistry I (3)

Lecture three hours per week. Introduction to the organic chemistry of aliphatic and aromatic compounds, correlating structural theory and reactivity using a mechanistic approach. Offered for Chemistry majors in the B.S. and B.A. program. Fall semester.

CHEM 347 - Organic Chemistry II (3)

Lecture three hours per week. A continuation of CHEM-346. Offered for Chemistry majors in the B.S. and B.A. program. Spring semester.

CHEM 348 - Organic Laboratory Techniques (1)

This course introduces the basic operational techniques in the organic chemistry laboratory. Required for all chemistry and biochemistry majors. co-requisite: Chemistry 346

CHEM 350 - Organic Lab Techniques II (1)

Students carry out experiments on important organic functional groups encountered in organic chemistry. Students carry out reactions, learn more advanced lab and instrumental techniques, and study functional group properties. Required for all chemistry and biochemistry majors. Pre-requisites: 346 or 342 and 344 or 348 with C- or better, and 347, which may be taken concurrently.

CHEM 360 - General Biochemistry (1-3)

This course provides a survey of biochemistry. Topics include (a) structure and properties of amino acids, carbohydrates, lipids, and nucleic acids (b) behavior of enzymes (c) metabolism: glycolysis, citric acid cycle, oxidative phosphorylation (d) information transfer: replication, transcription, translation.

CHEM 391 - Introduction to Chemical Literature (1)

Introduction to chemical literature and related informational retrieval techniques; students utilize available resources to prepare one or more oral seminar presentations. Fall semester.

CHEM 395 - Transfer Student Mentoring (0)

The mentoring session covers material presented in CHEM 195: First Year Mentoring and CHEM 295: Second Year Mentoring and is designed for transfer students or students not in residence when the other mentoring sessions were held. This course will be offered each semester and there are no prerequisites.

CHEM 397 - Undergraduate Research (0-3)

Chemical research under the direction of a faculty member of the department. Required for students in the B.S. in Chemistry program.

CHEM 413 - Inorganic Chemistry (3)

The development and foundation of the periodic classification of the elements and an introduction to the systematic study of the properties of the elements and their compounds. Fall semester.

CHEM 414 - Inorganic Chemistry Laboratory (1)

Inorganic Chemistry Laboratory Arranged laboratory, three hours per week. Experiments include Inorganic preparations, advanced laboratory methods, chemical characterization. For B.S. in Chemistry students. Spring Semester. Prerequisites: CHEM 413

CHEM 420 - Analytical Chemistry II (3)

Lecture three hours per week. Topics to be covered include an introduction to computer-based instrumentation, data acquisition methods, statistical evaluation of data. Also included are lectures on instrumental techniques such as optical spectroscopy, electrochemical measurements, and separation methods. Fall semester.

CHEM 422 - Analytical Chemistry III (1)

Analytical Chemistry III. Arranged laboratory, three hours per week. Experiments to be covered include UV-Vis spectrophotometry, fluorescence spectrometry, gas chromatography, liquid chromatography, potentiometric methods, atomic absorption, an introduction to computer-based instrumentation, and miniaturized instrumentation. For B.S. or B.A. in Chemistry students. Fall Semester. Prerequisites: CHEM 320, 322, (343or347), & 348 & Corequisites: CHEM 420

CHEM 432 - Mathematical Technique in Chemistry (3)

Includes introduction to differential equations, group theory, matrix algebra and vector analysis as applied to chemistry. Fall semester.

CHEM 435 - Environmental Chemistry (3)

This course is concerned with the impact of human activities on our natural surroundings, and will focus on the chemical processes that occur in bodies of water and in the atmosphere. Pollutant removal and health hazards to humans will also be discussed.

CHEM 444 - Biochemistry (3)

This course is designed to bridge chemistry and biology by studying the underlying mechanisms of living processes. It will emphasize chemistry, and systematically establish the relationship between chemical processes and biological structure. Discussions of biomolecules will be followed by descriptions of their roles in metabolism. Spring semester.

CHEM 445 - Principles of Medicinal Chemistry (3)

This course examines the relationship between chemical structure and biological activity with an emphasis on drug design and modification. Specific drug classes which will be used as illustrative of this relationship include, cardiovascular drugs, anti-inflammatory agents, steroid hormones, and chemotherapeutic agents (antibiotics), among others. Fall semester.

CHEM 449 - Organic Spectroscopy (3)

This lecture/laboratory course meets for two hours of lecture and three hours of lab per week and consists of a look at the principles of spectroscopic techniques used in organic/bioorganic chemistry. The course also teaches practical, hands-on approaches to the use of various spectroscopic techniques for structure determination of organic molecules.

CHEM 462 - Biochemistry I (0-3)

An upper-level, one semester, undergraduate course focusing on biomolecules. Topics to be covered include biological buffers, thermodynamics, amino acids, proteins, carbohydrates, lipids, membranes, nucleic acids, recombinant DNA, enzymes, and molecular motors.

CHEM 463 - Biochemistry Lab I (1)

An upper level, one semester, undergraduate laboratory surveying the fundamental components of biochemistry. This laboratory is intended to introduce the students to many of the important techniques employed by biochemists including but not limited to buffers, titrations, spectrophotometry, ion exchange chromatography, thin layer chromatography, quantification of protein concentration, gel-filtration, affinity chromatography, native gel electrophoresis, SDS-PAGE electrophoresis, and enzyme kinetics.

CHEM 464 - Biochemistry II (3)

An upper-level, one semester, undergraduate course focusing on metabolism and information transfer. Topics to be covered include glycolysis, citric acid cycle, electron transport, oxidative phosphorylation, photosynthesis, synthesis and degradation of biomolecules, transcription, replication, and translation.

CHEM 465 - Biochemistry Lab II (1)

An upper level, one semester, undergraduate laboratory surveying advanced components of biochemistry. This laboratory is intended to introduce the students to many of the advanced techniques employed by biochemists including but not limited to isolation and characterization of enzymes, NMR, ligand binding, recombinant DNA techniques, X-ray crystallography, PCR, and computer modeling.

CHEM 495 - Senior Residency (0)

Required for graduating seniors.

CHEM 498 - Advanced Independent Study (0-3)

Prior permission of sponsoring professor and chairperson required.

CHEM 500 - Intro to Chemical Research (1)

This course will provide new, incoming graduate students with instruction on how to perform research in our department. Lectures will involve how to pick research mentor, database searching and journal capabilities, how to write an abstract, how to give oral and poster presentation, research ethics, and chemical safety.

CHEM 512 - Group Theory & Spectroscopy (3)

Introduction to spectroscopic techniques applied to structural problems in inorganic chemistry. Topics include IR, UV, visible, NMR and ESR spectroscopy; ligand field theory and group theory in interpretation of spectra. (Offered every other Fall semester.)

CHEM 513 - Inorganic Chemistry (3)

The development and foundation of the periodic classification of the elements and an introduction to the systematic study of the properties of the elements and their compounds. Fall semester.

CHEM 515 - Organometallic Chemistry (3)

Key aspects of organometallic and metal cluster chemistry; rationalization of organometallic complexes using the eighteen-electron rule; metal carbonyl complexes and their analogs; commonly encountered carbon- and heteroatom-based ligands; isolobal theory; mechanisms of organometallic reactions; organometallic chemistry in catalysis with a focus on some key industrial homogeneous catalytic processes.

CHEM 518 - Intro Inorganic Research (3)

This course gives students a thorough grounding in basic and advanced aspects of solid state structure and function. It begins with a survey of basic crystalline packing and symmetry leading to description of critical properties, such as electrical and super-conductivity. Solid state analysis will be described, with an emphasis placed on X-ray diffraction (XRD) techniques.

CHEM 519 - Spec Top-Inorganic Chemistry (3)

Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 520 - Analytical Chemistry II (3)

This course will examine instrumentation required analytical determinations. We will take both a broad and a more detailed look at instrumental methods for chemical analysis. We will study a broad range of chemical analysis methods, including chromatographic, electrochemical, optical spectroscopic, and mass spectral methods. Time permitting we will also touch on x-ray, surface and few more esoteric techniques. We will also learn some of the more detailed electronic and engineering aspects of chemical instrumentation.

CHEM 521 - Environmental Chemistry (3)

Concerns the impact of human activities on our natural surroundings. Course will focus on the chemical processes which occur in the atmosphere and in bodies of water and the effect of release of chemical pollutants on these systems. Sources of pollutants will be identified, and their removal from aqueous and atmospheric systems will be discussed. Health hazards to humans of selected pollutants will be covered to a limited extent.

CHEM 523 - Chemical Sensors (3)

This course is designed to introduce the fundamentals of sensors and to discuss sensor development and applications. Topics to be covered include: optodes, ion selective electrodes, amperometric sensors, optical sensors, biosensors, and miniaturized sensors.

CHEM 524 - Electroanalytical Chemistry (3)

This course is designed to introduce you to the fundamentals of electrochemistry and to discuss electroanalytical techniques. Topics to be covered include: chronoamperometry, cyclic voltammetry, scanning electrochemical microscopy, spectroelectrochemistry, electrochemiluminescence, and electrochemical sensors.

CHEM 525 - Bioanalytical Meth Analysis (3)

This course will focus on analytical techniques and methodologies that are used to monitor biologically important compounds in various matrices. Topics will include the use of enzymes in bioassays, immunoassays involving antibody-antigen interactions, mass spectrometry in proteomics, capillary electrophoresis for genomics, and microscale instrumentation for quantitative determinations. Offered every other Fall semester.

CHEM 526 - Analytical Separations (3)

This course focuses on chromatographic and electrophoretic separations. Topics include general plate theory, the principles and optimization of gas chromatography, liquid chromatography, supercritical fluid chromatography and capillary electrophoresis, and the principles of the detection systems utilized in these separation techniques. (Offered every Spring semester.)

CHEM 527 - Stat Meth of Phys Scientists (3)

This course presents many of the important statistical methods used in physical sciences with a focus on applications important to engineering, chemistry, and physics. Errors, uncertainties, and error analysis in physical measurements, probability theory, probability density functions, moments of distributions, statistical parameters, statistical tests, least squares, chemometrics, electronic noise and noise reduction, and control charts are all discussed.

CHEM 528 - Intro to Analytical Research (1-3)

Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in analytical chemistry. (Offered every semester.)

CHEM 529 - Special Topics (3)

Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 534 - Advanced Thermodynamics (3)

The subject matter of this course entails advanced chemical thermodynamics. The four laws are recalled from Modern Thermodynamic perspective. The major component of the course is Statistical Thermodynamics where the four laws are restated from microscopic point of view. Statistical interpretation of equilibrium constant is given. Finally, laws related to the workings of far-from-equilibrium systems are summarized using Prigogine's minimum entropy production principle.

CHEM 535 - Elements of Surface/Colloid Sc (3)

The chemical properties of interfaces will be the main focus of this course. Chemistry of gas-liquid, solid-gas, and solid-liquid interfaces will be discussed with emphasis on thermodynamic descriptions. Industrial applications of interfacial processes will also be discussed. (Offered every other Spring semester.) Prerequisites: Chem 333 and 334 or the equivalent.

CHEM 537 - Computational Chemistry (3)

A description of the theory and practice of computational methods used in modern chemical research. Students gain knowledge of computational methods through classroom instruction and semester-long projects focused on a molecular system of their choice. Molecular calculations are performed using Gaussian 03 on a supercomputer.

CHEM 538 - Intro to Physical Research (1-3)

Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in physical chemistry. (Offered every semester.)

CHEM 539 - Spec Top-Physical Chemistry (3)

Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 540 - Advanced Organic Chemistry (3)

Physical organic chemistry including molecular orbital theory, structure-activity relationships, stereochemistry, reactive intermediates, determination of organic reaction mechanisms. (Offered every Fall semester.)

CHEM 541 - Synthetic Organic Chemistry (3)

Emphasis on modern synthetic methods, mechanisms and application to the synthesis of complex structures. (Offered every Spring semester.)

CHEM 544 - Polymer Chemistry (3)

A survey of polymer chemistry including the mechanisms of polymerization and the characterization and structure-property relationships of polymers. (Offered every other year.)

CHEM 545 - Principles of Medicinal Chem (3)

This course examines the relationship between chemical structure and biological activity with an emphasis on drug design and modification. Specific drug classes which will be used as illustrative of this relationship include, cardiovascular drugs, anti-inflammatory agents, steroid hormones, and chemotherapeutic agents (antibiotics), among others. Fall semester.

CHEM 546 - Heterocyclic Chemistry (3)

A broad survey of the synthetic approaches to, and reactions of the fundamental heterocyclic systems. (Offered occasionally.)

CHEM 548 - Intro to Organic Research (1-3)

Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in organic chemistry. (Offered every semester.)

CHEM 549 - Organic Spectroscopy (3)

Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 551 - Fundamentals & Design of Nana (3)

This course addresses the development and application of nanomaterials. Synthetic and preparative processes for making nanoscale structures and materials are addressed along with techniques for their characterization. Theoretical models for describing physical and chemical properties of nanostructures are presented. Nanotechnology and applications of nanostructures are covered.

CHEM 561 - Principles of Develop Biology (3)

This course investigates cellular and molecular mechanisms responsible for building multicellular organisms. Topics include fertilization, cleavage, gastrulation, axis specification, and organogenesis, with particular attention devoted to the experimental basis for current models. The connections between developmental biology and medical environmental issues will also be discussed.

CHEM 591 - Research Seminar (0-1)

Registration required of full-time graduate students during regular sessions when the course is offered. Applicants for the M.S. (Research) degree may accumulate a maximum of three semester hours toward that degree. (Offered every Fall and Spring semester.)

CHEM 597 - Research Topics (0-3)

Prior permission of guiding professor required.

CHEM 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor and department chairperson

CHEM 618 - Methods in Inorganic Research (3)

This course will introduce students to the most current research methods in modern inorganic chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze and interpret data in order to solve a particular problem in inorganic chemistry.

CHEM 619 - Advanced Inorganic Research (3)

This course will require students to search and critically analyze the inorganic chemistry literature, formulate a problem in experimental and/or theoretical inorganic chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 621 - Environmental Chemistry (3)

Concerns the impact of human activities on our natural surroundings. Course will focus on the chemical processes which occur in the atmosphere and in bodies of water and the effect of release of chemical pollutants on these systems. Sources of pollutants will be identified, and their removal from aqueous and atmospheric systems will be discussed. Health hazards to humans of selected pollutants will be covered to a limited extent.

CHEM 627 - Stat Meth for Phys Scientists (3)

This course presents many of the important statistical methods used in physical sciences with a focus on applications important to engineering, chemistry, and physics. Errors, uncertainties, and error analysis in physical measurements, probability theory, probability density functions, moments of distributions, statistical parameters, statistical tests, least squares, chemometrics, electronic noise and noise reduction, and control charts are all discussed.

CHEM 628 - Methods in Analytical Research (3)

This course will introduce students to the most current research methods in modern analytical chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect analyze and interpret data in order to solve a particular problem in analytical chemistry.

CHEM 629 - Advanced Analytical Research (3)

This course will require students to search and critically analyze the analytical chemistry literature, formulate a problem in experimental and/or theoretical analytical chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 638 - Methods in Physical Research (3)

This course will introduce students to the most current research methods in modern physical chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze, and interpret data in order to solve a particular problem in physical chemistry.

CHEM 639 - Advanced Physical Research (3)

This course will require students to search and critically analyze the physical chemistry literature, formulate a problem in experimental and/or theoretical physical chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 648 - Methods in Organic Research (3)

This course will introduce students to the most current research methods in modern organic chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze, and interpret data in order to solve a particular problem in organic chemistry.

CHEM 649 - Advanced Organic Research (3)

This course will require students to search and critically analyze the organic chemistry literature, formulate a problem in experimental and/or theoretical organic chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 651 - Fundamentals & Design of Nano (3)

This course addresses the development and application of nanomaterials. Synthetic and preparative processes for making nanoscale structures and materials are addressed along with techniques for their characterization. Theoretical models for describing physical and chemical properties of nanostructures are presented. Nanotechnology and applications of nanostructures are covered.

CHEM 690 - Introduction to Proposal Writing and Oral Pre

This course will introduce students to the complex process of proposal writing and the art of preparing and presenting effective oral presentations.

CHEM 691 - Seminar (1)

Each semester, invited speakers from research programs in both academic and industry will give presentations on their work, and PhD students will be expected to attend and engage in discussions with the speakers.

CHEM 699 - Dissertation Research (0-6)

This course involves an experimental or theoretical research project chosen and completed under the guidance of a graduate faculty member. A thesis must be written and orally defended.

Chinese (CHIN)**CHIN 110 - Communicating In Chinese I (0-3)**

Prerequisites: None Introduction to basic pronunciation (pinyin), simple sentence structure. Simple oral comprehension and speaking Chinese. Vocabulary items and useful phrases for surviving simple daily life and travel in China.

CHIN 115 - Communicating In Chinese II (0-3)

Prerequisites: CHIN110-01 Communication in Chinese I or Instructor's permission. Development of Chinese vocabulary, oral comprehension, fundamentals of Chinese grammar, reading, writing and speaking capabilities. Introduction to Chinese culture.

CHIN 210 - Intermediate Chinese (0-6)

Prerequisites: CHIN115-01 or Instructor's permission. Development and refinement of Chinese vocabulary, oral comprehension, fundamentals of Chinese grammar, reading, writing and speaking capabilities. Introduction to Chinese culture and business protocols.

CHIN 215 - Intermediate Chinese (0-3)

Development and refinement of Chinese language skills by introducing Chinese culture through extensive readings of Chinese literature and history. Prerequisite: CHIN 210.

CHIN 310 - Oral and Written Proficiency in Chinese I (0-3)

Builds on acquired knowledge of Chinese language and culture. Review and refinement of grammar skills, development of written and oral communication skills. Reading and discussion of authentic language materials (articles, videos, recordings, etc.). Pre-requisite: CHIN 215

CHIN 315 - Oral and Written Proficiency in Chinese II (0-3)

Continuation of CHIN 310. Further development of oral and written expression leading to the ability to handle with confidence a wide variety of social situations and writing needs.

Classical Humanities (CLH)**CLH 120 - Greek Lit in Translation (3)**

Fall semester.

CLH 121 - Latin Lit in Translation (3)

Spring semester.

CLH 429 - Intro to Classical Mythology (3)

Greek and Roman Mythology; special attention to use of mythology in later literature.

Communication (CMM)**CMM 100 - Human Communication and Culture (3)**

An introduction to fundamental concepts and theories that contribute to our understandings of human communication. Students examine the impact of technology and culture on the communication practices of individuals and collectives across a variety of contexts ranging from interpersonal to organizational to mediated communication. Satisfies social science requirement for non-majors.

CMM 120 - Public Speaking (3)

Students are introduced to principles of effective public speaking and provided with opportunities to develop public speaking skills. In addition, standards of evaluation for public communication are established for the use in evaluating their own and other's public speaking performances.

CMM 140 - Film Criticism (3)

Viewing and discussion of some short and several feature films; text reading and exams; written reviews and responses to film discussion; refining of film as an art.

CMM 200 - Communication Theory (3)

Examines the problems that communication researchers attempt to solve by theorizing effectively. Topics include the relation of theory to research and practice, and different ways of theorizing, such as covering laws, systems, and social constructionist approaches.

CMM 206 - Media and Society (3)

This introductory course provides students with the background and critical skills necessary for understanding how media work and how they impact our everyday lives. It seeks to give students critical media analytical skills necessary to succeed as professionals, citizens, and members of a community.

CMM 210 - Journalism: News Writing (3)

Introduces basic techniques of gathering, writing, and editing news; discusses new room operations, decision making, and ethics; includes frequent in-class and out-of-class writing assignments.

CMM 212 - Message Design (3)

Message Design explores the process of analyzing audiences, needs, and situations to construct strategically appropriate messages. This course emphasizes writing skills and the process of analyzing messages. This course draws upon rhetorical theories and their practical applications. ENGL 190 or EAP 190 are prerequisites for this course.

CMM 220 - Small Group Presentation (1)

Small Group Presentation is a one-credit course for students pursuing specialized technical careers. As part of creative teams, students will learn to design and deliver effective technical presentations. Students will hone their skills while participating in discussions, workshops, speech critiques, research and presentations.

CMM 230 - Intergroup Dialogue (3)

Intergroup dialogue provides a space for discussion and learning about issues of cultural and social differences, conflict, and community. Through this course student will explore their own and others' social identities and ways of taking action to create change and bridge differences at both the interpersonal and the social/ community levels.

CMM 255 - Photojournalism (3)

This is an introductory course intended for the student who wishes to learn the fundamentals of making solid pictures or wants to gain an appreciation of the field. It includes the technical, aesthetic and professional aspects of photography as well as criticism. It considers the history and future of photography.

CMM 256 - Graphic Design Production (3)

Introduces visual communication theory and practice, including the elements and principles of perception, typographic design, and symbol logic. Emphasizes functional and aesthetic use of parts, forms, color, and typography, and strategic thinking that leads to effective visual communication.

CMM 280 - Communication Research (3)

Introduces principles of empirical research in communication and trains students to become critical consumers of research used and produced by communication professionals. Topics covered include formulating research questions; conducting literature reviews; understanding problems of observation, measurement, validity, and reliability; and critiquing research designs. Satisfies social science requirement for non-majors.

CMM 281 - Video Production and Design (3)

Video Production and Design focuses on the professional production and design of video projects. Students learn to craft scripts, direct, shoot in the field and work in a studio environment, use Final Cut Pro editing software, and deliver their final work for use on television, mobile devices, websites and DVD.

CMM 293 - Special Topics (0-4)

This course prepares students in the engineering and other technical professions to make individual and group presentations in professional and public settings. Students learn to prepare and deliver individual presentations, briefings, and reports adapted to technical, corporate, and public audiences.

CMM 300 - Interpersonal Communication (3)

Theory, research, and practical exercises in dyadic interaction. Examines mutual influence, communication patterns, relationship characteristics, interaction goals, and contextual factors.

CMM 305 - Argumentation and Debate (3)

Basic concepts and practical application of the role of argument in day-to-day communication. Students learn to identify, analyze, and criticize arguments, and will gain experience in creating, presenting, defending, and refuting arguments in oral and written form.

CMM 309 - Health Communication (3)

Examines health communication research and theory in such a way that considers the influences of culture, interpersonal relationships, societal structures, media, and technology on practice. Explores the role of communication in a variety of health contexts, such as health care delivery, health promotion, disease prevention, and risk communication.

CMM 311 - Feature Writing (3)

Analysis of contemporary newspaper and magazine feature writing techniques. Required assignments in common feature genres, such as seasonal stories, profiles, and how-to and service articles.

CMM 312 - Media Scriptwriting (3)

This course explores the art and crafts of media storytelling. Juggling the "Audio" (music, sound, silence, words), "visual" (design) and "scriptwriting" (art of the drama) crafts, the students work all semester to construct a final project: a written, produced, directed episode for an original television series. Prerequisite: CMM 210

CMM 313 - Editorial and Opinion Writing (3)

Problems of writing editorials, news analyses, and opinion pieces. Course includes reading and writing about topical and controversial national and international issues.

CMM 314 - Essay Writing (3)

Reading and analysis of work by a wide range of essayists, and regular practice in writing formal and informal essays. Emphasis on finding a personal voice, polishing one's writing style, learning to describe scenes and characters, and creating eloquent literary effects.

CMM 320 - Organizational Communication (3)

Discusses the basic theories and concepts related to the study of communication in organizations. Considers a variety of theoretical approaches to the study of organizational settings, as well as specific organizational communication issues such as decision-making, feedback, conflict management, diversity, and technology in light of those theoretical approaches.

CMM 323 - Business and Professional Communication (3)

Practical instruction and experience in developing professional communication skills in situations such as conferences, reports, sales, media and other professional speaking situations.

CMM 330 - Intercultural Communication (3)

Introduces the role of culture in the process of human interaction and encourages in-depth analysis of the unique challenges posed by intercultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups.

CMM 342 - Literary Journalism (3)

Analyzes recent trends in American magazine journalism. Discusses stylistic strategies of writers such as Tom Wolfe, Joan Didion, Hunter Thompson, and Jane Kramer, and explores recent debates about journalism as a cultural practice.

CMM 344 - Media Ethics (3)

Introduces media ethics issues primarily in journalism, but also in advertising, public relations, entertainment and visual media. Examines frameworks by which ethical decisions can be made systematically and consistently. Topics include accountability in journalism, truth-telling in visual media, ethics of persuasion, social ethics, and privacy.

CMM 347 - Political Communication (3)

Analyzes the role of communication in politics. Topics covered include communication practices in political communities, campaigns, legislative deliberations, and the popular media.

CMM 356 - Publication Design (3)

Principles of effective visual communication applied to the planning, design, and production of publications such as newsletters and magazines.

CMM 360 - Public Relations Principles and Practices (3)

Introduces basic public relations concepts. Examines the relationship between clients, practitioners, and the news media. Includes a variety of public relations activities designed to give students a working understanding of how public relations functions.

CMM 361 - Writing for Public Relations (3)

Covers forms of professional writing practiced in corporate, nonprofit, and government public relations. Requires writing of informative and persuasive messages, press releases, PSAs, feature profiles, and backgrounders, and preparation of press kits.

CMM 370 - Advertising Principles and Practices (3)

Explains and demonstrates the important role of advertising in the marketing process. Outside professionals make presentations and are questioned and critiqued by students. Course maintains a balance of persuasive theory and technique.

CMM 371 - Advertising Writing and Production (3)

Teaches students to use their creative skills to write and produce effective ads, commercials, and advertising campaigns. Students learn to think strategically as well as imaginatively, working in small groups to brainstorm and think "outside the lines." Students also start preparing portfolios for presentation.

CMM 377 - Advertising Media Buying (3)

Students will develop an understanding of media strategy and grasp the key issues that determine media strategy, including definition of consumer groups, the nature of message dispersion and identification of qualitative values to be acquired from the advertising. Students use actual reference sources in their evaluation of media.

CMM 380 - Interviewing and Listening (3)

Students will develop an understanding of media strategy and grasp the key issues that determine media strategy, including definition of consumer groups, the nature of message dispersion and identification of qualitative values to be acquired from the advertising. Students use actual reference sources in their evaluation of media.

CMM 382 - Communication in Third Places (3)

This course introduces students to naturalistic/interpretive research as a way to examine on aspect of contemporary public life in America - communication in "third places." The course first introduces students to issues regarding the role public life plays in societies. Next, the students learn about naturalistic research methods. Finally, students conduct a naturalistic study of a third place of their choosing.

CMM 383 - Methods Rhetorical Analysis (3)

Discusses the rhetorical methods used in the critical analysis of public communication. Course offers practice in the application of a variety of rhetorical methods.

CMM 384 - Analysis of Popular Culture (3)

Discusses methodologies used to study popular symbols, rituals, and artifacts in everyday culture, such as those in television, radio, film, print, and sport, and the social practices by which such artifacts are produced and consumed. The readings draw on the theoretical literature in rhetorical criticism, critical studies, and cultural studies.

CMM 385 - Quality Research Methods in Communication (3)

Introduces students to the methods used by qualitative/naturalistic researchers. Topics covered include strengths and limitations of qualitative research; problems of studying interaction in public settings; procedures for collecting, analyzing, and writing up qualitative data; and techniques for managing relationships between subjects and researcher.

CMM 386 - Studio Production (3)

The course creates a season of television shows, each produced in various professional formats. Students perform one of the following roles for each new show: producer, director, on-camera talent, technical director, or audio operator. Prerequisite: CMM 207

CMM 389 - Sports Documentary (3)

The Sports Documentary class covers the ins and outs of documentary filmmaking. Students will produce a sports documentary using voice-overs, interviews, visuals and music. Coming into the class, students should have the basic skills necessary to digitize and do basic edits in a digital video editor. Prerequisite: CMM 207

CMM 390 - Sport Communication (3)

Individuals participate in, report on, consume, and promote sport using a variety of mediated and face-to-face messages. Students employ communication theory to critically examine these messages to understand how sport is both affected by and creates broader cultural beliefs, values, and practices regarding race, gender, ethnicity, physical (dis)abilities, and achievement. (Prerequisite CMM 280 or permission of instructor)

CMM 400 - Family Communication (3)

Examines the family as a communication system through which patterns of interaction develop, maintain, and enhance/disturb relationships. Explores theory and research on topics such as family culture and identity, conflict, and decision-making. Emphasizes critical analysis and development of effective verbal/nonverbal skills to promote healthy family communication. (prereq: CMM 200)

CMM 409 - Theories of Persuasion (3)

Focuses on contemporary persuasion theory and research. Covers a variety of perspectives on the subject, such as motivation theory, social judgment, social movements, and advertising campaigns. The approach helps demonstrate how theories of persuasion can help guide the practice of human communication.

CMM 410 - Multiplatform Journalism (3)

This course fosters students' journalism skills across platforms; students will learn how to combine audio, video, and photos with text to tell stories and how to evaluate when it is appropriate to use these tools. CMM 210 is a prerequisite for the course.

CMM 415 - Nonfiction Writers Workshop (3)

Capstone writing course, designed to provide near-professional experience for advanced writers. Course conducted as a group workshop.

CMM 416 - Editing (3)

Teaches skill required for editing and proofing news, magazine, or book copy. Topics covered include close reading of manuscripts for grammar, style, structure, and word choice; writing of appropriate headlines; and trimming copy to fit space.

CMM 420 - Leadership and Teams (3)

Examines formal and emergent leadership principles as they relate to productive teams. Students learn about leadership communication, conflict management, team/group communication, techniques for analyzing and improving team communication skills, and technologies for connecting virtual team members. This course prepares students to be effective and ethical team leaders/communicators in organizational contexts. Prerequisite: CMM 200

CMM 421 - Organizational Culture (3)

Introduces the theory and philosophy of cultural approaches to organizational communication. Topics covered include the nature and significance of sense-making activities in a modern organization, the interplay of organizational structure and culture, the methods researchers use to investigate and write about issues of organizational culture.

CMM 422 - Conflict Mediation and Negotiation (3)

Examines the communication patterns people use when trying to work through conflicts. Discusses the positive uses of conflict in relations and organizations as well as successful methods for negotiating conflicts. Course includes case studies of conflicts in different contexts, as well as specific knowledge about organizational negotiation and bargaining.

CMM 424 - Training and Development (3)

Focuses on processes of training and development in organizations. This includes assessing communication goals and practices, designing training or consulting programs that enhance interactions in organizational contexts, and evaluating these programs. Students will conduct a needs assessment of an organization and design and present a training proposal. (prereq: CMM 200)

CMM 430 - Gender and Communication (3)

Explores the ways in which communication in families, schools, media, and society creates and perpetuates gender rules. Discusses how men and women enact gender differences in public and private, and how such experiences affect success, satisfaction, and self-esteem.

CMM 432 - Communicating Across Racial Divisions (3)

Focuses on the communication process that occurs in interactions between races in the United States, with an emphasis on the relationship between Blacks and Whites. Examines how issues such as class structure, power and the history of race relations create barriers to effective communication and explores solutions to increase understanding.

CMM 435 - Stereotyping and Bias in the Mass Media (3)

Examines debates over stereotyping and bias in the mass media. Considers the types of materials that have aroused charges of bias, and surveys the historical, economic, political, and sociological perspectives that help explain stereotyping as a cultural practice.

CMM 441 - Crit Perspectives: Journalism (3)

This course provides students with a critical understanding of journalism and how it functions within a democratic society. Students will learn about the development of journalism, contemporary issues, and major theoretical concepts in journalism studies. The assignments will allow students to apply critical perspectives to news content.

CMM 442 - Theory of Free Expression (3)

This course introduces students to issues of free expression and First Amendment law and their manifestation in the legal system, particularly the U.S. Supreme Court. Broadly put, the course analyzes the history, political and philosophical arguments, legal cases, and controls associated with communicating freely.

CMM 443 - Culture, Technology and Communication (3)

Analyzes the interrelation of culture, technology, and communication in contemporary societies. Topics covered include the historical evolution of communication technology, the reorganization of social and psychic time and space, and recent debates about virtual reality.

CMM 444 - History of Journalism (3)

Traces the history of journalism in the United States as a literary, political, social, economic, and cultural institution.

CMM 453 - Multimedia Scripting & Design (3)

Focuses on the use of Macromedia Director to create digital multimedia presentations. The course covers both the scripting of multimedia presentations and the design of attractive, practical interfaces.

CMM 455 - Seminar: Politics, Rhetoric, and Culture (3)

This course examines the relationship between politics and rhetoric. Does communication reflect political reality or create it? What are the political effects of different rhetorical styles? We will examine classical writings on rhetoric as well as contemporary democratic and rhetorical theory.

Prerequisite: junior-level standing or permission of instructor.

CMM 460 - Integrated Communications Campaigns (3)

Explores techniques for researching, designing, presenting, and evaluating communication campaigns. Course emphasizes integration of public relations and advertising strategies in a comprehensive plan.

CMM 461 - Social Media & Strategic Comm (3)

This course reaches the principles of social media and how they should be utilized in strategic communication contexts, mainly in public relations. This is a semi-lecture course, combining discussions, case studies, and hands-on tasks. Students will create a social media campaign for a select client. Prerequisite: CMM 360 (May be taken concurrently)

CMM 464 - Public Relations Case Studies (3)

Analyzes a wide range of public relations situations that actual organizations have confronted. Students read about and critique real-life cases, devise alternative strategies, and compare solutions. Course emphasizes strategic thinking and problem solving.

CMM 465 - International Public Relations (3)

Explores the effect of cultural differences on the practice of international public relations. Readings discuss the significance, for public relations practitioners, of differences in language, gender roles, time and space orientations, ethical norms, symbolic rituals, and institutional structures.

CMM 470 - Advertising Research and Strategic Planning (3)

Discusses use of primary and secondary research to develop objectives and strategies for an integrated advertising and promotion plan. Research methods used may include focus groups, observation, structured interviews, mall intercepts, and tested questionnaires. CMM-A470 is a prerequisite for participation in the spring AAF competition.

CMM 472 - NSAC Advertising Competition (0-3)

Students participate in annual American Advertising Federation competition. They work as an advertising agency preparing research, media, creative, public relations and even marketing plans, and preparing plans book and making client presentation for national competition.

CMM 481 - Digital Storytelling (3)

As a cultural practice digital storytelling is a way to learn about and represent the narratives existing within communities. This course teaches the theoretical and practical skills needed to create a digital story: (1) qualitative research methods, (2) narrative writing, and (3) digital production.

CMM 489 - Advanced Media Practicum (3)

Students will produce multimedia projects working directly with a local community organization. These projects will focus on telling the story of the organization based upon their media needs. Students will have the opportunity to write, produce and edit various short documentaries and other media projects. Enrollment requires instructor approval.

CMM 490 - Senior Capstone in Communication (3)

Students will engage in a culminating project synthesizing the theories, research methods, and applications of Communication major coursework. Projects will showcase creativity, creative thinking, and the ability to solve a problem and/or address an important and significant issue in a way that demonstrates knowledge/skill mastery. CMM 280 is a prerequisite.

CMM 491 - Internship (0-3)

Work experience with local business or non-profit organizations in the student's area of communication interest. May be repeated once for general elective credit.

CMM 500 - Graduate Study of Comm (3)

An introduction to both the responsibilities and skills required of graduate students in Communication, and to the perspectives and theories that guide the study of the communication process in interpersonal, small group, organizational, intercultural, and mass communication contexts.

CMM 502 - Res Methods in Communication (3)

An introduction to the research process in the study of communication. Emphasis is on formulating research questions, methods of data collection, data management, and data analysis to help students become more skillful researchers and more knowledgeable interpreters of others research.

CMM 504 - Reading Fndtns in Comm Theory (3)

Engages students in a multi-theoretical examination of the communication process through the reading, written analysis, and discussion of books and historical importance in the discipline.

CMM 506 - Contemp Theories in Comm (3)

Provides students the opportunity to read, analyze, and discuss contemporary literature in communication theory that is influencing the discipline. Emphasizes readings of a broadly cultural orientation as well as established social science approaches to communication.

CMM 510 - Studies in Mass Media (3)

Explores the theoretical and methodological differences between behavioral, cognitive, and cultural approaches to mass media. Discusses recurring issues in the history of media research, such as debates over the media's political and social influence, audiences uses of the media, and media and social policy.

CMM 514 - Culture & Public Dialogue (3)

Study of the theory and practice of dialogue in public and private, cultural and intercultural settings. Students will understand major theorists of dialogue, and analyze actual attempts at dialogic communication in especially difficult contexts involving conflict, prejudice, and political ideologies.

CMM 518 - Organizational Communication (3)

Advanced study of formal and informal communication in the organizational context. Students review, discuss, and critique research and theory in organizational communication with the goal on conducting a limited research project. Theoretical approaches covered in this course include classical, human relations, human resources, systems, cultural, critical, postmodern, and feminist theories.

CMM 520 - Communication Ethics (3)

The use of lectures, discussions and case studies to stimulate the moral imagination, facilitate the recognition of moral issues, develop analytical skills, and increase tolerance for differing points of view.

CMM 521 - Contmpy Rhetorical Theory (3)

A comprehensive examination of contemporary rhetorical theories, and how these theories enhance our understanding of the nature of rhetoric.

CMM 522 - Rhetorical Theory & Criticism (3)

The critical analysis of public discourse, including speeches, written works, social movements, and forms of popular culture. Students will discuss rhetorical criticism as a research method in communication.

CMM 524 - Language & Cultural Diversity (3)

This course is designed to introduce students to the study of language and provide an opportunity to examine how language influences culture and culture influences language. Through the study of language in cultural contexts, the student will better understand the significance that language and communication have in the construction of culture.

CMM 525 - Foundations of Journalism (3)

Explores the history of American journalism as a social institution. Among the topics covered will be the role of journalism in public life, the origins of professionalism and objectivity, the bureaucratic structure of news organizations, group conflicts over press freedom, and the nature of news as a symbolic world.

CMM 526 - Interpersonal Communication (3)

Advanced study of human communication processes in dyadic and small group relationships. Application of related communication theory to the analysis of relational interaction across contexts. Study of the "self and the other" as a communication system. Individual research required.

CMM 532 - Digital Storytelling (3)

Digital Storytelling explores the practical and theoretical components of cultural reporting and non-fiction narrative. This course involves employing the key skills needed to create multi-media digital stories: (1) qualitative research methods, (2) narrative writing, (3) critical thinking and (4) technical production.

CMM 535 - Advanced Research Methods (3)

Introduces methods commonly used by scholars in the humanities and social sciences to study a wide range of cultural texts and practices. Discusses some of the theoretical differences among the most common approaches to cultural studies. Readings include representative works by scholars in communication, sociology, history, and literature.

CMM 562 - Philosophy of Communication (3)

Explores philosophical issues and theoretical perspectives that inform the study of communication, including discussions of humanness, language, and ways of knowing. Individual research required.

CMM 566 - Case Problems in Communication (3)

An advanced study and analysis of classic cases in advertising, public relations, journalism, or communication studies.

CMM 589 - Applied Project (0-3)

Credits taken by students completing an Applied Project.

CMM 598 - Graduate Reading Course (1-3)

Investigation of a specific and focused problem in communication, to be conducted with the supervision of a full-time faculty member in Communication.

Computer Science (CSCI)**CSCI 140 - Introduction to Computer Science: Principles (3)**

A broad survey of the computer science discipline, focusing on the computer's role in representing, storing, manipulating, organizing and communicating information. Topics include hardware, software, algorithms, operating systems, networks.

CSCI 141 - Introduction to Computer Science: Bioinforma

An introduction to computer programming motivated by the analysis of biological data sets and the modeling of biological systems. Computing concepts to include data representation, control structures, text processing, input and output. Applications to include the representation and analysis of protein and genetic sequences, and the use of available biological data sets.

CSCI 142 - Introduction to Computer Science: Game Desig

Introduces the design of computer and video games. Students learn the practical aspects of game implementation using computer game engines and 3D graphics tools, while simultaneously studying game concepts like history, genres, storylines, gameplay elements and challenges, and the design process. No computer science background required.

CSCI 143 - Introduction to Computer Science: Mobile Com

An introduction to programming based on the development of apps for mobile devices such as phones and tablets. Students will learn to design an effective user interface, to interact with device hardware and sensors, to store data locally and access Internet resources.

CSCI 144 - Introduction to Computer Science: Multimedia

An introduction to computer programming, motivated by the creation and manipulation of images, animations, and audio. Traditional software development concepts, such as data representation and control flow, are introduced for the purpose of image processing, data visualization, and the synthesis and editing of audio.

CSCI 145 - Introduction to Computer Science: Scientific Pr

Elementary computer programming concepts with an emphasis on problem solving and applications to scientific and engineering applications. Topics include data acquisition and analysis, simulation and scientific visualization. Prerequisite: Calculus I (or concurrent enrollment).

CSCI 146 - Object Oriented Practicum (1)

Labs and lectures in object-oriented programming to supplement knowledge gained in CSCI-145 for students wishing to continue on to CSCI-180, who have not taken CSCI-150. Offered on an as-needed basis.

CSCI 147 - Introduction to Computer Science: Taming Big

An introduction to data science and machine learning. Fundamentals of data representation and analysis will be covered, with a focus on real-world applications to business intelligence, natural language processing, and social network analysis.

CSCI 148 - Introduction to Computer Science: Web Develo

The technology of the web, from the structure of the Internet to the design of web pages. Students will learn Internet standards for encoding information, and create dynamic web pages using the latest technologies. The course introduces fundamentals of computer science, including programming concepts, software engineering principles, client systems, and database interactions.

CSCI 150 - Introduction to Object-Oriented Programming (3)

An introduction to computer programming based upon early coverage of object-oriented principles such as classes, methods, inheritance and polymorphism, together with treatment of traditional flow of control structures. Good software development practices will also be established, including issues of design, documentation, and testing. Prerequisite: MATH 120 or equivalent, and C- or better in one of CSCI 130 through 149 or equivalent programming experience with permission.

CSCI 210 - Data Structures (4)

The design, implementation and use of data structures. Principles of abstraction, encapsulation and modularity to guide in the creation of robust, adaptable, reusable and efficient structures. Specific data types to include stacks, queues, dictionaries, trees and graphs. Prerequisites: A "C-" or better in CSCI 150; passing grade or concurrent enrollment in MATH 135.

CSCI 224 - Computer Architecture (3)

Introduction to the organization and architecture of computer systems, including aspects of digital logic, data representation, assembly level organization, memory systems and processor architectures. Prerequisites: CSCI 150 and MATH 135

CSCI 269 - Computational Problem Solving (1)

Intended primarily to train students for the International Collegiate Programming Contest (ICPC), this course covers data structures, algorithms, and programming techniques that apply to typical programming challenges. Prerequisite: CSCI 210 or equivalent.

CSCI 281 - Computer Ethics (3)

This course examines the moral, legal, and social issues raised by computers and electronic information technologies for different stakeholder groups (professionals, users, business, etc.). Students are expected to integrate moral theories and social analysis for addressing such issues as intellectual property, security, privacy, discrimination, globalization, and community. Prerequisite: PHIL 205.

CSCI 290 - Object-Oriented Software Design (3)

An implementation-based study of object-oriented software development. Teams will design and create medium-scale applications. Additional focus on the design and use of large object-oriented libraries, as well as social and professional issues. Prerequisite: At least a "C-" in CSCI 210.

CSCI 298 - Independent Study (0-4)

Prior approval of sponsoring professor and chair required.

CSCI 305 - Microprocessors (3)

Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Prerequisites: CSCI 150 or CSCI 145. Corequisite: CSCI 306.

CSCI 306 - Microprocessor Lab (1)

Laboratory experiments to emphasize material covered in CSCI 305. Corequisite: CSCI 305

CSCI 314 - Algorithms (3)

Introduction to analysis and complexity of algorithms. Big-O notation. Running time analysis of algorithms for traversing graphs and trees, searching and sorting. Recursive versus iterative algorithms. Complexity, completeness, computability. Prerequisites CSCI 210, MATH 135, and MATH 142.

CSCI 324 - Operating Systems (3)

Theory and practice of operating systems, with emphasis on one of the UNIX family of operating systems. File organization and database systems. Focus on a multi-user system in the client-server model. Hands-on experience. Prerequisites: CSCI 210 and either CSCI 224 or ECE 317.

CSCI 327 - Compilers (3)

Introduction to the theory and techniques of compiler design, lexical analysis, finite state automata, context-free grammars, top-down and bottom-up parsing, syntax analysis, code generation. Other important issues such as optimization, type-checking, and garbage collection will be discussed. Prerequisites: CSCI 210 and either CSCI 224 or ECE 317.

CSCI 334 - Network Programming I (3)

Transmission media; packets, frames, and error-detection; LAN and WAN technologies; routing; Internet architecture and protocols; network performance; host computers; routers; protocol layers; Internet protocol addresses; datagrams; encapsulation; fragmentation; reassembly; Internet Control Message Protocol; network security and legal issues. Prerequisite: CSCI 324.

CSCI 344 - Programming Languages (3)

Overview of programming languages: procedural and functional languages. Exposure to functional languages. Analysis of solution strategies to variable binding and function calls. Problem solving paradigms and linguistic issues. Prerequisite: CSCI 290.

CSCI 357 - Computer Graphics I (3)

Applications and implementation of computer graphics. Algorithms and mathematics for creating two and three dimensional figures. Animation and two and three dimensional transformations. Interaction, windowing, and perspective techniques. Coding using the graphics library OpenGL. Prerequisites: CSCI 210, MATH 244, and MATH 311 or MATH 315

CSCI 362 - Artificial Intelligence (3)

Fundamental introduction to the broad area of artificial intelligence and its applications. Topics include knowledge representation, logic, search spaces, reasoning with uncertainty, and machine learning. Prerequisite: CSCI 210.

CSCI 371 - Databases (3)

Fundamentals of Database systems: the relational model, file organization and indexes, relational algebra, structured query language, the entity relationship model, normalization, object databases. Prerequisite: CSCI 210.

CSCI 386 - Internship with Industry (0-3)

Department permission required.

CSCI 390 - Software Engineering (3)

Theory and practice of software engineering. Design and implementation of software systems. Levels of abstraction as a technique in program design. Organized around major group programming projects. Prerequisite: CSCI 290.

CSCI 398 - Independent Study (0-3)

Prior approval of sponsoring professor and chairperson required.

CSCI 408 - High-Performance Computing (3)

Use processor features, multiple cores, memory, graphics cards and clusters to maximize efficiency of computer software. Topics include vectorizing code, cache and memory efficiency, multithreaded programming, GPU programming and distributed programming.

Prerequisites: CSCI 210 (required); CSCI 314 and CSCI 324 recommended.

CSCI 413 - Automata (3)

The theory of automata and finite state machines. Regular languages and automata. Algebraic coding theory and shift registers. Algebraic matching theory. Prerequisite: CSCI 210.

CSCI 425 - Advanced Operating Systems (3)

Parallel processes; processor problems; linear address space and tree structured spaces of objects; resource allocation, queuing and network control policies; system balancing and thrashing; job allocation and process scheduling; multiprogramming systems; protection mechanisms for accessing jobs; pipelining and parallelism; distributed systems. Prerequisite: CSCI 324.

CSCI 434 - Network Programming II (3)

Client Server interactions; socket interference; Domain Name Systems; e-mail registration and transfer; file transfer and remote file access; security and legal aspects of network management; web-servers and technologies; CGI and Java technologies. Prerequisite: CSCI 334.

CSCI 443 - Computer Security (3)

Fundamental introduction to the broad area of computer security. Topics include access control, security policy design, network security, cryptography, ethics, securing systems, and common vulnerabilities in computer systems. Prerequisite: CSCI 210. CSCI 324 and CSCI 281 / PHIL 341 are recommended but not required.

CSCI 485 - Co-op with Industry (0)

Full-time supervised work experience with an agency, firm, or organization that employs persons in this degree field. Learning plan and follow-up evaluation required.

CSCI 486 - Internship with Industry (0-3)

A work experience with an agency, firm, or organization that employs persons in this degree field. Learning plan and follow-up evaluation required.

CSCI 491 - Capstone Project (3)

Some projects may have more specific prerequisites. Either a research project or a design project. Public presentation of the project required. Prerequisites: Senior Computer Science major. All required 200-level CS courses and six additional hours of computer science. Prerequisites: CSCI 290 and CSCI 224 (senior standing, all required 200 level CSCI courses plus six more hours).

CSCI 495 - Senior Residency (0)

Required for graduation seniors.

CSCI 496 - Capstone Project I (2)

The first part of a two-course sequence serving as a concluding achievement for graduating students. In this course, students develop a proposal, collect and formalize specifications, become acquainted with necessary technologies, and create and present a detailed design for completing the project. Prerequisite: Completion of all 200-level CSCI requirements and at least 75 credit hours toward graduation (i.e., second-semester junior standing or beyond).

CSCI 497 - Capstone Project II (2)

The continuation of CSCI 496. In the second part of the sequence, students complete their project based upon the design that was developed during the first part of the sequence. Students must demonstrate continued progress throughout the semester and make a preliminary and final presentation of their results. Prerequisite: CSCI 496.

CSCI 498 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chairperson required.

Comm Sci & Disorders (CSDI)

CSDI 100 - Intro to Comm Sci & Disorders (3)

A survey course designed to provide an introduction to the areas of study and the disciplines involved in communicative disorders, including an overview of communication processes and development as well as speech, language, and hearing disorders. Offered each Fall and Spring.

CSDI 200 - Phonetics (2)

A study of English phonemes with practice transcribing connected speech including dialectal variations, as well as disordered speech, using the international Phonetic Alphabet. Offered each Fall.

CSDI 220 - Anatomy and Physiology of the Speech Mechanism (2)

A study of the anatomical and physiological aspects of the speech mechanism. Offered each Fall.

CSDI 240 - Foundations of Language (2)

An Introduction to linguistic theories focusing on the rule systems of language, language development, language difference, dialects and language change across time.

CSDI 260 - Counseling (2)

An overview of counseling principles and procedures related to speech language pathology and audiology. Offered each Spring.

CSDI 300 - Chara. Multicult Popultrn (3)

A study of diverse populations, including cultural and linguistic differences and disorders in speech, language, and hearing, as well as cross-cultural issues in assessment and intervention. Offered each Spring.

CSDI 320 - Speech Science (3)

A study of the physiological, acoustic, and perceptual aspects of speech. Offered each Spring.

CSDI 340 - Hearing Science (3)

A study of the scientific aspects of hearing and its measurement, including basic acoustics, anatomy and physiology of the ear, psychoacoustics, and instrumentation. Offered each fall.

CSDI 342 - Beginning Sign Language (1)

An introduction to the manual alphabet and basic signs used in communicating with individuals who are deaf. Open to non-majors. Offered each Fall.

CSDI 343 - Advanced Sign Language (1)

A continuation of the study of sign language from CSDI 342. Offered each Spring.

CSDI 360 - Speech Development (3)

A survey course designed to study the development of phonology, articulation, voice, and fluency across the lifespan. An overview of development of swallowing will also be included. Offered each Fall.

CSDI 380 - Language Development (3)

An overview of the development of language and communication skills in typically developing individuals across the lifespan. Issues related to linguistic and cultural diversity will be explored. Offered each Fall.

CSDI 400 - Survey of Speech Disorders (2)

A survey of speech disorders, including etiologies, characteristics, linguistic and cultural correlates of articulation, phonology, voice, and fluency disorders across the lifespan. Offered each spring.

CSDI 405 - Research Seminar (1)

Investigation of methods of inquiry learned in the COPS Level 2 course. Interested students may apply and be admitted through a selection process based on faculty recommendation. Offered each Fall.

CSDI 406 - Research Practicum (1)

Research experience based on the completion of CSDI 405. Offered each Spring.

CSDI 410 - Survey of Language Disorders (2)

A survey of language disorders including etiologies, characteristics, linguistic and cultural correlates of language disorders across the life span. Offered each Spring.

CSDI 420 - Audiology: Basic Audiometry (3)

An introduction to various causes of hearing loss and comprehensive audiological evaluation procedures across the life span. Offered each Spring.

CSDI 430 - Clinical Methods (3)

An introduction to clinical service provision, including principles and procedures in diagnostics and intervention that are common across communication disorders. Offered each Fall.

CSDI 435 - Clinical Observation (0)

Students will learn an approach to meaningful observation and documentation of clinical practice in communication disorders in multiple settings. Offered each Fall.

CSDI 440 - Aural Rehabilitation (3)

A study of hearing aids and other amplification systems, cochlear implants, speechreading, and auditory training. Habilitative and rehabilitative strategies for individuals with hearing impairment will be discussed. Offered each Fall.

CSDI 450 - Neurol Basis of Communication (3)

A study of neurological development and function related to speech, language, and hearing. Offered each Spring and Summer.

CSDI 460 - Advanced Audiology (2)

A study of pediatric audiology, electrophysiology measures, behavioral hearing assessment related to developmental level, immittance audiometry and testing for auditory processing disorders. Offered each Spring.

CSDI 470 - Clinical Practicum (1)

A study of diverse populations, including cultural and linguistic differences and disorders in speech, language, and hearing, as well as cross-cultural issues in assessment and intervention. Offered each Spring.

CSDI 475 - Neurol Bases of Communicatn (3)

A study of neurological development and function related to speech, language, and hearing. Offered each Spring and Summer.

CSDI 480 - Senior Seminar (1)

Designed to be a culminating experience for seniors, this course provides the opportunity to synthesize the knowledge and skills they have acquired from prior coursework and related experiences through a capstone project. This project is expected to tie together information across the five dimensions of the university experience.

CSDI 501 - Clinical Practicum (0-3)

Supervised experience in clinical practicum. Offered every semester.

CSDI 502 - Hospital Practicum (0-3)

Supervised experience in a hospital setting. Offered every semester.

CSDI 503 - Student Teaching in Comm Dis (3-5)

Supervised experience in a public school program. Offered every semester.

CSDI 505 - Experimental Design (2)

Statistics is recommended. This course is designed to assist graduate students in reading, understanding and critically evaluating research in speech-language pathology. Aids students in developing, designing and writing their own experimental and clinical research proposals. Offered every Fall semester.

CSDI 506 - Research Practicum (1)

Offered every semester.

CSDI 544 - Linguistics (2)

Advanced clinical application of linguistic theories of language development. Offered every Spring semester.

CSDI 545 - Phonological Dev. & Disorders (2)

A study of theories of phonological development and disorders and current diagnostic and therapeutic techniques. Offered every Spring.

CSDI 551 - Assessment / Management of Social Somuni

Social Skills are integrally intertwined with communication skills and are essential for academic and professional success. This course will include discussions of the neurological bases, environmental factors, early connections to language and literacy, and a discussion of the communication disorders that may demonstrate difficulties in social communication. Assessment and management strategies will be demonstrated and described.

CSDI 553 - Augmentative & Alternative Com (2)

An overview of augmentative and alternative communication modes, techniques and symbol systems, as well as assessment and intervention strategies. Offered every Summer.

CSDI 555 - Language I (3)

A focus on theoretically-based functional practices in the assessment and intervention of language disorders in children from birth to eight years. Offered every Fall semester.

CSDI 556 - Language II (3)

A focus on theoretically-based functional practices in the assessment and intervention of language-learning disorders in school-age children and youth. Offered every Spring semester.

CSDI 558 - Language Based Literacy Disorders (2)

This course will focus on the study of literacy development and disorders in school-age children with language impairment. Includes assessment and intervention practices for reading, spelling, and writing.

CSDI 560 - Fluency Disorders (3)

An overview of normal fluency and exploration of fluency disorders. Specific focus on the nature, assessment, and treatment of stuttering. Offered annually.

CSDI 563 - Dysphagia (3)

A study of the anatomy, physiology, evaluation and treatment of swallowing and associated disorders. Offered every Spring semester.

CSDI 565 - Clinical Supervision (2)

An overview of theoretical models of supervision with primary emphasis on practical application of principles and strategies. Legal, ethical and professional standards, methods of evaluating self and other's performance, and managing difficult supervision situations will be explored. Offered occasionally.

CSDI 570 - Voice Disorders (2)

A study of research in areas of voice science and pathology and development of advanced techniques in the assessment and treatment of voice disorders. Offered every Fall and Spring semester.

CSDI 571 - Cleft Palate & Cranofacial Ano (2)

A study of the nature, etiology, physiological and psychological aspects and ramifications of cleft palate. Offered every Summer.

CSDI 572 - Neurogenic Com Dsrdrs in Adult (3)

A study of the nature, etiology, physiological and psychological aspects of aphasia and motor speech disorders. Offered every Fall semester.

CSDI 573 - Neuropathologies in Children (2)

A study of the nature of development and acquired neuropathologies in children and their impact on communication. Offered every Summer semester.

CSDI 576 - Motor Speech Disorders (3)

A study of the nature, etiology, physiological and psychological aspects of acquired motor speech disorders. Offered every Spring semester.

CSDI 577 - Assmt/Mngmnt of Comm Dis Multi (2)

Issues and methodologies in definition, diagnosis and treatment of communication disorders of persons from culturally and linguistically diverse backgrounds. Offered every Fall and Spring semesters.

CSDI 580 - Pro Issues in Spch-Lang Pthlgy (1)

Taken in the last semester of study. This course focuses on the business, legal and ethical issues that impinge on clinical practice in speech-language pathology. Emphasis is placed on the administrative aspects of service delivery pertaining to private practice, clinics and hospital-based programs. Offered every Fall and Spring semester.

CSDI 582 - Cognitive Comm Disorders (3)

A study of the etiology, diagnosis, and treatment of cognitive communication disorders due to traumatic brain injury and dementia. Offered every Fall semester.

CSDI 588 - Advanced Audiology (2)

A study of pediatric audiology, electrophysiology measures, behavioral hearing assessment related to development level, immittance audiometry and testing for auditory processing disorders. Offered every Spring semester.

CSDI 589 - Institute in Comm Disorders (1-3)

Various topics in the field. Offered every Summer.

CSDI 594 - Clinical Internship (0-3)

A required course taken in the last semester of the program involving full-time clinical placement in an off-campus site. Emphasis of this course is the integration of academic knowledge and clinical skills in a professional setting. Offered every semester.

CSDI 598 - Research Topics (1-3)

Permission of Instructor of department chair required.

CSDI 599 - Thesis Research (0-6)

Permission of department chair required.

Dance (DANC)**DANC 259 - Jazz Dance (2)**

Special notes: This class is repeatable once for credit. Objectives: To guide students in studio experience in Jazz Dance. All class activities are practical. Some in-class performance and accompanying critique will be used in determining grades.

DANC 260 - Modern Dance (2)

Special Notes: This class is repeatable once for credit. Objectives: to guide students in studio experience in Modern Dance. All class activities are practical. Some in-class performance and accompanying critique will be used in determining grades.

DANC 261 - Intermediate Jazz Dance (2)

This course is intended to continue the students exploration and practice of jazz dance building on the skills developed in the beginning jazz dance. Students will develop short and long movement phrases continuing their skills in composition and choreography based on material covered in class.

DANC 262 - Intermediate Modern Dance (2)

This course is intended to further develop the students ability in physical movement in terms of space, time and dynamics as begun in the beginning modern class. This course will focus on somatic intelligence and the development of this non-stylized aesthetic movement skills as introduced on world stages in this century.

DANC 263 - Modern Dance/Modern Movement (3)

An introduction to the philosophies and movement styles of the founding early modern dancers and contemporary dance movements through experiential work, readings, discussion, observation, and interpretation. Movement fundamentals - rise, fall, release, breath, body alignment, rhythmic phrasing, and coordination - are explored through the theoretical framework of Laban Movement Analysis. Satisfies the Arts and Science Core Requirement for non-majors.

DANC 264 - Dance: Ballet, Modern, & Jazz (3)

Students are introduced to the movement philosophies and techniques used in ballet, modern, and jazz dance. Students will be able to analyze, appreciate, and perform each dance form. Students will learn to regard their bodies as expressive, intelligent instruments that are capable of adapting to different styles of movement performance.

DANC 267 - The New Flamenco Experience (2)

Traditional Spanish dance with a contemporary flair. Learn rumbas, tangos and bulerias, and then show them off at modern flamenco clubs around the city. The perfect choice for a student interested in mastering Spanish dance in only one semester!

DANC 280 - Ballet Technique I (2)

This class will introduce students to beginning classical ballet dance technique and classroom etiquette. In addition, students will be introduced to basic ballet terminology, history, choreographers, dancers, theater traditions and stage performances. Students will also hone body awareness, alignment, strength, flexibility, stamina and artistry through consistent, focused class participation.

DANC 285 - Musical Theatre Dance (2)

This course will introduce students to a variety of dance styles created for the American Musical Theater stage. Students will learn about individual choreographers, history, movement vocabulary and dance scenes from different musicals. Course work will include daily warm-ups, rehearsal, as well as film viewings and attendance of live performances.

English for Academic Purposes (EAP)**EAP 095 - English VII: Intensive English for Academic Pur**

Four-skill language and culture course. Includes academic reading, writing, grammar, class discussion, and test-taking strategies. Prerequisite: English Placement Exam score: TOEFL: 450 - 484 or its equivalent. Writing score 3-/3 or its equivalent.

EAP 100 - Intensive English: Advanced Intermediate (1-6)

Academic English skills, including reading, writing, speaking, grammar, and American culture. Prerequisite: English Placement Exam score equivalent to level.

EAP 105 - English VIII: Intensive English for Academic Pur

Four-skill language and culture course. Includes academic reading, writing, grammar, class discussion, and test-taking strategies. Prerequisite: English Placement Exam score: TOEFL: 480 - 509 or its equivalent. Writing score 3+/4- or its equivalent.

EAP 110 - Intensive English: Advanced (1-6)

Academic English skills, including reading, writing, speaking, grammar, and American culture. Prerequisite: English Placement Exam score equivalent to level.

EAP 115 - Writing and Grammar Strategies (3)

Academic English skills, with an emphasis on writing and grammar. Prerequisites: 510 PBT TOEFL; and minimum 4- SLUWE score.

EAP 120 - Intensive Engl: High-Advanced (1-6)

Writing/Editing Skills, Business English or Academic English, Cultural Keywords, Service Learning Project, Test-taking/Study Skills, Pronunciation/Communication Skills. Prerequisites: 510 PBT TOEFL.

EAP 130 - College Reading & Study Skills (3)

This course is for international students whose assessment scores indicate a need for review and improvement of reading skills. Emphasis is placed on vocabulary expansion, improved reading comprehension and fluency, and critical thinking skills. Prerequisite: 535 PBT TOEFL.

EAP 150 - College Composition for International Students

Course to improve proficiency in written expression. Intensive practice in paragraph and expository essay writing; study of rhetorical principles and techniques, including cross-cultural comparisons of rhetorical patterns. Equivalent to ENGL150. Offered Fall and Spring semesters. Prerequisite: 525 TOEFL; and minimum 4.0 SLUWE score.

EAP 190 - Rhetoric & Research Strategies (3)

Course designed to develop foreign students' skills in expository writing, and the ability to read and analyze expository essays. Study of principles and techniques of argumentation and persuasion through analysis of assigned readings; writing of organized essays and writing of research paper using appropriate methodology. Prerequisite: EAP 150.

EAP 211 - Introduction to Literature for International Stud

Introduction to literary techniques: short story, essay, poetry, novel forms; cross-cultural interpretation of values and lifestyles.

EAP 2850 - Nation, Identity and Literature for International

This course introduces literary study within the context and theme of nation and identity. Through the reading of a variety of genres (drama, poetry, and fiction) the course engages students in literary ways of knowing. In this special EAP section, readings focus on the contours and complications of American national identity. Prerequisite(s): EAP 1900 or ENGL 1090

EAP 490 - Composition & Research Writing for Internation

Study of U.S. research skills: assessing research topics, incorporating and organizing material, using required citation formats and recognizing different types of papers. Students proceed from shorter essays to a longer research paper. Regular individual conferences.

EAP 491 - Research Paper Writing for International Studen

Students will practice library research skills, note-taking techniques, and citation formats in order to write an argumentative research paper appropriate for a U.S. graduate school.

Earth & Atmospheric Sciences (EAS)**EAS 101 - Earth Systems I-The Solid Earth (1-3)**

This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 102 - Earth's Environment I Lab (1)

This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 103 - Earth's Dynamic Environment II (3)

This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 104 - Earth's Environment II Lab (1)

Two hour laboratory per week. Illustrates and supplements the material covered in lectures of EAS-103 Earth's Dynamic Environment II. Several short field trips are taken during the semester. Not required for students enrolled in EAS-103, though EAS-103 is a pre-requisite or co-requisite for the lab.

EAS 105 - Introduction to Oceanography (1-3)

Lecture three hours per week. Provides an introduction to ocean basin formation, chemical and physical properties of sea water, waves, currents, tidal forces and tides, interaction of land and ocean in coastal environments, marine biology and ocean resources. Fulfills three hours of science requirement. Spring semester, alternate years.

EAS 107 - Understanding the Weather (3)

Lecture three hours per week. A nonmathematical description of the processes that effect the weather are provided. Topics include solar radiation, horizontal and vertical structure of the atmosphere, atmospheric motions, and climate. Fulfills three hours of science requirement. Fall and Spring semesters.

EAS 109 - Climate Change (3)

Introduction to climate change. Understand what is happening to the climate system, what evidence there is and what has happened in the past. We will study the reasons for the societal debate and evaluate proposals for international action on climate change. Lecture course, satisfies 3 hours of Science requirement and 3 hours of Global Citizenship requirement.

EAS 114 - Earth History (3)

Lecture three hours per week. Provides an introduction to the geologic origin and development of the earth; plant and animal inhabitants. Fulfills three hours of science requirement. Spring semester, alternate years.

EAS 117 - Physical Geography (3)

Lecture three hours per week. Provides an introduction to the origin of land forms, earth resources, climate and weather, implications of human use of natural resources. (Satisfies Missouri Teaching Certification Requirement.) Fulfills three hours of science requirement. Fall semester.

EAS 118 - Physical Geography Lab (1)

Two hour laboratory per week. Provides experience in using planimetric maps, topographic maps and nautical charts and an introduction to the underlying principles of map making and map reading. Fulfills 1 hour of science requirement. Usually offered in the Fall semester.

EAS 130 - Seismology of Nuclear Explosio (3)

This inquiry-based course will emphasize the scientific questions involved in the detection of underground nuclear explosions using seismology. Many other related issues will also be raised and discussed, e.g. the interplay of science and public policy, how political decisions are made, the ratification of Test Ban Treaties, and the difference between explosions and earthquakes. Class limit 19. Two lectures and a 2-hour lab per week. Offered once per year.

EAS 131 - Water-Our Precious Resource (3)

This course is focused on freshwater, which is one of most important and vulnerable resources on Earth. Availability of freshwater for human consumption, animal husbandry, and crop irrigation will become a major focus of national and international relations in the years to come. In this course, we will be learning the basics about freshwater resources, drinking-water and waste-water treatments, water-borne disease, water pollution, river dynamics and flooding, land use in flood plains, and national and international conflicts related to water resources. Each class session will be comprised of lecture (~2hours), water laboratory simulation (~2hours), and field trip (~3hours). Transportation is provided for the field trips. Fulfills 3 hours of science requirement."

EAS 132 - Natural Disasters (3)

This inquiry-based course examines geologic processes that are sometimes hazardous to humans, including earthquakes, volcanic eruptions, and landslides. Each section of the course will include and analysis of the geologic processes, and will end by discussing specific examples of where, when and how each type of geologic process has proven hazardous, or resulted in a natural disaster. Lecture and discussion, 3 hours per week. Fulfills 3 hours of Science requirement.

EAS 133 - Drifting Continents (3)

This inquiry-based course introduces students to the theory of continental drift and plate tectonics, covers the general character of science, the history behind plate tectonics, how the theory explains the gross features and phenomena near the Earth's surface, and current debates around plate tectonics. Lectures and discussion, 3 hours per week. Fulfills 3 hours of the science requirement.

EAS 135 - Real Meteorology (3)

Real observation-based meteorology will give non-science majors an appreciation of how meteorologists collect and use weather data to make forecasts. Students are expected to actively participate by analyzing meteorological data and by making and verifying at least one forecast. Fulfills 3 hours of science requirement.

EAS 136 - Beauty of Atmosphere (3)

The student understands the physical processes responsible for severe local storms, hurricanes, and winter storms. In addition to understanding the power behind these phenomena, the student marvels at the beauty of optical phenomena such as rainbows, halos, mirages, coronas and sundogs and inquiries about the mechanism. Fulfills 3 hours of science requirement.

EAS 137 - Meteorological Aspects of Emergency Respon

Two 75 minute periods per week. The first period and 25 minutes of the second period will be devoted to lecture topics. The last 50 minutes of the second period will involve a case study. Field trips to the St. Louis Forecast Office of the National Weather Service and to an Emergency Operations Center are required. 75% of situations involving federal, state and local emergency responders and agencies are directly caused by weather phenomena. Some of these are obvious, such as tornadoes, hurricanes and flooding; while others, like a heat wave or extreme winter weather may not be obvious. In addition, conflagrations, chemical spills and releases, and air pollution incidents require weather information and forecasts.

EAS 138 - Missouri Climate (3)

This course is an in-depth look into the physical processes which affect the climate of Missouri. Students working in teams will use actual observations to examine the possible relationships between climate phenomena (i.e. El Nino, La Nina, Pacifica Decadal Oscillation, teleconnections, and global warming) and the weather patterns over Missouri. Fulfills three hours of science requirement. Fall semester.

EAS 140 - Energy Resources for a Sustainable Future (3)

Analysis of the emerging crisis in fossil fuels as the cheap energy source for the future. Is limitless petroleum, gas, or coal available, accessible, and at what cost? Are there miracle cures from fundamental physics, biology? How much energy can be supplied by solar, wind, and other sources?

EAS 142 - Foundations of Atmospheric Science (3)

This course provides an overview of atmospheric science for students majoring in meteorology. Topics include: atmospheric composition and structure, temperature, heat, moisture, air masses, fronts, midlatitude cyclones, thunderstorms, and hurricanes. Education and career opportunities will also be discussed. Co-requisite: MATH-141 or better, meteorology major, or permission of the instructor.

EAS 153 - Aviation Meteorology (3)

This course will present the fundamentals of meteorological theory with a specific application to aviation and flight. The course will examine standard meteorological fields along with their roles in generating sensible weather. In addition, the course will study weather hazards specific to aviation including wind shear, turbulence, icing, visibility and fog.

EAS 160 - Sustainable Energy (3)

Scientific and economic impacts of the crisis in waning fossil fuels as the world's cheap energy source. Future petroleum, gas, and coal recovery will likely be either environmentally unacceptable or too costly. The challenges of supplying energy from solar, wind, and other renewable sources will be highlighted.

EAS 193 - Introduction to Earthquakes (1-3)

Lecture three hours per week. Provides an introduction to the science of earthquakes. Discussions include the general character of science, plate tectonics, geologic time, seismic hazards, faults and faulting, earthquake prediction, seismic waves, and Earth structure and composition. Fulfills three hours of science requirement. Fall semester.

EAS 208 - Introduction to Environmental Science (3)

Lecture 3 hours per week. Examination of natural and man-made environmental hazards, their causes and possible solutions. Fulfills three hours of science requirement. Fall semester.

EAS 211 - Meteorological Analysis (3)

The analysis procedures and tools of meteorology are studied. Types and formats of meteorological data from both observations and models are examined. The analysis and display of data by hand and with computers are introduced. Prerequisites: MATH-142, EAS-253, or permission of the instructor. Must be taken concurrently with EAS-244.

EAS 217 - Geographic Information System in Civil Enginee

This course discusses the fundamental concepts of GIS, the methods and software used to solve civil engineering problems. The course also covers skills to deal with remote sensing data, basic and differential GPS surveying to prepare students for today's growing business needs in civil engineering companies and government agencies. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-217, BIOL-417, EAS-417, or SOC-465.

EAS 220 - Mineralogy (3)

Lecture three hours per week. Crystallography, physical, chemical, and descriptive mineralogy.

EAS 221 - Mineralogy Lab (1)

Identification of rock-forming and ore minerals through physical and optical properties. Will include field trips. Meets 3 hours once a week.

EAS 230 - Geology for Engineers (3)

Engineering projects deal with surface materials and landforms on a daily basis. A proper understanding of material properties and processes that lead to their formation is critical to understand their behavior. This course introduces students to the basic principles of earth science, the composition of earth materials and processes that shape the Earth and how these relate to human modifications.

EAS 240 - Field Techniques in Geology (2)

Instruction in the fundamental methods of field work. Students will learn to use a compass, maps and other geological aids, orienteer, describe basic geologic features, keep a field notebook and map simple geologic structures. Most of the course will be conducted in the field. Fall semester.

EAS 242 - Computer Applications in Earth Science (1)

Restricted to students in Earth and Atmospheric Sciences. Laboratory two hours per week. Students gain experience in the use of word processors, spreadsheets and graphing packages for tabulating, analyzing and reporting scientific data in the geosciences. Spring semester.

EAS 244 - Atmospheric Processes and Systems (3)

Introduction to theoretical aspects of dynamic and synoptic meteorology and numerical weather prediction. The kinematic quantities of vorticity and divergence, as well as the analysis of weather systems will be emphasized. Prerequisite: MATH-142, Co-requisite: PHYS-161/162, or permission of the instructor. Must be taken concurrently with EAS-211.

EAS 245 - Communicating in Science (3)

Lecture three hours per week. Critical reading of and oral and written presentations about scientific articles. Emphasis will be on the examination of different types of sources and the synthesis of the content for different audiences. Spring Semester.

EAS 253 - Fundamentals of Climate Systems (3)

Introduction to the fundamental processes which effect climate and influence climate change. Topics include: earth's radiation budget, oceanic and atmospheric general circulations, ocean, atmosphere and land interactions, climate classifications, and the hydrologic cycle. Prerequisite: EAS-142, co-requisite: MATH-142 or better math course, or permission of the instructor.

EAS 260 - Environmental Science Seminar Series (1)

The seminar series is comprised of two components. Environmental scientists and professionals will be invited to give four seminars on important environmental issues. Three seminars will also be given to prepare students for their future careers. Must be declared environmental science / studies major or in the process of declaring to enroll in seminar.

EAS 305 - Geomorphology (3)

Introduction to landforms and surficial deposits, and to the erosional and depositional processes responsible for landform genesis. Long-term landscape development and aspects of larger scale geomorphology. Lecture three hours per week, occasional field trips. Spring or Fall semester.

EAS 310 - Environmental Issues (3)

An examination of current and historical environmental issues from scientific, economic, social, and political perspectives, with an emphasis on energy, public health, land use, and global change. Prerequisites: EAS 101/102 or 103/104; BIOL 104, 106, 220, or 236; CHEM 161, 162, or 163; or consent of instructor.

EAS 315 - Broadcast Meteorology I (3)

The principles of broadcast meteorology will be introduced combining lectures and hands-on experience. Students will develop the skills necessary to communicate scientific information, with emphasis on weather forecasts. The campus radio station will be used by the students to present weather forecasts on a daily basis. Prerequisites: EAS-244, EAS-211, or permission of the instructor.

EAS 316 - Broadcast Meteorology II (3)

production will be explored, including the concepts behind the presentation and practical applications. The goal is to achieve the knowledge and experience necessary to obtain a position in broadcasting and the understanding on how to advance one's career. Prerequisite: EAS-315, or permission of the instructor.

EAS 325 - Global Change (0-3)

Fundamentals of climate physics, global and regional scale average solar and terrestrial radiation regimes and respective radiation balances; radiation instruments of roof station; hydrologic cycle and water balance; energy balance for atmosphere, ground and total earth system; heat transfer in ocean and ground; paleoclimatology; climatic change. Fulfills three hours of science requirement. Spring semester.

EAS 331 - Paleontology (3)

Lecture three hours, laboratory two hours per week. Classification, anatomical structure and geological history of invertebrate fossils.

EAS 333 - Physical Meteorology I (3)

The study of the physical principles underlying atmospheric processes of dry and moist air. Additional topics include the analysis of atmospheric stability and thermodynamic diagrams. Prerequisites: MATH-143, PHYS-161/162, EAS-244, or permission of the instructor.

EAS 334 - Physical Meteorology II (3)

The study of cloud microphysics and radiative transfer in the atmosphere. Topics include absorption and emission of radiation, solar and terrestrial radiation, cloud formation, heat and energy transfer, and optical phenomena. Prerequisites: PHYS-163/164, a $\geq C$ or better in EAS-333, or permission of the instructor. Co-requisite: MATH-244.

EAS 335 - Surface Water Hydrology (3)

Fundamentals of precipitation, runoff, evaporation, and effects that various geomorphological and geological features have on these processes. Temporal and spatial variability of stream flow and flooding as influenced by both natural and cultural factors. Normally offered in Spring semester.

EAS 340 - Soils & Formation, Properties, Identification, and

This course covers the physical-, chemical-, and biologically related properties of soils and the environmental issues surrounding soils and society. Lecture 3 hours per week plus several field trips and field exercises. Prerequisite or co-requisite: Chemistry 161 or equivalent.

EAS 350 - NUMERICAL MODELING APPLICATIONS (3)

The input data and procedures for running numerical weather prediction models as well as the analysis of model output. Topics include: Numerical model components, model input requirements, cluster computing, analysis procedures, numerical model data formats, and analysis and display software. Prerequisites: MATH-143, PHYS-163/164, EAS-333, or permission of the instructor.

EAS 360 - A Future Based on Sustainable Energy (3)

Assuming available fossil fuels will soon be exhausted, we examine alternative renewable resources and nuclear energy to sustain current US consumption. Mid-Western States will be highlighted for their wind, solar, and geothermal potential. Implications for new transportation systems, power generation, and community development will be quantitatively examined. Preq: MATH 141, EAS140 or equivalent.

EAS 370 - Mesoanalysis and Severe Storms (3)

The study of the structure, dynamics and climatology of severe local storms. Topics include: severe local storm climatology, the severe storm environment, mesoscale convective systems, supercells, tornados and tropical cyclones. Forecasting techniques for assessing the severe weather morphology and potential will also be covered. Prerequisite: EAS-333, or permission of the instructor.

EAS 403 - Elements of Air Pollution (3)

Meteorological aspects of air pollution. Topics include atmospheric transport, turbulence models, geochemical cycles, stratospheric ozone, oxidation, ozone, aerosols, and acid rain. Current topics in air pollution along with health effects and policy implications will also be addressed. Prerequisites: MATH-142, EAS-253 or EAS-103, or permission of the instructor.

EAS 405 - Petrology (3)

Origin, occurrence, classification and characteristics of igneous and metamorphic rocks. Lecture three hours per week. Spring or Fall semester.

EAS 406 - Petrology Lab (1)

Three hours laboratory per week. An introduction to the description, classification and analysis of igneous and metamorphic rocks in hand specimens and under the microscope. A brief introduction to optical mineralogy is included. Spring or Fall semester.

EAS 407 - Coastal Processes & Morphology (3)

The origin/evolution of coastal landforms and the physical processes responsible for their creation and modification, including the following topics: geomorphic classification of coasts, sediment characteristics, sea level, tides, waves, nearshore currents, longshore and cross-shore sediment transport, beach and nearshore morphology, barrier island systems, salt marshes, cliffed coasts, and the effects of climate change on coastal environments.

EAS 410 - Surface Processes (3)

Overview of physical and chemical processes and landform development in modern and ancient surface environments. Field trip required. Prerequisites are EAS 101 and 102. Co-enrollment in EAS 411 is strongly encouraged.

EAS 411 - Surface Processes Laboratory (1)

This laboratory illustrates and supplements the material covered in lectures of EAS-410 Surface Processes. Several field trips are taken during the semester. Prerequisites are EAS 101, 102, and 240. EAS-410 is a pre-requisite or co-requisite.

EAS 413 - Geotechnics (3)

Geologists and Environmental Scientists are faced with slope stability, rock and soil loss problems at one point or another in the professional work. These issues directly affect population and infrastructure, as well impacts negatively household, state and federal budgets. It is of paramount importance to understand not only the behavior natural material under critical equilibrium or unstable conditions, and how they will react to induced disturbances, but also, the mechanisms to improve and resolve such conditions. This course presents the properties of geologic materials and general principles that govern the stability of rock and soil masses. In addition, it provides students with tools to characterize, assess and analyze unstable masses, and to provide solutions for their improvement, containment and stabilization.

EAS 415 - Instrumentation and Remote Sensing (3)

Meteorological instruments will be studied from the viewpoint of performance characteristics, sensitivity, dynamical error, and response to sinusoidal and step impulses. Statistical treatment of output data; digital systems; computerized processing and retrieval as it applies to meteorology. Prerequisites: MATH-162, PHYS-163/164, or permission of the instructor. Must take EAS-334 concurrently.

EAS 417 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-417, BIOL-417, or SOC-465.

EAS 418 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography. Prerequisites: one of the courses EAS-417, BIOL-417, or SOC-465. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-418, BIOL-418, or SOC-466.

EAS 419 - Geospatial Methods in Environmental Studies (3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment.

EAS 420 - Synoptic Meteorology I (3)

extratropical cyclones, polar and tropical jet streams, synoptic climatology, teleconnections and quasi-geostrophic theory as it applies to weather forecasting. Prerequisites: EAS-334 or permission of the instructor. Must take EAS-444 concurrently.

EAS 422 - Synoptic Meteorology II (3)

Continuation of the laboratory study began in EAS-422. Topics include thermodynamic diagrams, sounding analysis, stability indices, isentropic analysis, severe local storms and numerical weather prediction as a forecasting tool. Prerequisites: MATH-244, a $\geq C$ or better in EAS-420, or permission of the instructor. Students in the B.S. program must take EAS-445 concurrently.

EAS 423 - Micrometeorology (3)

Physical relations between profiles of temperature, moisture and wind in the atmospheric boundary layer, influence of low-level atmospheric turbulence, diffusion, and heat transfer processes on the boundary layer. Spring semester.

EAS 425 - Project in Environmental Science (0-6)

This course will be lecture, field and laboratory based. The goal will be to discuss local and global environmental issues important to society and allow students to acquire first-hand knowledge of such issues in the laboratory and in the field. Lectures will emphasize the methods of scientific analysis, data collection, library research, identification of environmental problems and possible solutions, report writing, and presentation of results. Several case studies will be reviewed in detail as needed.

EAS 426 - Environmental Geophysics (3)

Lecture three hours per week. Geophysical techniques for exploration and characterization of shallow structure and media in the geosciences. Includes gravity, magnetic, seismic, electrical, borehole and ground-penetrating radar methods. Alternate Spring semesters.

EAS 428 - Environmental Geochemistry (3)

Lecture three hours per week. Application of geochemical principles towards the understanding of chemical processes occurring at or near the Earth's surface. Alternate Fall semesters.

EAS 430 - Structural Geology (3)

Lecture three hours per week. Description of structures in sedimentary, igneous and metamorphic rocks at scales ranging from atomic to continental. Introduction to stress, strain, deformation mechanisms, and techniques of kinematic and dynamic analyses. Alternate Spring semesters.

EAS 431 - Structural Geology Laboratory (1)

Laboratory focuses on map interpretation, collection of structural data, and geometrical techniques for solving structural problems. Half-day and weekend field trips are an integral part of the laboratory.

EAS 433 - CLIMATE CHANGE AND VARIABILITY (3)

The analysis of the fundamental principles and techniques used for climate change detection, attribution, and projection. Topics include: climate system interplay, natural variability and likely anthropogenic influences of the climate system, and climate change scenarios and modeling. Prerequisites: MATH-351, EAS-444, or permission of the instructor.

EAS 435 - Groundwater Hydrology (3)

Lecture 2 hours, laboratory 2 hours per week. Introductory course in hydrogeology. Describes relations between surface water and groundwater, principles of groundwater flow, relations between groundwater and geology, and problems related to groundwater pollution. Numerous experiments and simulations are used in the course. Alternate Fall semesters.

EAS 437 - Earth Dynamics (3)

Lecture three hours per week. The relation between plate tectonics and properties of Earth's interior inferred from geological and geophysical observations. Emphasis will be on the relation of Earth's surface features to processes at depth. Alternate Fall semesters. Prerequisites: EAS 101 and MATH 142.

EAS 440 - Environmental Science Capstone Project (3)

This team project is the final integrative experience in the environmental science/studies programs. Each team focuses on one local, regional, or global environmental issue. The results of each team's investigation of the problem(s) and formulation of potential solutions will be presented and defended before faculty and students. Senior standing required.

EAS 444 - Principles of Dynamic Meteorology I (3)

Dynamic principles underlying large-scale atmospheric motion. Topics include the development of the primitive equations, horizontal wind approximations, thermal wind, vertical coordinate transformations, kinematics, circulation theorem and the flow in the planetary boundary layer. Prerequisites: MATH-244, EAS-334 or permission of the instructor. Must take EAS-420 concurrently.

EAS 445 - Principles of Dynamic Meteorology II (3)

Analytical investigation of atmospheric motions. Topics include: wave dynamics, sound waves, gravity waves, Rossby waves, geostrophic adjustment, baroclinic instability and isentropic potential vorticity. Prerequisites: MATH-355, a C or better in EAS-444, or permission of the instructor. Students in the B.S. program must take EAS-422 concurrently.

EAS 447 - Elementary Tropical Meteorology (3)

The study of the structure, dynamics and climatology of tropical weather. Topics include: the trade winds, intertropical convergence zone, Hadley and Walker circulations, El-Nino/Southern Oscillation, the Madden-Julian oscillation, and tropical cyclones. Prerequisite: EAS-333 or permission of the instructor.

EAS 448 - Introduction to Remote Sensing (3)

Fundamental knowledge on the physics of remote sensing, photogrammetry, multispectral, hyperspectral, thermal imaging and RADAR and LIDAR principles are reviewed in lectures while lab assignments cover image processing, environmental modeling & analysis. Course objective is to demonstrate present applications of RS in environmental sciences with software training in ENVI+IDL, SARscape.

EAS 449 - Microwave Remote Sensing: SAR Principles, Data

This course introduces SAR principles, data sources, data processing chain, and SAR applications in measuring earthquake deformation, land subsidence and building sinking, and tree height estimation, DEM generation, and monitoring environmental issues. These different topics will be covered through a series of stepwise exercises involving different kinds of SAR data.

EAS 450 - Scientific Communications (2)

Lecture two hours per week. Principles of effective writing for a scientific audience; the structure of reports, papers and communications; techniques for the organization and delivery of results for oral, written and poster presentations. Spring or Fall semester.

EAS 450 - Scientific Communications (3)

Lecture two hours per week. Principles of effective writing for a scientific audience; the structure of reports, papers and communications; techniques for the organization and delivery of results for oral, written and poster presentations. Spring or Fall semester.

EAS 451 - Principles of Seismic Exploration (2)

It is also recommended that EAS 452 be taken concurrently. Exploration for natural resources using seismic waves; refraction and reflection methods and interpretation; elementary seismic data processing. Spring or Fall semester.

EAS 452 - Seismic Exploration Lab (1)

Laboratory and field problems, two hours per week. Collection and interpretation of seismic data; applications of the computer to data interpretation. Fall or Spring semester.

EAS 453 - Principles of Electrical Exploration (3)

Electrical properties of earth materials, natural electrical fields, electrical fields in layered media, electrical methods of exploration. Spring or Fall semester.

EAS 455 - Principles of Gravity and Magnetic Exploration (3)

Earth's gravity and magnetic fields, density and magnetic properties of rocks, gravity and magnetic methods of exploration. Spring or Fall semester.

EAS 456 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

EAS 460 - Introduction to the Physics of the Solid Earth (3)

Physical properties and processes in the earth's interior structure, composition, heat flow, rheological processes, and evolution. Spring or Fall semester.

EAS 462 - Introduction to Earthquake Seismology (3)

Lecture two hours, laboratory two hours per week. Causes and effects of earthquakes; parameters of seismic foci determinable from seismographic records; seismic geography and structure of the earth inferred from seismic data. Laboratory exercises with problems of record interpretation. Spring or Fall semester.

EAS 465 - Weather Forecasting (3)

The development of skills to assess the current and future states of the atmosphere. Efforts are focused on proper weather briefing techniques and on producing forecasts for short term, extended, fire, and aviation weather. There will also be post-evaluation of forecasts. Prerequisites: EAS-422 or permission of the instructor.

EAS 468 - Mesoscale Meteorology (3)

Theoretical examination of the dynamical and thermodynamical processes associated with mesoscale meteorological phenomena. Topics include vorticity and divergence tendencies, supercell thunderstorms, quasi-linear convective systems, mesoscale convective vortices, and downbursts. Prerequisite: MATH-351, EAS-445, or permission of the instructor.

EAS 470 - Theory of Vibrating Systems (3)

Single and multiple degree of freedom oscillators. Theoretical and practical study of ground vibrations caused by earthquakes, machinery, quarry blasts, and other disturbances; effects of these vibrations on buildings and other structures. Offered Spring or Fall semester.

EAS 472 - Seismological Instrumentation (3)

Lecture two hours, laboratory one hour per week. Physical principles underlying design and operation of the seismograph. Selection of the seismograph for specific problems; calibration and response characteristics. Laboratory practice in assembly, installation, and calibration of modern seismographs. Offered Spring or Fall semester.

EAS 478 - COMET Modules (1-3)

This is a self study, self-paced course which utilizes the computer-based learning (CBL) modules on the laser video disk and CD-ROM, purchased from the Cooperative Program for Operational Meteorology, Education, and Training (COMET). Credits earned are based upon the number of modules chosen. The modules vary in length and include frequent quizzes and lab exercises which are computer evaluated. The student will contract to finish a certain number of modules during the term, and complete them on the department PC which runs the modules. The completion of the modules will be monitored by the student's advisor. Offered Fall or Spring semester.

EAS 501 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS 501, BIOL 517, IAS 517 or SOC 565

EAS 502 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS biogeography. Each part is instructed by a professor specialized in the particular area. Students may only apply credits towards their graduation requirements from one of the following courses: EAS 502, IAS 518, BIOL 518 or SOC 566

EAS 503 - Geospatial Methods in Environmental Studies (3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment.

EAS 504 - Potential Theory (3)

Laplace's equation and the Dirichlet, Neumann and mixed boundary value problems. Methods of solution studied include separation of variables, conformal mapping, and integral transforms. Offered every Fall semester.

EAS 506 - Physics of Solid Earth (3)

Structure and processes in the earth's interior; composition, heat flow, rheology, and geomagnetism. Offer as needed.

EAS 507 - Advanced Coastal Processes (3)

Origin and evolution of coastal landforms and the physical processes responsible for their creation and modification, including: geomorphic classification of coasts, sediment characteristics, sea level, tides, waves, nearshore currents, longshore and cross-shore sediment transport, beach and nearshore morphology, barrier island systems, salt marshes, cliffed coasts, and effects of climate change on coastal environments.

EAS 508 - Dynamics of the Atmosphere (3)

Dynamic core course of the graduate program. Comprehensive treatments of dynamic processes of the atmosphere on all spatial-temporal scales. Integrates dynamic aspects of atmosphere ranging from storm movement to general circulation. Topics include cloud-storm dynamics, mesoscale processes, large-scale dynamics, and global circulation.

EAS 509 - Physics of the Atmosphere (3)

Physics core course of the graduate program. Comprehensive treatment of physical processes of the atmosphere on all spatial-temporal scales. Covers atmospheric processes ranging from eddy turbulence to general circulation. Topics include boundary layer turbulence, atmospheric radiation, cloud physics, numerical modeling.

EAS 511 - Computing in Atmospheric Science (2)

The goal is to master computing and displaying technology. Contents include current computing techniques employed in digital era, computer modeling of weather and climate, programming languages including Fortran and scripting languages, Unix operating system, and common displaying software.

EAS 512 - Time Series Analysis in Geophy (3)

Fourier transform, Fourier series, discrete Fourier transform, fast Fourier transform, digital filtering. Applications to Geophysics. Offered occasionally.

EAS 513 - Geotechnics (3)

Geologists and Environmental Scientists are faced with slope stability, rock and soil loss problems at one point or another in the professional work. These issues directly affect population and infrastructure, as well impacts negatively household, state and federal budgets. It is of paramount importance to understand not only the behavior natural material under critical equilibrium or unstable conditions, and how they will react to induced disturbances, but also, the mechanisms to improve and resolve such conditions. This course presents the properties of geologic materials and general principles that govern the stability of rock and soil masses. In addition, it provides students with tools to characterize, assess and analyze unstable masses, and to provide solutions for their improvement, containment and stabilization.

EAS 515 - Properties of Earth Materials (3)

This course gives a survey of the physical and chemical properties of geological materials. The course covers: physical properties of minerals and rocks; chemical properties of minerals and rocks; seismic and thermal parameters of the lithosphere and mantle; properties of surface fluids and loose aggregate materials. Normally offered every year.

EAS 517 - Divergent & Convergent Margins (3)

This course in an in-depth, integrative examination into the geology and geophysics of divergent and convergent margins. Subject matter includes the physiography, petrology, geochemistry, sedimentology, seismic surveys, and seismology of margins. Laboratory exercises, take-home assignments, classroom presentations and paper are an integral part of the course. Offered every other year.

EAS 518 - Trans Margins & Plate Interior (3)

This course in an in-depth, integrative examination into the geology and geophysics of transform margins and plate interiors. Subject matter includes the physiography, petrology, geochemistry, sedimentology, seismic surveys, and seismology of margins and plate interiors. Laboratory exercises, take-home assignments, classroom presentations and paper are an integral part of the course. Offered every other year.

EAS 519 - Seminar in Geoscience (2)

In-depth study of recent research developments in geophysics. This seminar or EAS-539 is offered every semester.

EAS 520 - Numerical Method of Prediction (3)

Study of the concepts of dynamic meteorology underlying numerical weather prediction models, the development of the single and multi-level models and their applications. Climate modeling. Offered during the summer session.

EAS 522 - Geophysical Data Processing (3)

Modern digital data processing methods used in geophysics, based on Fourier and Z transforms. Topics include correlation, spectral analysis, and digital filters, with application to earthquake seismology, seismic, gravity, and magnetic exploration. Offered occasionally.

EAS 523 - Boundary Layer Meteorology (3)

Comprehensive treatment of the Navier Stokes equations - development and solutions. Discussions of the three-dimensional modeling of the planetary boundary layer, the accompanying turbulence theory, and marine boundary layers. Offered every other Fall semester.

EAS 524 - Tropical Meteorology (3)

Study of the fundamentals of circulation in the tropics, the importance of sea-air interaction, convection processes, monsoons, energy transfer and hurricanes. Offered every Spring semester.

EAS 526 - Synoptic & Dynamic of Jet Strm (3)

The dynamic concepts useful in jet stream meteorology; methods of measuring various parameters in the free atmosphere; discussion of laboratory and computing models as they relate to planetary jet streams. Offered occasionally.

EAS 527 - Meteorology of Severe Storms (3)

Comprehensive treatment of the synoptic and mesoscale meteorological aspects and the mechanics of thunderstorms, tornadoes and downbursts. Offered every other Fall semester.

EAS 528 - Diag & Pred of Severe Storms (3)

Emphasis is placed on the development of short term (1-6 hours) forecasting techniques for severe storms. Topics include: instability mechanisms, severe storm structure and types, sounding analysis, low level jet inversion wind maxima, jet streak coupling, boundary layer thermal gradients, satellite/radar signatures of severe convection, flash flood forecasting and statistical guidance. Case studies of severe weather are discussed in class. Offered every other spring semester.

EAS 529 - Mesometeorology (3)

Comprehensive synoptic and theoretical discussion of mesoscale meteorological events, thermally induced circulations and nonconvective circulations. Offered occasionally.

EAS 530 - Seminar in Atmospheric Science (0-1)

Student will choose paper(s) from recent literature related to a topic assigned. After thorough study of the papers, students present their finding around the papers in the class. Peers students, instructor, and participating professor provide written critical comments. Presenting students response to the comments and indicate how he/she would improve their presentation based on the feedback.

EAS 533 - Communicating in Research (2)

Students will enroll in EAS 530 & 533 and meet concurrently. In common with EAS 530, students and faculty will choose papers from recent literature relevant to research topics in the department. Individual students will be assigned to present the papers to the group and lead group discussions. A Computer Supported Peer Review in Education will be used to collect feedback and grades from entire class. The presenters will evaluate the feedback received (back-evaluations). This will provide a mechanism for enhanced critical evaluation with a view to improving student's communication and review skills.

EAS 534 - Cloud Physics (3)

Microphysics of warm and cold clouds, including diffusion, collision-coalescence, riming and aggregate processes. Offered occasionally.

EAS 536 - Principles of Radiative Trnsfr (3)

Concepts of transfer of solar and terrestrial radiation in the earth-atmosphere system studied on the basis of an introduction to precision radiometry. Topics include atmospheric turbidity, radiative transfer in cloudless and cloudy atmospheres, heat budget, role of radiative energy exchange in weather processes. Offered every other Fall semester.

EAS 538 - Stat Methods in Meteorology (3)

This course will introduce the students to the statistical methods used in the analysis of observational and numerical model data. The topics include a review of standard statistical analysis of location and spread in data, as well as, hypothesis testing, field significance, simple stochastic models, and advanced data analysis techniques including principle component analysis. The students will also be introduced to Monte Carlo techniques as another way to access statistical significance.

EAS 539 - Seminar in Seismology (2)

In depth study of recent research developments or specific topics not covered in formal courses. This seminar or EAS-519 is offered every semester.

EAS 540 - Continuum Mechs in Wave Propag (3)

Concepts of continua, tensor analysis, stress deformation, and elasticity will be covered in detail. Other constitutive relations used to describe deformation in real materials such as plasticity, viscoelasticity, materials testing, thermoelasticity, and several classical boundary value problems relevant to the geosciences will be presented. Offered every Spring semester.

EAS 542 - Advanced Structural Geology (2)

This course gives a survey of microstructures and mesoscale structures that are important for understanding and deciphering the deformation history of deformed rocks. Offered every other year.

EAS 543 - Isotope Geochemistry (2)

This course gives a survey of radiogenic and stable isotopic systems that are frequently used in the geosciences. The course covers: principles of isotopic decay; geochronology with emphasis on K/Ar, Rb/Sr, and U/Pb systems; thermochronology; and stable isotope geochemistry. Offered every other year.

EAS 544 - Advanced Sedimentary Geology (2)

A survey of clastic depositional systems and their facies, ranging from terrestrial systems to marginal-marine and deep-marine systems. Topics will include the occurrence of depositional systems within a sequence stratigraphic framework, and the storage and migration of hydrocarbons and groundwater in these depositional systems. Offered every other year.

EAS 545 - Advanced Petrology (2)

An introduction to modern geochemical theory and methods and their application to the igneous and metamorphic rocks. Emphasis will be on the major and trace element geochemistry of crust and mantle rocks, and the use of geothermometers and geobarometers in deciphering the pressure-temperature histories of rocks. Offered every other year.

EAS 546 - Geodynamics (3)

Course focuses on the poorly understood, and hence controversial, large-scale processes and events that have affected the gross structure and chemistry of the Earth's mantle, crust, atmosphere, and biosphere. Offered occasionally.

EAS 547 - Turbulence (3)

The main theoretical concepts of atmospheric turbulence, diffusion, evaporation and wind structure in the atmospheric boundary layer. Offered every other Spring semester.

EAS 549 - Microwave Remote Sensing: SAR principles, da

This course introduces SAR principles, data sources, data processing chain, and SAR applications in measuring earthquake deformation, land subsidence and building sinking, and tree height estimation, DEM generation, and monitoring environmental issues. These different topics will be covered through a series of stepwise exercises involving different kinds of SAR data.

EAS 550 - Atmospheric Process & Applictn (3)

Advanced applications of convective, dynamic, radiative, synoptic, and numerical meteorological principles to model atmospheric phenomena. Offered every spring semester.

EAS 550 - Scientific Communication (3)

Principles of effective writing for a scientific audience; the structure of reports, papers and communications; techniques for the organization and delivery of results for written, oral, and poster presentations.

EAS 551 - Seismic Exploration Methods (2)

Exploration for natural resources using seismic waves; refraction and reflection methods and interpretation; elementary seismic data processing. Offered alternate years.

EAS 552 - Seismic Exploration Lab (1)

Laboratory and field problems two hours per week. Collection and interpretation of seismic data; application of the computer to data interpretation. Offered in alternate years.

EAS 554 - Poten & Elect Explortn Methods (3)

Earth's gravity, magnetic and natural electrical and electromagnetic fields; density and magnetic and electrical properties of rocks; gravity, magnetic and electrical methods of exploration. Offered occasionally.

EAS 556 - InSAR (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timesSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

EAS 561 - Satellite Meteorology (3)

Satellite instrumentation; rectification, analysis and interpretation of satellite radiation measurements and cloud photographs; use of these data in the solution of specific meteorological problems. Offered every other Fall semester.

EAS 565 - Radar Meteorology (3)

Fundamentals of a pulsed Doppler and non-Doppler radar. Velocity and range folding. Doppler radar display and signature interpretation. Characteristics of convective storms and severe weather signatures. Offered every other Spring semester.

EAS 570 - Convection in the Atmosphere (3)

Derivation of consistent equations to study thermal convective phenomena in the atmosphere, the interaction between convective elements and their environments, simulation of thunderstorms and arrangement of convection. Offered every other Fall semester.

EAS 572 - Seismological Instrumentation (3)

Lecture two hours, laboratory one hour per week. Physical principles underlying design and operation of the seismograph. Selection of the seismograph for specific problems; calibration and response characteristics. Laboratory practice in assembly, installation and calibration of modern seismographs. Offered in alternate years.

EAS 575 - Land-Atmosphere Interaction (3)

Principal physical and dynamic processes governing exchanges of mass and energy among soil, vegetation, bodies of water, and overlying atmosphere: precipitation, evapotranspiration, infiltration, snowmelt, and surface-runoff. Parameterization of these processes in numerical models over large tempo-spatial scales.

EAS 580 - Synoptic-Mesoscale Circulation (3)

This course will cover topics that are critical for understanding both large- and small-scale circulations in the atmosphere. Emphasis will be placed on developing a deep conceptual understanding and in-depth mathematical treatment of "balanced" vertical motions, quasi-geostrophic theory, the Petterssen's development equation, the Sawyer-Eliassen ageostrophic circulation equations, jet streak dynamics, tropopause undulations, and isentropic potential vorticity concepts.

EAS 588 - Independent Study (1-3)

The Master's student undertakes an independent study of a chosen topic with the approval of sponsoring professor and the Program Director.

EAS 591 - Geoscience Journal Club (0-1)

Registration in Journal Club is required every semester.

EAS 598 - Graduate Reading Course (1-3)

A critical evaluation of literature concerning a specific problem.

EAS 610 - Adv Top in Solid Earth Geophys (3)

Physics of the earth's interior; emphasis on current research problems. Topics from seismology, geology, heat flow, geomagnetism, and tectonophysics. Offered occasionally.

EAS 619 - Adv Seminar in Geophysics (2)

In-depth analysis of topics for Ph.D. students. Offered occasionally.

EAS 620 - Advanced Geomagnetism (3)

Lecture course on spherical harmonic analysis of the main magnetic field of the earth and of transient magnetic variations. Processes in the ionosphere relating to geomagnetism; topics in paleomagnetism and magnetohydrodynamics included. Offered occasionally.

EAS 630 - Seminar in Atmospheric Science (1)

Student will choose paper(s) from recent literature related to a topic assigned. After thorough study of the papers, students present their finding around the papers in the class. Peers students, instructor, and participating professor provide written critical comments. Presenting students response to the comments and indicate how he/she would improve their presentation based on the feedback.

EAS 631 - Advanced Seismology I (3)

Students will enroll in EAS 530 & 531 and meet concurrently. In common with EAS 530, students and faculty will choose papers from recent literature relevant to research topics in the department. Individual students will be assigned to present the papers to the group and lead group discussions. ζ Computer Supported Peer Review in Education ζ will be used to collect feedback and grades from entire class. The presenters will evaluate the feedback received (ζ back-evaluations ζ). This will provide a mechanism for enhanced critical evaluation with a view to improving student ζ s communication and review skills.

EAS 632 - Advanced Seismology II (3)

Wave propagation in a spherical earth is the focus of this course. Wave equation solutions using free oscillations, WKBJ ray theory and surface waves are developed. Modern techniques for wave propagation in an earth with laterally varying media will be addressed. Theory for the inversion of seismic observations, e.g. free oscillation frequencies, surface wave dispersion or body wave travel times, for earth structure will be developed. Offered every Spring semester.

EAS 633 - Advanced Seismology I (3)

Students will enroll in EAS 530 & 533 and meet concurrently. In common with EAS 530, students and faculty will choose papers from recent literature relevant to research topics in the department. Individual students will be assigned to present the papers to the group and lead group discussions. ζ Computer Supported Peer Review in Education ζ will be used to collect feedback and grades from entire class. The presenters will evaluate the feedback received (ζ back-evaluations ζ). This will provide a mechanism for enhanced critical evaluation with a view to improving student ζ s communication and review skills.

EAS 648 - Gen Circulation of Atmosphere (3)

The nature and theories of the atmospheric general circulation, the energy and momentum budget of the atmosphere and the numerical simulation of the atmospheric general circulation. Offered occasionally.

EAS 659 - Numer Mthds of Atmos Sciences (3)

Topics include the solution of linear algebraic systems, generalized Fourier Series methods of boundary-initial-value problems, finite difference solutions of partial differential equations and statistical techniques of geophysical data processing. Applications to problems of interest in the atmospheric sciences. Offered occasionally.

EAS 688 - Independent Study (1-3)

The student undertakes an independent study of a chosen topic with the approval of a sponsoring professor and the Program Director.

EAS 691 - Geoscience Journal Club (0-1)

Registration in Journal Club is required every semester.

English (ENGL)**ENGL 0900 - Introduction to Writing (3)**

Assists in the development of the basics of written expression and reading, including grammar, sentence and paragraph structure, thesis formulation, complexities of expository works. Pass/No Pass only.

ENGL 1500 - The Process of Composition (3)

Develops effective personal and expository prose writing skills, including methods of invention, organization, audience analysis, and style. Focuses on the compositional process.

ENGL 1900 - Advanced Strategies Of Rhetoric and Resear

Studies complex structures of language including its logical and persuasive possibilities. Emphasizes analytical reading, critical thinking, and research methodology skills. Prerequisite: ENGL-150, or equivalent.

ENGL 1920 - Advanced Writing for Professionals (3)

Advanced instruction in expository and argumentative writing with issues relevant to engineers. Not equivalent to ENGL-190. Restricted to students at Parks. Prerequisite: ENGL-150, or equivalent.

ENGL 1940 - Advanced Writing (3)

[Equivalent to ENGL 190] Designed for probable majors in English or Humanities. Through study of a subject tied to the research interests of the professor, this course emphasizes critical reading, argumentative writing, rhetorical awareness, and research. Serves as the first in a recommended sequence that includes ENGL 294, 394, and 494. Prerequisite: ENGL 150 or equivalent. Offered regularly.

ENGL 1950 - Advanced Writing about Urban and Social Pr

ENGL 195 Advanced Strategies of Rhetoric and Research (3). The Micah section of this course engages students in writing about urban problems and about the stages by which ordinary people come to participate in, or to resist, social injustice. Emphasizes skills in analytical reading, critical thinking, persuasive argumentation, and research. Fulfills the English 190 Writing core. No prerequisite.

ENGL 202 - Introduction to Literary Study (3)

Introduces students to theoretical and methodological approaches to literary texts, including major terms, methods, and concepts.

ENGL 2020 - Intro to Literary Study (3)

Introduces students to theoretical and methodological approaches to literary texts, including major terms, methods, and concepts.

ENGL 2200 - Introduction to Poetry (3)

Introduces students to theoretical and methodological approaches to poetry, including major terms, methods, and concepts.

ENGL 2250 - Conflict, Social Justice and Literature (3)

This course introduces literary study within the context and theme of Cultural Conflict and Social Justice. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2300 - ζ Introduction to the Novel (3)

ζ Introduces students to theoretical and methodological approaches to the novel, including major terms, methods, and concepts.

ENGL 2350 - Faith, Doubt and Literature (3)

This course introduces literary study within the context and theme of Faith and Doubt. Through the reading of a wide variety of genres - including drama, poetry, and fiction - this course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2400 - Introduction to Drama (3)

Introduces students to theoretical and methodological approaches to drama, including major terms, methods, and concepts.

ENGL 2450 - Nature, Ecology & Literature (3)

This course introduces literary study within the context and theme of Nature and Ecology. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 255 - Gender, Identity & Literature (3)

This course introduces literary study within the context and theme of Gender and Identity. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2550 - Gender, Identity & Literature (3)

This course introduces literary study within the context and theme of Gender and Identity. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2600 - Intro to Short Fiction (3)

Introduces students to theoretical and methodological approaches to short fiction, including major terms, methods, and concepts. Offered regularly.

ENGL 2650 - Technology, Media & Literature (3)

This course introduces literary study within the context and theme of Technology and Media. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2700 - Introduction to Film (3)

Introduces students to theoretical and methodological approaches to film, including major terms, methods, and concepts. Prerequisite: ENGL 1900 or equivalent.

ENGL 2750 - Film, Culture and Literature (3)

This course introduces literary study within the context and theme of Film and Culture. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2850 - Nation, Identity & Literature (3)

This course introduces literary study within the context and theme of nation and identity. Through reading a wide variety of genres - including drama, fiction, and poetry - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative and reflective writing. Prerequisite: ENGL 1900 or equivalent.

ENGL 2940 - Advanced Introduction to Literary Study (3)

Designed for students who plan to major in English or Humanities. Emphasizes theoretical and methodological approaches to literary texts. Serves as the second in a recommended sequence including ENGL 194, 394, 494. Pre-requisite: ENGL 190 or 194 (or equivalent) and permission of the department.

ENGL 3030 - The Writer as Reader (3)

In this course, we will consider what it means to read like a writer (vs. a scholar) and practice doing this kind of reading ourselves on a range of short fiction. Students will complete weekly assignments that will be alternately critical (craft-oriented) or creative in nature and write a craft-oriented paper.

ENGL 3040 - Writing Literacy Narratives (3)

Enables students to understand what reading and writing mean to them, and to appreciate why cultures struggle for literacy. Students will write several essays/narratives. Offered regularly.

ENGL 3050 - Creative Writing: Poetry (3)

An introduction through reading and writing to common poetic forms. Offered regularly.

ENGL 3060 - Creative Writing: Fiction (3)

An introduction through reading and writing to the fundamentals of short story writing, with some attention to the problems of longer narrative forms. Offered regularly.

ENGL 3070 - Creative Writing: Drama (3)

An introduction through reading and writing to the fundamentals of drama writing. Offered regularly.

ENGL 3080 - Creative Writing: Non-Fiction (3)

An introduction through reading and writing to different aspects and modes of prose nonfiction, e.g., journal writing, the personal essay, and the development of individual style.

ENGL 3090 - Creative Writing: Poetry and Translation (3)

A study through reading and writing of the problems involved in literature and translation. Specific techniques will be introduced through translation exercises. Emphasis may be on poetry, fiction or drama.

ENGL 3110 - American Short Story (3)

Studies short stories by nineteenth and twentieth-century American authors, to show the unity and diversity of the form from the beginning to the present. Offered regularly.

ENGL 3130 - American Fiction (3)

Examines American fiction from the 19th century to the present, including cultural trends and historical contexts. Offered occasionally.

ENGL 3140 - Poetry (3)

Studies poetry to show the unity and diversity of the form from the beginning to the present. Offered occasionally.

ENGL 3180 - Film (3)

A study of selected films to show the diversity of films from the beginning to the present.

ENGL 3190 - Literature of Ridicule and Satire (3)

Examines satiric literature from Aristophanes to the contemporary American novel. Offered occasionally.

ENGL 3200 - Detective Fiction (3)

Examines detective and international spy literature. Offered occasionally.

ENGL 3210 - Fantasy and Literature (3)

Examines literature about imaginary beings and worlds, including chivalric romance, fairy tales, and ghost stories. Offered occasionally.

ENGL 3220 - Film and Literature (1-3)

Examines works of literature and film. Offered regularly.

ENGL 3230 - Journalism and Literature (3)

Examines works of literature and journalism. Offered occasionally.

ENGL 3240 - Reading the Female Bildungsroman (3)

Although as a genre the Bildungsroman has traditionally focused on the intellectual, social, and moral education of a male hero, women have variously employed this genre to tell alternate stories focused upon female intellectual, social, and sexual development. This course provides a critical examination of the American Female Bildungsroman. Students will consider American novels, films and television shows that depict a girl's emergence into an often hostile national and social order to consider how gender affects selfhood, citizenship, and authorship.

ENGL 3250 - British Literary Traditions to 1800 (3)

Examines representative works of medieval, renaissance, restoration, and eighteenth century British literature in light of historical and cultural developments. Strongly recommended for majors. Fall semester.

ENGL 3260 - British Literary Traditions after 1800 (3)

Examines representative works of nineteenth and twentieth century British literature in light of major historical and cultural developments. Strongly recommended for majors. Spring semester.

ENGL 3270 - American Literary Traditions to 1865 (3)

Examines representative works in American literature from the beginnings to 1865 in light of major historical and cultural developments. Strongly recommended for majors. Fall semester.

ENGL 3280 - American Literary Traditions after 1865 (3)

Examines representative works in American literature from 1865 to the present in light of major historical and cultural developments. Strongly recommended for majors.

ENGL 3290 - American Literary Traditions: Special Topics

Special topics in American literary traditions: content varies.

ENGL 3300 - Eastern European Literature (3)

Studies literary reactions to and treatments of some of the most sweeping changes in Europe. Offered frequently.

ENGL 3310 - World Literary Traditions I (3)

Studies selected literary works from the ancient world through the Renaissance. Offered occasionally.

ENGL 3320 - World Literary Traditions II (3)

Intended as a continuation of ENGL 340, studies selected works of literature from the seventeenth-century to the present. Offered occasionally.

ENGL 3330 - World Literary Traditions III (3)

Studies selected fiction, drama or other topics from a diverse range of authors. Offered occasionally.

ENGL 3340 - Modern Literature (3)

Studies the variety and range of modern contemporary literature. Offered occasionally.

ENGL 3350 - Selected Major British Authors (3)

A study of several major British writers. Offered occasionally.

ENGL 3360 - Contemporary Irish Writing (3)

Examines the genres and themes in contemporary Irish literature and culture, including modernist literary texts, and aspects of Irish culture. Offered occasionally.

ENGL 3370 - The Oxford Christians: Tolkien, Lewis and Wi

Introduces students to the works of Tolkien, Lewis, and Williams, examining their popularity, and their place in history. Offered occasionally.

ENGL 3380 - The Classics and Literature (3)

Examines classical epics, tragedies, comedies, lyrics and myths and their adaptations in English literature from the sixteenth to the nineteenth centuries. Offered occasionally.

ENGL 3390 - Literature and Film of World War II (3)

Examines the rhetoric of American representation of its experience of World War II, and how the war shaped the American experience. Offered frequently.

ENGL 3400 - War in Literature (3)

Examines how literature and film have represented war. Students will read literary, historical and journalistic texts, and will view films. Offered occasionally.

ENGL 3470 - Introduction to Shakespeare (3)

Examines a selection of Shakespeare's major works with a focus on his appeal as a popular author as well as his achievement as a major poet and craftsman. Offered every semester.

ENGL 3490 - 19th Century British Literature (3)

Examines the development of British literature from 1800-1899, including the various genres and forms, cultural trends and historical contexts. Offered occasionally.

ENGL 3500 - Literature of the Postcolonial World (3)

Examines representative works and major literary, historical, and cultural developments in the postcolonial literatures of Asia, Africa, and the Caribbean. Strongly recommended for majors. Offered regularly.

ENGL 3510 - African American Literary Traditions I: Before

Examines African American literature prior to 1900 including works of literature, essays, poems and short stories.

ENGL 3520 - African American Literary Traditions II: After

Examines African American literature of the 20th and 21st centuries including works of literature, essays, poems and short stories. Offered regularly.

ENGL 3530 - African American Literary Tradition: Special

Special topics in African American literary traditions: content varies.

ENGL 3540 - Literature of the African Diaspora (3)

An introduction to the fiction and poetry of Black African and African - American writers.

ENGL 3550 - Native American Literature (3)

Examines the ways in which Native American writers struggle to maintain their cultural identities and how they tell stories. Offered regularly.

ENGL 3560 - Ethnic American Literature (3)

Examines the ways in which ethnic American writers tell and write stories, and what "ethnic" and "American" mean as concepts. Offered occasionally.

ENGL 3570 - Writing Sex in the Middle Ages (3)

Examines medieval texts in various genres that represent sexuality and gender. Offered frequently.

ENGL 3580 - Literature of the Natural World (3)

Studies modern and contemporary literary texts as social, aesthetic, and humanistic foundations for environmental and ecological perspectives. Offered occasionally.

ENGL 3590 - Nature and Literature (3)

Examines literary works reflective of the world of nature and the environment. Offered occasionally.

ENGL 3600 - Women in Literature (3)

Analyzes works authored by and about women; studied from a feminist perspective.

ENGL 3610 - The City and Literature (3)

Examines representations of the city in literature and film including how Americans use the city as fundamental cultural space. Offered regularly.

ENGL 3620 - Special Topics in Spirituality and Literature (3)

Studies literature that considers the nature of God and of spirituality, broadly defined.

ENGL 3630 - Disaster Narratives (3)

This course reflects on the nature and implications of selected disasters by considering their real-life effects, both on innocent victims caught by forces beyond their control and on perpetrators. Prerequisites: PHIL 105 or 205 or equivalent; and ENGL 190.

ENGL 3640 - British Culture and Travel (3)

Combines the study of literary works, along with travel to London (during Spring break). Spring semester and requires a \$1500 travel fee.

ENGL 3650 - Science Fiction (3)

A survey of futuristic fantasies that emphasize science and technology.

ENGL 3700 - The Bible & Literature (3)

Studies poems and narratives from scripture, e.g., Genesis, the Psalms, and the Gospels, with attention to literary works based on the Bible.

ENGL 3730 - Introduction to Medical Humanities, Literatur

Examines narratives of illness experience to understand illness and health as historically and culturally constructed; students interpret representations of suffering, confusion, despair, hopelessness, and hope that people experience when confronted with illness. Pre-requisite: a 200-level English course or English Departmental permission.

ENGL 3740 - Medicine and Literature (3)

Examines literature dealing with medicine, medical issues, and the relationship between medicine and literature. Offered occasionally.

ENGL 3750 - Writing about Literature (3)

Explores ways to write effectively about literature, stressing skills in analysis and theories and methods of reading. Recommended for English majors. The third in a sequence of four courses (ENGL 194, 294, 394 & 494). Pre-requisites: ENGL 194 & 294 (or equivalent) and permission of the department. Offered each spring.

ENGL 3760 - Topics in Rhetorical Analysis (3)

Introduces students to advanced methods of argument, persuasion, and deliberation through the study of practices of ancient rhetoric (Aristotle; Cicero). Literary texts include Sophocles's *Antigone* and Philoctetes. Recommended for students pursuing the Secondary Major in Legal Studies, and for students with interests in professional writing, communication, political science, and philosophy.

ENGL 3850 - Foundations Rhetoric & Writing (3)

English 300 introduces students to the field of rhetoric and writing through a sustained engagement with its practices and principles. Work in the course stresses the importance of primary research, document design, effective writing, and audience awareness, considerations that will shape the professional lives of students.

ENGL 3860 - Public Rhetoric (3)

Introduces students to advanced methods of rhetoric, persuasion, and deliberation in both print and digital formats. Recommended particularly for students pursuing the English department concentration in Rhetoric, Writing, and Technology.

ENGL 3870 - Technical Writing (3)

English 302 is designed to introduce students to the principles of technical writing. Technical writing is the presentation of technical material in written and visual formats that are user-centered and context-specific. The course and its principles are grounded in rhetorical theory, which students are introduced to throughout the semester.

ENGL 3880 - Writing Personal Narratives and Memoirs (3)

This course will enable students to write in a way that creates more meaning in their lives, to describe what reading and writing mean to them, and understand personal writing practices. Students will write about 4 essays/narratives (16-35 pages) and a process journal.

ENGL 4000 - Business and Professional Writing (3)

Teaches business and professional writing from a rhetorical perspective. Involves case studies based on research in actual professional settings, with special attention to strategic planning and rigorous revision and editing. Offered every semester

ENGL 4010 - New Media Writing (3)

New Media Writing explores such questions as: what is the impact of new media technologies on the composition and distribution of texts, on the work of persuasion and identification, and on the cultivation of ethos and identity? This exploration takes place across multiple, short writing assignments, podcasts, and multimedia projects.

ENGL 4020 - History of Rhetoric I (3)

Introduces students to the history of rhetorical theory in the West and centers on the long-standing debate between rhetoric and philosophy concerning the nature of persuasion. Focuses on major thinkers, including Socrates, Plato, Aristotle, Cicero, and Quintilian, and studies their influence on both medieval and renaissance rhetoric.

ENGL 4030 - History of Rhetoric II (3)

ENGL 403 traces the development of rhetorical theory and practice from the dawn of the Enlightenment up to the present. The course's attends to how 20th century thinker Kenneth Burke saw rhetoric: the work of bringing people together. The course focuses particular attention on technology's role in this rhetorical work.

ENGL 4040 - Special Topics in Rhetoric (3)

An examination of various aspects of language literature, culture and communication, through the use of rhetorical theory as a critical apparatus.

ENGL 4050 - Advanced Creative Writing: Poetry (3)

Weekly poetry writing assignments based on weekly poetry reading assignments. Offered regularly.

ENGL 4060 - Advanced Creative Writing: Fiction (3)

Reading and writing of fiction in a workshop setting in which one's own writing and the writing of other participants are shared and discussed. Offered regularly.

ENGL 4070 - Advanced Creative Writing: Drama (3)

A writer's workshop focusing on skills and procedures for beginning playwrighting in an attempt to build from a short sketch to one-actors towards a full-length drama. Offered regularly.

ENGL 4080 - Advanced Creative Writing: Non-Fiction (3)

An attempt to define the essay operationally and performatively, by writing it. Essays will be read by established authors; class work will be shared through group editing. Offered regularly.

ENGL 4090 - Advanced Creative Writing: Time in Fiction (3)

This is an upper-level creative writing workshop focusing on the craft of time in fiction writing. Over the course of the semester, students will be expected to write and workshop two short stories, engage in revision, and complete a number of weekly assignments built around craft-based readings and exercises.

ENGL 4100 - History of the English Language (3)

A survey of the main features of Old, Middle and Modern English. Offered regularly.

ENGL 4110 - Introduction to Linguistics (3)

A survey of how the nature and structure of human language, focusing on English, are studied. Offered regularly.

ENGL 4130 - Literary Theory (3)

Explores theories and movements of/about literature, with special emphasis on twentieth century literary theory. Offered regularly.

ENGL 4150 - Ethnic and Race Studies (3)

Explores the ways in which individuals reflect on their ethnic and racial experience through language and how the terms "race" and "ethnicity" are dynamic, and changing. Offered regularly.

ENGL 4170 - American Film History (1-3)

Explores the issues and developments that characterized the development of film and film traditions in America from the beginnings to the present. Offered frequently.

ENGL 4180 - Film Theory (3)

Explores theories and movements of/about film, with special attention to twentieth century film theory. Offered occasionally.

ENGL 4190 - Topics in Religion & Culture (3)

Studies the influence of religion on literature and culture.

ENGL 4200 - Introduction to Old English (3)

Enables students to read Old English works in the original. At the end students will be prepared to read Beowulf. Offered regularly.

ENGL 4210 - Beowulf (3)

Enables students to read and translate Beowulf. It will explore comparisons to works in both Old English and Old Norse. Offered regularly.

ENGL 4220 - Intro to Old Norse (3)

Enables students to read Old Norse works in the original, thereby providing access to the myths and sagas of the Viking age. Offered regularly.

ENGL 4230 - Literature of the Vikings (3)

Explores the myths, legends and sagas of the Viking era, including heroic poems. Examines their impact on European culture. Offered regularly.

ENGL 4240 - Chaucer: The Canterbury Tales (3)

Introduces students to the characters, narratives, and genres in *The Canterbury Tales*, and explores their socio-cultural contexts. The tales will be read in the original Middle English. Offered frequently.

ENGL 4250 - Chaucer: Troilus and Shorter Works (3)

Explores the poems Chaucer wrote outside The Canterbury Tales, including the "dream poems", short lyrics, addresses and begging poems, and Troilus. Offered frequently.

ENGL 4290 - Topics in Medieval Literature (3)

Topics in Medieval Literature: content varies.

ENGL 4300 - Age of Elizabeth (3)

Examines non-dramatic poetry and prose from 1558 to 1603, including works by Marlowe, Spenser, Shakespeare, the Sidneys, and Donne. Offered regularly.

ENGL 4310 - Early Shakespeare (3)

Examines Shakespeare's plays written during the 16th century, with attention to their variety and development. Fall semester.

ENGL 4320 - Shakespeare: Special Topics (3)

Examines selected topics and areas in Shakespeare's work. Content varies. Offered regularly.

ENGL 4330 - Renaissance Drama (3)

Examines plays written during the 16th and 17th centuries by Shakespeare and his contemporaries, including Kyd, Marlowe, Jonson, Webster, Middleton, and Ford. Offered regularly.

ENGL 4340 - Falling in Love in Renaissance (3)

Explores selected issues, writers, and writing, exemplifying the literary concerns of the Renaissance. Offered frequently.

ENGL 4350 - 17th Century Literature (3)

Examines selected writers and writing from the early 17th century to the Restoration, with particular attention to literary development and historical context. Offered regularly.

ENGL 4360 - Milton (3)

Examines Milton's major poems and selected prose, with special attention to Paradise Lost. Offered regularly.

ENGL 4370 - Renaissance Literature and Rhetoric (3)

Familiarizes students with the oral-rhetorical tradition in Renaissance England, focusing mainly on the early Tudor humanist program of rhetoric. Offered regularly.

ENGL 4380 - Early Women Writers (3)

Examines the writings of English women in the period from 1600 to 1700, including autobiographies, tracts, letters, fiction, poetry and plays. Offered regularly.

ENGL 4390 - Special Topics in 16th and 17th Century Liter

Courses that focuses on selected topics and areas in the period.

ENGL 4450 - Special Topics in Restoration & 18th Century

A survey of the prose of the period, to include the development of the periodical essay, the rise of journalism and letter-writing, as well as the formal stylists of the late century.

ENGL 4490 - 18th & 19th Century Women Writers (3)

Examines women writers and literary traditions in the 18th and 19th centuries including Eliza Haywood, Fanny Burney, Jane Austen, Charlotte Brontë and Christina Rossetti. Offered regularly.

ENGL 4500 - The Age of Romanticism (3)

Studies the thought and character of the Romantic Movement in England in the early part of the 19th century, through the examination of representative authors and works. Offered regularly.

ENGL 4550 - Victorian Poetry (3)

Surveys the panorama of poetry in the Victorian era in an effort to understand the vast changes brought about by this rapidly changing modernizing civilization. Offered regularly.

ENGL 4580 - Major Victorian Authors and Movements (3)

Surveys major Victorian authors and/or movements including Tennyson, Brontë, Browning, Dickens, Eliot and Wilde; the crisis of faith, the emergence of women writers, and social critique. Offered occasionally.

ENGL 4590 - Special Topics: 19th Century Literature (3)

Courses that focus on special topics and areas in the period.

ENGL 4600 - Topics in British Literature 1900 - 1945 (3)

Studies the fiction, drama and poetry of the first half of the 20th century with special attention to Conrad, Woolf, Joyce and Eliot, in an effort to assess the modernism of the period. Offered regularly.

ENGL 4610 - Female/Expatriate Modernism (3)

Addresses the concept of a "female modernism" expounded by such texts as No Man's Land and Gynesis. Readings include early 20th century men's and women's literature that stresses gender ideologies. Offered regularly.

ENGL 4620 - British Postmodernism (3)

Studies contemporary British fiction, drama, and poetry through appropriate readings in postmodern theory. Offered regularly.

ENGL 4630 - Nationalism and Irish Cultural Revival (3)

Explores the conjunction of politics and aesthetics in the art of the Irish Literary Revival. Examines visions of the nation, cultural nationalism and Yeats' influence. Offered regularly.

ENGL 4650 - Contemporary Irish Literature (3)

Analyzes the nexus of aesthetics and politics in contemporary Irish culture, including texts written by playwrights, poets, fiction writers, directors, cultural critics and historians. Offered regularly.

ENGL 4660 - Early 20th Century Postcolonial Literature an

Examines the configurations of empire in the context of postcolonial literary texts from the 1930s to the 1970s, focusing on nationalism and history in Asia, Africa and the Caribbean. Offered regularly.

ENGL 4670 - Contemporary Postcolonial Literature and Cu

Examines literary representations of social upheavals, post-independence disillusionment, violence, and globalization in Africa, Asia and the Caribbean from the 1970s to the present. Offered regularly.

ENGL 4680 - Major Post-Colonial Writers (3)

Examines major postcolonial writers like Achebe, Rushdie, Desai, Gordimer, Soyinka, and Walcott, including their attitudes to race, politics, language, gender and history. Offered regularly.

ENGL 4690 - Special Topics in 20th/21st Century British, Ir

Topics in 20th and 21st Century British, Irish and Postcolonial Literature and culture, content varies.

ENGL 4700 - American Literary Tradition to 1865 (3)

Identifies and explores emerging themes and methods in American literature in the Puritan, Enlightenment, and Romantic periods. Offered regularly.

ENGL 4720 - Contemporary American Literature (3)

Studies significant figures and trends that have shaped contemporary American literature. Offered regularly.

ENGL 4730 - Ethnic American Literature (3)

Explores and analyzes ethnic American literature, including an understanding of the world views and ideologies of different groups. Offered regularly.

ENGL 4740 - 19th Century American Literature (3)

Studies major American literature of the 19th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.

ENGL 4760 - 20th Century American Literature (3)

Studies the major American literature of the 20th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.

ENGL 4770 - 20th Century American Poetry (3)

Surveys major trends and developments from the Imagists and the 20th century traditionalists to the major modernists (e.g. Pound, Williams), to the beats and confessionals of the later century. Offered regularly.

ENGL 4780 - Recent American Poetry (3)

Explores American poetry in its varied forms. Surveys the current state of poetry and maps some possible directions for the future. Offered regularly.

ENGL 4790 - American Drama (3)

Examines major American playwrights of the 20th century, the socio-cultural contexts out of which they worked, and the aesthetic canons which their plays helped to form. Offered regularly.

ENGL 4800 - American Short Story (3)

Surveys representative examples and major practitioners of the short story form from the 19th and 20th centuries. Offered regularly.

ENGL 4810 - Major American Authors (3)

Examines some of the major American writers of the modern period focusing on their influences and their historical and literary contexts. Offered regularly.

ENGL 4830 - Post-1900 African American Literature (3)

Explores African American writings from the beginnings of the 20th century to the present, through a reading of a variety of literary, critical and historical texts from the Harlem Renaissance to Afro-Centrism. Offered regularly.

ENGL 4840 - Native American Literature (3)

Explores how Native American authors read and write a "different" history, including how storytelling helps create community and a sense of home. Offered regularly.

ENGL 4870 - Introduction to Young Adult Literature (3)

Exploration of trends and issues in young adult literature, from its modern origins in the 1960s to its most recent thematic and literary innovations. Designed with beginning teachers in mind but also intended to meet the needs of English majors and others with a general interest in the topic.

ENGL 4880 - The Machine Age in American Literature (3)

An analysis of the relationship of industrial and post industrial technologies to the literature and culture of America from the later Nineteenth century to the present.

ENGL 4890 - Spc Topics: Amer Lit & Culture (3)

Topics in American literary and cultural studies, content varies.

ENGL 4900 - Interdisciplinary Studies (3)

Studies pertinent writings from an interdisciplinary focus relating literature to other media and other literature. Offered occasionally.

ENGL 4920 - Introduction to Writing Instruction: Secondary

Examines the basic issues in rhetorical theory and writing pedagogy as they apply to secondary education in English.

ENGL 4940 - Senior Inquiry Seminar (3)

Requires intensive reading and research on a variety of topics and issues, and the writing of short reports and long reports. Required for all English majors. Prerequisite: Senior standing.

ENGL 4950 - Senior Residency (0)

Required of all graduating seniors.

ENGL 4980 - Adv Independent Study (1-3)

May vary from 1 to 3 hours. Prerequisite: Permission of Department Chair.

ENGL 5000 - Methods of Literary Resrch (3)

Introduction to resources and methods of research central to the scholarly study of literature.

ENGL 5010 - Teaching Writing (3)

Introduction to traditional and contemporary theories of rhetoric and composition, with special attention to their application in classroom practice.

ENGL 5020 - History of Rhetoric II (3)

English 502 offers an overview of rhetorical history in the West, starting in Ancient Athens and ending in Renaissance Europe. The course focuses on the rhetorical theory of major thinkers in the tradition, including Aristotle, Plato, Isocrates, Cicero, Quintilian, Augustine, Boethius, and many others.

ENGL 5040 - Problems in Rhetoric (3)

Focused examination of a specific historical, theoretical, or practical issues in rhetoric and composition.

ENGL 5100 - Literary Criticism: Aristotle (3)

Historical introduction to the significant epochs in the development of literary criticism from ancient to modern times.

ENGL 5110 - Literary Theory (3)

Introduction to the conceptions of the literary text that have influenced the reception and criticism of literature, with special attention to the development of theory through the twentieth century.

ENGL 5120 - Perspectives in Medieval Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5130 - Perspectives in Renaissance Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5140 - Perspctivs in Restoration/Brit (3)

Serves to introduce students to literary theory through an examination of the theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5150 - Perspctvs: 19th Cent Brtsh Lit (3)

Serves to introduce students to literary theory through an examination of the theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5160 - Perspctvs: 20th Cent Brtsh Lit (3)

Serves to introduce students to literary theory through an examination of the theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5170 - Perspectives in American Lit (3)

Serves to introduce students to literary theory through an examination of the theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5180 - Perspctivs in Contemporary Lit (3)

Serves to introduce students to literary theory throuh an examination of the theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5190 - History of the English Language (3)

A survey of the main features of Old, Middle and Modern English. Offered regularly.

ENGL 5200 - Intro to Old English (3)

Introduction to the Anglo-Saxon language, its grammar and vocabulary, with particular application to a selection of the most prominent works of Old English Literature.

ENGL 5260 - Intro to Old Norse (3)

Introduction to the Old Norse language, its grammar and vocabulary. Select readings in Old Norse mythology and Viking sagas.

ENGL 5270 - Arthurian Literature (3)

This course covers the development of the Arthurian legend from medieval times to the present day, taking in material from Celtic, French, English, and American cultural traditions, but centered on Sir Thomas Malory's *Morte Darthur*.

ENGL 5340 - Anglo-Saxon/Old English Lit (3)

Introduction to the Anglo-Saxon language, its grammar and vocabulary, with particular application to a selection of the most prominent works of Old English literature.

ENGL 5710 - American Fiction 1900-1950 (3)

The transformation of American fiction that occurred during the first half of the 20th century, placing emphasis more or less equally upon thematic and aesthetic considerations. The writings of approximately eight authors, including Faulkner, Hemingway, and Dos Passos.

ENGL 5800 - Studies in Contemp Culture (3)

Media such as film, photography, television, and periodical journalism which supply an indispensable context for study of modern literature. Designed around various themes, styles, and movements.

ENGL 6040 - Rhet Thry Dscourse Pedagogy (3)

Major rhetorical theories underlying discourse pedagogy, with special attention to the ways in which specific theoretical positions inform curricular practices.

ENGL 6100 - Studies in Literary Theory (3)

Selected issues, developments, or schools in literary theory.

ENGL 6150 - Genre Studies (3)

Selected writings and issues integral or peculiar to the definition of particular genres or subgenres.

ENGL 6170 - Literary Themes (3)

Exploration of selected writers, writings, and issues associated by common themes.

ENGL 6190 - Interdisciplinary Studies (3)

Selected figures, works, and issues studied from the perspective afforded by specific disciplines or media.

ENGL 6250 - Chaucer: Canterbury Tales (3)

A study of Chaucer's writings with special attention to The Canterbury Tales.

ENGL 6260 - Studies in Chaucer (3)

Selected issues in and portions of Chaucer's writings with special attention to Troilus and Criseyde and other major works by Chaucer apart from The Canterbury Tales.

ENGL 6270 - Middle English Literature (3)

Selected issues or representative figures in Middle English literature.

ENGL 6300 - 16th Cent Non-Dramatic Lit (3)

Non-dramatic figures or currents in the literature of Tudor England.

ENGL 6310 - Renaissance Drama (3)

Renaissance dramatists other than Shakespeare.

ENGL 6320 - Shakespeare (3)

Selected groupings of Shakespeare's works.

ENGL 6350 - 17th Century Literature (3)

Figures or developments in English literature of the seventeenth century.

ENGL 6360 - 17th Century Prose (3)

Groups or movements in English poetry of the seventeenth century.

ENGL 6390 - Topics: Renaissance Literature (3)

Particular issues and developments in the literature and culture of the English Renaissance.

ENGL 6400 - Restoration Literature (3)

Representative figures, issues, and developments in English writing of the late seventeenth century.

ENGL 6410 - Restoration & 18th Cent Poetry (3)

Significant figures and developments in English poetry of the Restoration and the eighteenth-century English literature.

ENGL 6420 - Rstratn & 18th Cent Prose Fict (3)

The novel and prose fiction writing in Restoration and eighteenth-century English Literature.

ENGL 6430 - Restoration & 18th Cent Drama (3)

Selected playwrights, plays, and issues in the English theater of the Restoration and eighteenth century.

ENGL 6490 - Special Topics (3)

Particular issues and developments in Restoration and eighteenth-century English literature.

ENGL 6500 - Romanticism (3)

Selected writers and works of the Romantic period in British literature.

ENGL 6510 - 19th Century Prose Non-Fiction (3)

Selected writers and works of prose non-fiction in nineteenth-century England.

ENGL 6520 - Victorian Poetry (3)

Selected figures, works, and issues in nineteenth-century British poetry.

ENGL 6530 - Nineteenth-Century Novel (3)

Selected writers, works, and issues in nineteenth-century British fiction.

ENGL 6590 - Topcs in 19th Cent Engl Lit (3)

Studies in particular issues and developments in British literature of the nineteenth century.

ENGL 6600 - Studies in Modernism (3)

Selected figures, movements, and developments representative of modernisms in English in the first half of the twentieth century.

ENGL 6610 - Twentieth-Century Fiction (3)

Selected writers and works of fiction of the twentieth century.

ENGL 6620 - Twentieth-Century Poetry (3)

Selected figures, movements, and developments in poetry of the twentieth century.

ENGL 6630 - Twentieth-Century Drama (3)

Selected figures, epochs, and developments in literatures in drama of the twentieth century.

ENGL 6650 - Twentieth Century Postcolonial Literature (3)

This course will focus on postcolonial literature and film with attention to current critical theories and approaches. We will examine how novels, poetry, drama and films from Africa, Asia, and the Caribbean have impacted postmodern culture as a whole. We will look at the various approaches that have been used to study postcolonial literature and film, including Marxist, feminist and poststructuralist. We will discuss such questions as: how have postcolonial writers and filmmakers used literature and film as tools for social change? How have they chosen to represent their identities?

ENGL 6690 - Topics in Lit of 20th Century (3)

Particular issues and developments in literatures in English of the twentieth century.

ENGL 6700 - Early American Literature (3)

Significant figures, writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 6710 - Nineteenth-Century Amer Lit (3)

Representative writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 6720 - Nineteenth-Century Amer Poetry (3)

Central figures, works, and issues in American poetry in the nineteenth and early twentieth centuries.

ENGL 6730 - 19th Century Amer Modernism (3)

Writers, works, and issues in American fiction writing, with special attention to developments in the nineteenth and early twentieth centuries.

ENGL 6740 - Studies in Amer Modernism (3)

Significant figures, groupings, and developments that shaped American modernist writing.

ENGL 6760 - Twentieth Cent Amer Fiction (3)

Writers and works of prose fiction of the twentieth century America.

ENGL 6770 - Twentieth Cent Amer Poetry (3)

Writers and developments in American poetry of the twentieth century.

ENGL 6780 - Twentieth Century Amer Drama (3)

Playwrights, plays and issues in the theater of the twentieth century America.

ENGL 6790 - Topcs: 20th Cent Amer Lit (3)

Particular issues and developments in American literature of the twentieth century.

ENGL 6850 - Studies in Comparative Lit (3)

Writers, works, genres, and issues from a comparative focus that situates literature of the English language in the context of developments in world literature.

English As A Second Language (ESL)

ESL 120 - Intensive English for International Students: Hig

Prerequisite: English Placement exam: TOEFL between 70 & 80. This level prepares students for undergraduate and graduate admission. Courses offered: Adv. Writing/Editing Skills, Intro. Business English or Intro. Academic English, Cultural Keywords, Service Learning Project, Adv. Test-taking/Study Skills, Adv. Pronunciation/Communication Skills.

ESL 190 - Adv Str Rhet & Res for Foreign (3)

Course designed to develop foreign students' skills in expository writing, and the ability to read and analyze expository essays. Study of principles and techniques of argumentation and persuasion through analysis of assigned readings; writing of organized essays and writing of research paper using appropriate methodology.

ESL 211 - Intro to Lit for Foreign Stndt (3)

Introduction to literary techniques: short story, essay, poetry, novel forms; cross-cultural interpretation of values and lifestyles.

ESL 490 - Comp, Res Writing for For Stdn (3)

Study of U.S. research skills: assessing research topics, incorporating and organizing material, using required citation formats and recognizing different types of papers. Students proceed from shorter essays to a longer research paper. Regular individual conferences.

ESL 491 - Res Pap Writing for Frgn Grads (1)

Students will practice library research skills, note-taking techniques, and citation formats in order to write an argumentative research paper appropriate for a U.S. graduate school.

French (FREN)

FREN 110 - Communicating in French I (0-3)

Introduction to French language and culture: reading, writing, speaking, listening. The course emphasizes the acquisition of communicative skills.

FREN 115 - Communicating in French II (0-3)

Continuation of FR-A110. Expansion of oral and written communication skills in areas of immediate needs, personal interests and daily life.

FREN 210 - Interm. French Lang & Culture (0-3)

Continued practice in and development of all language skills, enabling the student to function in an increased number of areas. Materials and discussion relating to French culture.

FREN 225 - Lit Frch-Spk Africa & Cribbean (3)

An overview of the literature of different French-speaking African and Caribbean nations. A focus on the effects of colonization on creating an African or Caribbean identity. Taught in English.

FREN 293 - Special Topics (1-3)

Fall and Spring semesters.

FREN 298 - Independent Study (0-3)

Fall and Spring semesters.

FREN 310 - Discovering the Frnch-Spk Wrld (0-3)

Students discover varied aspects of the French-speaking world, both locally and internationally, while raising their proficiency in French to a level at which they can communicate with increasing ease and accuracy. Emphasis on oral expression and listening comprehension, reinforced by writing skills.

FREN 315 - Text, Voice, & Self-Expression (0-3)

Students expand their knowledge of modern French and Francophone literature, art, and music, while developing their reading strategies and the skills needed to analyze and write about text. Emphasis on reading comprehension, written proficiency, and grammatical accuracy.

FREN 325 - Contemporary French Culture (3)

The study of trends in society, work, politics, education, the arts, and notions of leisure as they relate to the multi-cultural environment in France and to France's place within the European community.

FREN 410 - 21st-Century France (0-3)

Students extend their knowledge of contemporary French and Francophone cultures, while strengthening their communication skills and ability to talk about unfamiliar and abstract topics. Special focus on current issues. Emphasis on oral expression and listening comprehension. Prerequisite (FREN 310 & 315) may be taken concurrently with permission of the instructor.

FREN 411 - Language & Linguistics (3)

An introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes.

FREN 415 - Soc, Natn & Art in Pre-Rev Fra (0-3)

Through studying important historical figures, concepts, and literary movements of French civilization from the Middle Ages to the French Revolution, students learn to write extended analyses on abstract topics. Emphasis on mastering various writing styles. Prerequisite (FREN 310 & 315) may be taken concurrently with permission of the instructor.

FREN 416 - French for the Professional (0-3)

For students interested in developing the proficiency needed in business-oriented activities.

FREN 417 - French and the Sciences (3)

Students in this course will extend their knowledge of scientific advances and issues in contemporary French and Francophone cultures, while strengthening their communication skills and ability to talk and write about unfamiliar and abstract topics. In "French and the Sciences" we will study current issues in science and technology, including scientific, medical, and technological research being done in France and other Francophone countries. We will also discuss health issues, particularly in French-speaking Africa, as well as other global issues. Taught in French. Prerequisite: FREN 415 or the equivalent.

FREN 418 - French and International Relations: Global Si

This performance-based course culminates in a global simulation project of international conferences. First, you will immerse yourself in the world of International Relations through the Francophone world's lens; become familiar with key events, institutions and actors of International Relations; acquire cultural/linguistic skills to function effectively in international settings.

FREN 420 - Perceiving other US & France (3)

The study of French and American cultures' perceptions of each other and frequent cultural misunderstandings, placed in the perspective of their development in history and of current events. Taught in French.

FREN 422 - French and Francophone Media: Qu'est-ce qu

This course will introduce students to a variety of French and Francophone media with an emphasis on national and regional variations. It will expand students' knowledge and understanding of Francophone societies and cultures throughout the world through analysis of media coverage of current and recent events. Conducted in French.

FREN 423 - French Masterpieces: Survey of French Literat

A basic study of France's rich literary tradition & from the Middle Ages to the present time & an introduction to the vocabulary of literary analysis (irony, metaphor, etc.). Special attention devoted to the improvement of French language skills. Prerequisite: FREN 410 and FREN 415.

FREN 429 - Women and Global Issues (3)

In this course, we explore globalization from various theoretical perspectives (historical, cultural, literary and economic). Through literary and visual narratives, we examine how the increased interconnectedness that comes with globalization affects feminist discourses and how global culture shapes women, their experiences, their lives and their bodies within the public/cultural spheres.

FREN 430 - Masculin/Feminin (3)

This course examines the themes of love and marriage in 18th and 19th century French literature, through developing a critical approach to the concept of gender - the social construction of male and female social roles and "natures." Authors studied may include: Montesquieu, Graffigny, Balzac, Sand.

FREN 431 - Cont Women Wrtrs: Frne & Quebc (3)

20th-Century Feminine fiction in French examined in light of French and QuCbCcois feminist theory. De Beauvoir, Duras, Sarraute, Brossard, Maillet, Cixous, Irigaray, Redonnet. Taught in French.

FREN 432 - French Short Story (3)

The study of themes, techniques and perspectives as seen in a diversity of French short stories. Texts may include selections from as early as the Medieval fabliau through contemporary writings by Michel Tournier and J.M.G. Le Clézio.

FREN 433 - French Prose: Rebels to 17th C (3)

Humanism, preciousness, classicism, Rabelais, Marguerite de Navarre, Montaigne, Descartes, Pascal, LaFontaine, and LaFayette. Taught in French.

FREN 434 - 18th-Century French Prose (3)

A course on society, literature, art and revolution in 18th-century France. A focus on how the concepts of society and social change are articulated in the novels and essays of writers such as Montesquieu, Voltaire, Rousseau, Diderot, Olype de Gouges, Condorcet.

FREN 435 - Studies in 19th-Century Novel (3)

The development of the novel in 19th-century France, as seen in representative works of the period from Romanticism to Naturalism. Authors studied may include: Chateaubriand, Hugo, Stendhal, Balzac, Flaubert, Zola.

FREN 436 - Paris in 19th-Century Lit (3)

Paris in the 19th century was a city in transition - politically, economically, culturally. This course deals with some of the great writers of the period who, as visionaries of their time, were able to grasp the true meaning underlying the ever-changing Parisian panorama. Texts include works by Hugo, Balzac, Gautier, Murger.

FREN 439 - Studies in 20th Century Prose (3)

Examines the new directions taken by French fiction in the 20th century. Beginning with Proust, through the Existentialists and the post-war nouveau roman, ending with an evaluation of recent literary trends in the light of the concepts of modernity and post-modernity.

FREN 441 - Frnch Poetry: Orgn to 18th Cen (3)

Marie de France, Fabliaux, Christine de Pizan, DuBella, Ronsard, Malherbe, LaFontaine, and Moliere. Taught in French.

FREN 442 - Frnch Poetry: Romantic to Baud (3)

An examination of the Romantic period as a moment of explosive creative activity in poetry and art during a time of profound social and economic change. Selections may include works by Lamartine, Vigny, Hugo, Musset, Gautier, Nerval, Baudelaire.

FREN 444 - Frnch Poetry: Symbol to Present (3)

Analysis of Symbolism and subsequent schools (from Naturalism to Simultaneism). Apollinaire, Aragon, Breton, Cendrars, Char, Saint John Perse, Senghor, Supervielle, Toulet. Taught in French.

FREN 451 - Early Modern French Theatre: Comedy, Tragedy

Students in this course will explore the nature of tragedy and comedy and will acquire a critical awareness of the representation of dramatic personages through the study of French theatre from the Middle Ages through the seventeenth century.

FREN 452 - Frnch Drama: 18th to Romantics (3)

A course on theater and theatricality for Neo-Classicism to the Romantics, focusing both on the themes of the family romance and on the creation of the Artist. Texts include works by Marivaux, Beaumarchais, Hugo, Musset, Vigny.

FREN 454 - French Drama: 20th-Century (3)

Theatre of commitment, art, the absurd, cruelty and alienation. Taught in French.

FREN 461 - French Cinema (3)

A history of French Cinema by movements and authors. MCliais, Bunuel, Vigo, Gance, Renoir, Clouzot, Cocteau, Tati, Truffaut, Godard, Rohmer, Kurys, Berri, Chatiliez, Tavernier. Taught in French.

FREN 462 - Prose Literature of Quebec (3)

Examines 20th century QuCbCcois Literature, focusing on the genres of the tale, the short story and the novel. Brulotte, Ducharme, HCbert, Godbout, Ferron. Taught in French.

FREN 464 - Studies in Francophone Lit (3)

An overview of Francophone literature of Africa and the Caribbean, focusing on themes of imperialism, de-colonization, and Cgitude as seen in the works of authors such as CCsaire, Senghor, BE, Schwarz-Bart.

FREN 465 - French Cinema II 80's-90's (3)

A look at French cinema since 1980 as indicative of a French identity and value crisis. Examines new genres: Cinema du look, Memory films, heritage films, postmodern parody and satire. Directors studied include young directors (Besson, Crax), older directors (Truffaut, Malle), women (Varda, Kurys), minority (Kassowitz) and foreign directors (Kieslowksi).

FREN 467 - Postcolonialism and Violence, Issues of Repre

After examining socio-political conditions that produced violence in individual francophone cultures and countries, we will analyze ways in which texts (novels, plays, life narratives and testimonies) and films arouse horror, discomfort, denial or connection in readers and spectators.

Prerequisite courses: FREN-410 and FREN-415 or their equivalents.

FREN 471 - Women/Writing Early Mod France (3)

An examination of the role of women in early modern French literature through a study of French literary works by and about women from the 15th through the 17th century. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Labé, Racine, and Molière. Taught in French.

FREN 485 - Seminar on Moliere (3)

In this course students study several of Molière's plays, focusing on his great comedies of character in which he ridiculed vice or intemperance through his caricature of the personage who is its incarnation. Students analyze Molière's comic theatre as a form of ethical inquiry that entertains and instructs its audience.

FREN 496 - Inter-Semester Study Abroad (0-3)

For elective credit and language majors. Summer semester.

FREN 500 - Teaching College French (0)

Practice-centered teaching training for college-level French courses. Discussion and application of course development, of current approaches to teaching and of evaluation techniques. Systematic incorporation of technology in the learning process. Offered every semester.

FREN 503 - Advanced Oral Proficiency (3)

This course aims at upgrading oral proficiency in spoken French to a level at which advanced/superior level functions (on the ACTFL scale) can be handled successfully and with a high level of accuracy. Use of multi-media equipment serves to develop comprehension and the ability to communicate in extended discourse. Offered occasionally.

FREN 504 - Mthd & Tech for Teaching Frnch (3)

A practical approach to teaching methods and technologies, focusing on how different strategies can serve to increase students' skills in French. Principles of language acquisition, a history of foreign language methodologies, current approaches to language learning and evaluation of language performance with respect to the "Proficiency" movement are some of the topics studied. Offered occasionally.

FREN 506 - Studies in Contemp French Cltr (3)

An update on France and France's place in the greater European Community as seen from a diversity of perspectives. This course will examine current trends in society, politics, economy, education, cultural values and their impact on the way of life in France today. Offered every other year.

FREN 507 - Studies in Francophone Culture (3)

An analysis of the culture, history and cultural content of selected literary texts of a French-speaking country (such as Canada) or a group of French-speaking countries (such as Francophone West Africa). The "politics" of writing and identity are discussed. Offered occasionally.

FREN 510 - Crit Writ, Orl Exprsn, & Rsrch (3)

Taking as a point of departure a specific theme in French literature or culture, this course aims at expanding expository and critical expression in French. Students will strengthen their ability to analyze texts and will develop strategies for carrying out research in French and Francophone studies. Offered every Fall semester.

FREN 520 - Perceiving Others: US & France (3)

This course examines how the French are perceived by Americans, and how Americans are perceived by the French. Its focus is on points at which observation, on one hand, and imagination and/or value judgment, on the other, meet, in such perceptions. These meeting points are called stereotypes: a projected, generalizing reading of one culture onto another.

FREN 522 - French and Francophone Media (3)

This course will introduce students to a variety of French and Francophone media with an emphasis on national and regional variations. It will expand students' knowledge and understanding of Francophone societies and cultures throughout the world through analysis of media coverage of current and recent events. Conducted in French.

FREN 529 - Women and Global Issues (3)

In this class, we will explore how globalization is bringing to the fore issues that are affecting and shaping women's lives throughout the world. Through essays, various literary pieces and films, we will examine how dichotomies that are usually identified in feminist discourse take on a renewed life as increased interconnectedness that comes with globalization shapes religious, economic, cultural and political issues.

FREN 531 - Love & Honor in Early Mod Fran (3)

This course will explore the evolution of the concept of honor, as well as the depiction and expression of romantic love, in French literature throughout the Early Modern period. We will analyze literary representation of the heroic figure, particularly as he or she relates to identity and nation building, and we will examine the voice of the lover and the depiction of the beloved, considering the relationship in terms of gender and power.

FREN 533 - French Prose: Origins - 17th C (3)

This course attempts to define the "moralist" and analyze the work of representative writers from the Renaissance through the 17th century in light of this definition. An introductory overview of thought and attitudes marking the Middle Ages is followed by the study of texts by Montaigne, Pascal, La Rochefoucauld, La Bruyere and Madame de Lafayette. Offered occasionally.

FREN 534 - Age of Enlightenment (3)

A study of the 18th-century French "philosophes" and their notion of society and the ideal citizen, followed by a look at the darker side of the Enlightenment, and in particular the "anti-societies" envisioned by Sade. Included is an examination of the role of Enlightenment ideology in the French Revolution. Offered occasionally.

FREN 535 - 19th Century French Novel (3)

This course examines the emergence of the novel as a genre in France. Both literary technique as well as the socio-cultural factors present at the time of the work's creation will be considered. To be studied are selected works by Chateaubriand, Hugo, Balzac, Sand, Stendhal, Flaubert, Zola. Offered occasionally.

FREN 537 - Literature of the Fantastic (3)

This course examines a literary genre known as the conte fantastique (fantastic short story) that emerged in 19th century France and whose legacy is still seen in today's literature, cinema and art. Fantastic tales by well-known authors such as Balzac, Gautier, Maupassant, Merimee and German writer Hoffmann are analyzed from a theoretic perspective and for the underlying questions of identity, universal values and the unconscious that they contain.

FREN 539 - 20th Century French Prose (3)

An examination of the new directions taken by French fiction in light of the development of the notions of modernism and post-modernism. Representative texts ranging from the narrative innovations of Proust through the Existential writing of Camus and Sartre, to the rise of the "Nouveau roman" of Duras and Robbe-Grillet, to recent contributions by Perec and Toussaint. Offered occasionally.

FREN 541 - Early Modern French Poetry (3)

Eustache Deschamps described poetry as "natural music." This course will explore the ways in which the "music" of poetry intensifies its meaning. We will trace the evolution of French poetry from its medieval origins through the seventeenth century. We will explore poetic techniques, devices, and forms.

FREN 542 - 19th Century French Poetry (3)

A study of poetic expression in France during the "Romantic" period and its aftermath. Representative works are examined from the point of view of theme and poetic technique, but also from the perspective of the greater artistic and historical context of the time. Examples from Lamartine, Hugo, Vigny, Musset, Gautier, Baudelaire. Offered occasionally.

FREN 551 - 17th Century French Theatre (3)

Following an introductory overview of Medieval and Renaissance theater, this course focuses on the 17th century and its three "greats" of French drama: Corneille, Racine, Moliere. Play analysis and discussion will take into consideration literary trends of the period (preciosite, realism, and classicism), as well as modern literary criticism. Offered occasionally.

FREN 554 - 20th Century French Theatre (3)

A study of the major trends in 20th-century French theater, from the influence of the Surrealist movement and Existentialism to the Theater of the Absurd of the Post-War period and its Kafkaian undertones. Offered occasionally.

FREN 560 - Contem Wmn Wrtrs: Fran/Quebec (3)

This course focuses on the contributions of women writers to 20th-century Francophone fiction in two countries where feminism has made a mark on intellectual thought: France and Quebec. Selections from the pioneer works of Simone de Beauvoir to the literary experiments of the '80s. Offered occasionally.

FREN 561 - French Cinema (3)

A history of French cinema by themes and authors. Examined are the major current directions, including the influence of Surrealism and the Post-Modern, problems in realism and cinematographic genres, the relation of cinema to French politics. Films are shown and discussed. Offered occasionally.

FREN 563 - Studies in Francophone Lit (3)

An over-view of Francophone literature of Africa and the Caribbean, focusing on imperialism, de-colonization and "negritude" as seen in the works of Césaire, Senghor, Ba, Schwartz-Bart. Offered occasionally.

FREN 566 - Nation, Identity and Culture (3)

This course promotes an understanding of the dynamics at play in contemporary French culture by examining how the State has shaped society from the Revolution of 1789 to now. Through various texts and films, students explore the shifting notions of Nation, Identity and Culture during their period. (offered occasionally)

FREN 567 - Postcolonialism and Violence (3)

After examining socio-political conditions that produced violence in individual francophone cultures and countries, we will analyze ways in which texts (novels, plays, life narratives and testimonies) and films arouse horror, discomfort, denial or connection in readers and spectators.

FREN 571 - Women and Writing in Early Modern France (3)

This course introduces students to the role of women in early modern French literature as symbol/image and as writer, through a study of French literary works by and about women. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Lave, Racine, and Moliere. Taught in French.

FREN 585 - Seminar on Moliere (3)

This seminar endeavors, through a thorough analysis of Moliere's plays, to recapture the time, the life and the literary theories of one of the world's best playwrights. Video cassettes make it possible to first view the plays, then analyze them in light of Aristotelian and modern criticism. Offered occasionally.

FREN 586 - The World of Baudelaire (3)

The study of Baudelaire-poet, art critic, "man of his time"-as a pivotal figure in the transition from "Romanticism" to the "modern" era in France. Offered occasionally.

FREN 587 - Exoticism in French Literature (3)

A cultural critique of French novels from the Eighteenth to the Twentieth Centuries, including works by Montesquieu, Mme de Duras, Chateaubriand, Balzac, Loti, Levi-Strauss. Discussion of the evolution of exoticism as a genre and representations of exotic in "other" cultures. Offered occasionally.

FREN 593 - Special Topics in French (0-3)

In this course, we will examine how the city functions as a catalyst in the artistic and literary creation of some of the most well-known French authors of the 19th century. In studying the dynamics at play in the creative process, we will be linking texts by Victor Hugo, Balzac and selected poets (Hugo, Vigny, Gautier, Baudelaire and Apollinaire) to the actual areas of the city which inspired their work.

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Film Studies (FSTD)**FSTD 104 - Approaching the Arts: Art&Film (3)**

This course will focus on the relationship between film and modern art. Motion picture making is a distinctly modern art form and shares characteristics found in modern art. Through art and film, we will examine impressionism, symbolism, expressionism, cubism, futurism, dadaism, abstract art, pop art and performance art.

FSTD 140 - Film Criticism (3)

Viewing and discussion of some short and several feature films; text reading and exams; written reviews and responses to film discussion; refining of film as an art.

FSTD 206 - Media and Society (3)

This introductory course provides students with the background and critical skills necessary for understanding how media work and how they impact our everyday lives. It seeks to give students critical media analytical skills necessary to succeed as professionals, citizens, and members of a community.

FSTD 270 - Introduction to Film (3)

Introduces students to theoretical and methodological approaches to film, including major terms, methods, and concepts. Prerequisite: English 190 or equivalent.

FSTD 312 - Audio-Visual Script Writing (3)

This course explores the art and crafts of media storytelling. Juggling the "Audio" (music, sound, silence, words), "visual" (design) and "scriptwriting" (art of the drama) crafts, the students work all semester to construct a final project: a written, produced, directed episode for an original television series.

FSTD 318 - Film (3)

A study of selected films to show the diversity of films from the beginning to the present.

FSTD 378 - Lit and Film of WWII (3)

Examines the rhetoric of American representation of its experience of World War II, and how the war shaped the American experience. Offered frequently.

FSTD 379 - War in Literature (3)

Examines how literature and film have represented war. Students will read literary, historical and journalistic texts, and will view films. Offered occasionally.

FSTD 382 - The City and Literature (3)

Examines representations of the city in literature and film including how Americans use the city as fundamental cultural space. Offered regularly.

FSTD 384 - Analysis of Popular Culture (3)

Discusses methodologies used to study popular symbols, rituals, and artifacts in everyday culture, such as those in television, radio, film, print, and sport, and the social practices by which such artifacts are produced and consumed. The readings draw on the theoretical literature in rhetorical criticism, critical studies, and cultural studies.

FSTD 415 - Berlin (3)

Excursions into the cultural development of Berlin from its very beginnings in the 13th century up to the present day. Focus on the period after 1871. Berlin as a microcosm for the cultural, socio-historical and ideological development of Germany as a whole. Taught in German.

FSTD 417 - American Film History (0-3)

Explores the issues and development that characterized the development of film and film traditions in America from the beginning to the present.

FSTD 418 - Film Theory (3)

Explores theories and movements of/about film, with special attention to twentieth century film theory. Offered occasionally.

FSTD 420 - African American Cinema (3)

Traces the history of African-Americans in the motion picture industry. Topics cover "black-face," minstrel stereotypes, wages, social and political opposition, organizing for representation, Blaxploitation, interracial casting and subject matter, and documentaries. A comparative study of Hollywood versus the Independent Filmmaker looks at "Race Movies" and the first African-American film companies.

FSTD 443 - Culture, Technology & Comm (3)

Analyzes the interrelation of culture, technology, and communication in contemporary societies. Topics covered include the historical evolution of communication technology, the reorganization of social and psychic time and space, and recent debates about virtual reality.

FSTD 461 - French Cinema (3)

A history of French Cinema by movements and authors. M. C. Lias, Bunuel, Vigo, Gance, Renoir, Clouzot, Cocteau, Tati, Truffaut, Godard, Rohmer, Kurys, Berri, Chatiliez, Tavernier. Taught in French.

FSTD 462 - Adv. Acting: Special Topics (3)

This course is structured around various topics which introduce advanced level students to particular performance techniques. Topics might include auditioning, acting for the camera, voice acting, creative dramatics, stage combat, etc.

FSTD 490 - Film Studies Internship (3)

This course may be used as a substitute for the FSTD485 Capstone upon approval of the Film Studies Director.

Greek (GK)**GK 110 - Reading Greek I (3)**

Pronunciation, vocabulary, morphology, syntax, and practice in reading.

GK 115 - Reading Greek II (3)

Vocabulary, morphology, syntax, and practice in reading. Easier Greek authors introduced.

GK 120 - Greek Literature Translation (3)

Vocabulary; intermediate grammar; more extensive reading in easier authors; selections from more difficult ancient authors.

GK 210 - Intermediate Greek Lang & Lit (3)

Vocabulary; intermediate grammar; more extensive reading in easier authors; selections from more difficult ancient authors.

GK 298 - Independent Study (0-3)

Prior approval required of sponsoring professor and department chairperson.

GK 495 - Senior Residency (0)

Greek majors must enroll in GK 495 during their final semester of study.

German (GR)

GR 110 - Communicating in German I (0-3)

Introduction to German language and culture: speaking, listening, reading and writing. Emphasis on the acquisition of communicative skills.

GR 115 - Communicating in German II (0-3)

Continuation of GR-A110. Expansion of all language skills, enabling the student to function in simple situations related to immediate needs, personal interests and daily life.

GR 210 - Intern. German: Lang & Cltre (0-3)

Continued practice in and development of all language skills, enabling the student to function in an increased number of areas. Materials and discussion relating to German culture.

GR 220 - German Lit in Translation (3)

Analysis and discussion of representative works of prominent authors from Austria, Germany, and Switzerland in terms of their aesthetic dimensions, and as cultural documents reflecting the socio-historical conditions, ideological attitudes, and elements of the national identity of the three nations which share the German language.

GR 225 - Berlin! Berlin! (3)

Excursions into the cultural development of Berlin from its very beginnings in the 13th century up to the present day. Focus on the period after 1871. Berlin as a microcosm for the cultural, socio-historical and ideological development of Germany as a whole. Taught in English.

GR 310 - Oral & Written Proficiency I (0-3)

Builds on acquired knowledge of German language and culture. Review and refinement of grammar skills, development of written and oral communication skills and strategies. Reading and discussion of authentic language materials (articles, videos, recordings, etc.)

GR 315 - Oral & Written Proficiency II (0-3)

Continuation of GR 310. Further development of oral and written expression leading to the ability to handle with confidence a wide variety of social situations and writing needs.

GR 320 - German Culture Studies I (3)

A survey of German cultural history from the Middle Ages through Romanticism as reflected in German literature and other cultural artifacts.

GR 325 - German Culture Studies II (0-3)

A survey of German cultural history from Romanticism through the present day as reflected in German literature and other cultural artifacts.

GR 410 - Fluency in German (0-4)

Use of authentic language materials in German culture, special fields and in topics of particular interest to enable the student to achieve oral and written accuracy and fluency.

GR 415 - Berlin (3)

Excursions into the cultural development of Berlin from its very beginnings in the 13th century up to the present day. Focus on the period after 1871. Berlin as a microcosm for the cultural, socio-historical and ideological development of Germany as a whole. Taught in German.

GR 420 - Modern German Prose (3)

Analysis and discussion of modern German prose by such authors as Max Frisch, Heinrich Boll, Gunter Grass, Martin Walser, Christa Wolf among others. Taught in German.

GR 421 - Language and Linguistics (3)

Crosslisted with FREN 411, RUSS 411 and SPAN 411. Introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes. Taught in English.

GR 425 - Business German (0-3)

Development of advanced language skills (reading, writing, listening comprehension and speaking) pertaining to business and economy. Taught in German.

GR 435 - German Film (3)

An introduction to film theory, film analysis and cinema history within the German cultural context. Taught in German.

GR 450 - Courtly Love and Life Portrayed Through Mediev

As an introduction to medieval life and its literature, this course takes a brief look at political, social and religious structures that shaped medieval "Germany." This course studies several classics from medieval German literature that are representative for aspects of medieval life: e.g. Hartmann Der arme Heinrich, the Nibelungenlied, Eschenbach's Parzival, Straßburg's Tristan, and courtly love lyrics. The course will be taught in German.

GR 455 - History of German Language (3)

History of the German language will study the development of German from its earliest forms to contemporary German. Students will become familiar with linguistic terminology along with major linguistic and cultural changes that happened from Indo-European to Germanic to Old and Middle High German to contemporary German. This course will be taught in German. Prerequisites: GR 320 and GR 325 or Instructor approval.

GR 460 - Beginning Middle High German Language (3)

Students will become proficient in Middle High German grammar and pronunciation, as well as learn to translate Middle High German texts into English in addition to an introduction to manuscript studies and discussion of the role of memory in oral culture, the use of standardized-edited vs. authentic manuscript language. This course is taught in English, but knowledge of German required. Prerequisites: GR 320 & GR 325, or instructor permission.

GR 465 - Wolfram von Eschenbach's Parzival: Gender, Ra

In this course, student will read and critically reflect on Wolfram von Eschenbach's Parzival (ca. 1220). They will read the text in modern German. While this text is fictional, it is grounded in reality and reflects upon its times and its discourses on politics, religion, race, gender, and otherness, the focus of this course. This course is taught in German, therefore knowledge of German required. Prerequisites: GR 320 & GR 325, or instructor permission.

GR 470 - The Culture of The Weimar Republic (3)

This course examines the various forms of rich artistic production that emerged in Germany during the 1920s. Topics covered include literary, filmic, and visual representations of war, urban landscape, the modern woman, as well as influential artistic movements such as German Expressionism, cabaret, Dada, New Objectivity, Bauhaus, and Ausdrucksstanz. Taught in German. Prerequisites: GR320 & GR325, or instructor permission.

GR 475 - The German Press: Creating a Foreign Language

Students produce a print and online German newspaper focusing on current events in German-speaking countries as well as German-American communities and cultural sites in and around St. Louis. They collaborate to produce video documentaries thematically connected with topics featured in the publication. Taught in German. Prerequisites: GR 320 & GR 325, or instructor permission.

GR 493 - Special Topics (1-4)

Special topics might include: The German Experience of the New World, Introduction to the Literature of the German Democratic Republic, Translation of Technical German, German Phonetics, German Drama. All taught in German.

GR 495 - Senior Residency (0)

Required for graduating senior.

GR 501 - German for Reading & Translatn (3)

This course develops reading proficiency in German. It focuses on grammatical skills, works on vocabulary and primarily reading comprehension and translation skills in selected German academic texts and discipline specific academic writing. It prepares students to satisfy the foreign language translation exams required in respective Ph.D. programs.

Hindi (HIND)**HIND 110 - Communicating in Hindi I (0-3)**

Prerequisites: None Introduction to reading, writing (Devnagari script), oral comprehension and speaking of Hindi, and to Indian culture. Elements of Hindi grammar. Simple sentence construction. Vocabulary and phrases useful in daily life and while traveling in India.

HIND 115 - Communicating in Hindi II (0-3)

Prerequisites: Hindi I or instructor's permission. Development of Hindi vocabulary, oral comprehension, fundamentals of Hindi grammar, reading, writing and speaking capabilities. Introduction of Indian Culture.

HIND 210 - Intermediate Hindi (0-3)

Prerequisites: Hindi II or Instructor's permission. Development and refinement of Hindi vocabulary, oral comprehension, fundamentals of Hindi grammar, reading, writing and speaking capabilities. Introduction to Hindi literature.

History (HIST)**HIST 111 - Origins of the Modern World to 1500 (0-3)**

An historical approach to understanding the development of the modern world to 1500. The course will examine ancient civilizations, the Hebrews, Greece, Rome, Christianity, Islam, Byzantium, the Middle Ages, The Renaissance, and encounters between cultures and regions of the globe.

HIST 112 - Origins of the Modern World, 1500 to Present (

An historical approach to understanding the development of the modern world from 1500 to the present. The course will examine the cross-cultural impact of European expansion, the Protestant and Catholic Reformations, the Scientific Revolution, absolutism, the Enlightenment, the French and Industrial Revolutions, nineteenth and twentieth century thought the World Wars, totalitarian and liberation movements, and the challenges of the new global age.

HIST 260 - History of the United States to 1865 (3)

This survey course examines the development of the United States from its pre-Columbian origins through the Civil War. Required for majors.

HIST 261 - History of the United States Since 1865 (3)

This survey course examines the U.S. from Reconstruction through the present. Required for majors.

HIST 270 - China and Japan To 1600 (3)

Introduction to the history and culture of China and Japan from ancient times to the early seventeenth century. Readings designed to introduce students to sections of classic works and to give a sense of the culture and society of the various periods that we will examine.

HIST 271 - China and Japan since 1600 (3)

Survey of Chinese and Japanese history since 1600.

HIST 299 - Historian's Craft: Methods Proseminar (3)

Historian's Craft provides research and writing training to prepare students for successful careers as History majors and minors and a vocation after college. The Historian's Craft Proseminar is required for majors and minors in the revised major and minor program and restricted to students who have declared their major or minor within History.

HIST 300 - Ancient Greece (3)

The history of the Greek people from the Mycenaean period to the Hellenistic Age.

HIST 301 - Roman Republic (3)

The political, social, and cultural history of Rome from the beginning to the time of Julius Caesar.

HIST 302 - The Roman Empire (3)

The political, social, and cultural history of Rome from Augustus to Odovacar.

HIST 303 - The Byzantine Empire (3)

This course examines the waning years of the Roman Empire in the West and the subsequent millennium of its history of the East. We will examine Byzantine politics, culture, and society as well as Byzantine interactions with the Islamic East and Catholic West.

HIST 304 - The Middle Ages to 1100 (3)

Political, ecclesiastical, and cultural developments in Europe from the collapse of Rome in the West to the struggle of empire and papacy.

HIST 305 - The Middle Ages 1100 to 1450 (3)

The High and Late Middle Ages from the rise of universities to the fall of Constantinople.

HIST 306 - The Crusades (3)

Why did pious Christians bring fire and sword to the home of the Prince of Peace? This is just one question that this course explores. Along the way we will examine the Islamic response to the crusades, the Crusader States, and the effects of the movement on Byzantium.

HIST 307 - Catholic Traditions to 1540 (3)

Theology, spirituality, church organization, religious art from the time of the Apostles to the Counter Reformation. Readings from classics.

HIST 308 - Catholic Tradition Since 1540 (3)

Theology, spirituality, church organization, religious art from the Council of Trent to the Second Vatican Council and its effects.

HIST 309 - The Age of Renaissance (3)

The political, social and cultural influences which brought the medieval period to a close and prepared the way for a new European society.

HIST 310 - The Reformation Era (3)

The religious crisis of age against the background of political, economic and intellectual change, 1500-1600.

HIST 311 - The Age of Absolutism (3)

The rise and fall of dynasties; the Scientific Revolution and Age of Reason; beginnings of Industrialization. 1600-1789.

HIST 312 - FRENCH REVOLUTION and NAPOLEON, 1789-1

The origins and history of the french Revolution; social, economic, intellectual, institutional, and constitutional changes; European War; the Napoleonic empire and its collapse.

HIST 313 - THE AGE of INDUSTRIALISM and DEMOCRACY

The history of Europ from the Congress of Vienna to the First World War.

HIST 314 - TWENTIETH CENTURY EUROPE: ERA of WOR

Background and events of World War I; the inter-war period and the rise of Fascism and Nazism; the origins and events of World War II.

HIST 315 - Europe since 1945 (3)

This course will examine how the European continent gained an unprecedented political, economic and social stability after 1945. It will also examine the impact of the Cold War on the European continent.

HIST 316 - Eastern Europe (3)

Survey of the lands and peoples between Germany and Russia, the Baltic to the Black Seas from the fall of Rome to the present. Emphasizes religious, cultural, political, and economic elements which have shaped Eastern Europe today, including the impact of outside forces such as the Byzantine, Ottoman, Habsburg, and Russian Empires.

HIST 317 - Colonial Latin America (3)

A survey from the pre-Columbian period to the wars for independence.

HIST 318 - Modern Latin America (3)

A survey from the wars for independence to contemporary Ibero-America.

HIST 319 - Mexico (3-4)

Political, cultural and economic survey from Pre-Columbian period to the wars for independence.

HIST 320 - China to 1644 (3)

From the embryo of the Middle Kingdom to the first confrontation with the west.

HIST 321 - China Since 1644 (3)

From Manchu to Mao Tse Tung.

HIST 322 - The Jesuits in Asia (3)

A study of the work of the Jesuit missionaries in India, china, and Japan from the mid-sixteenth through the mid-eighteenth centuries, concentration on the confrontation of different cultures.

HIST 323 - Africa to 1884 (3)

Population movement and interaction; development of institutions and ideas in African civilizations varying types of politics and revolutionary changes; slavery and the Atlantic encounter; impact of Christianity and Islam.

HIST 324 - Africa since 1884 (3)

Political, economic and, social developments in Africa since 1884. Includes European scramble for and partition of Africa; African initiatives and reaction to imposition of colonial rule; the colonial state and independence movements; nationalism and nation building.

HIST 325 - World in Conflict Since 1945 (3)

Crises of the period after 1945 caused by the weakening of European influence in the world; the decline of Europe and the Cold War; terrorism in the West; the various Mid-East crises; the legacy of imperialism in Africa and Asia.

HIST 326 - Modern France since 1815 (3)

History of France from the restoration of the Bourbons to the organization of the European Community, with special emphasis on the development of and the struggle over French national identity.

HIST 328 - Russia to 1905 (3)

Survey of Kievan, Muscovite, and Imperial periods with major emphasis on Peter the Great and his successors; foreign and domestic politics, economic and social changes, westernization, religious and cultural developments.

HIST 329 - Russia Since 1905 (3)

Causes and effects of the revolutions of 1905 and 1917. Foreign and domestic evolution of the Soviet state from its origins to its demise; the post-Soviet era - Lenin, Stalin, Khrushchev, Gorbachev, Yeltsin, and Putin.

HIST 330 - MODERN EUROPEAN DIPLOMATIC HISTORY fr

Metternich, Cavour, Bismarck, Disraeli, Salisbury, William H. Grey; Europe's diplomacy in the century before World War I.

HIST 331 - MODERN EUROPEAN DIPLOMATIC HISTORY, 1

How the destruction of World War I enervated the democracies vis a vis totalitarian Nazism and Communism; World War II and its aftermath.

HIST 333 - Modern History Spain:1808-Pres (3)

The altibajos of Spanish modernity. History of Spain from the French invasion to the present. Analysis of the nineteenth-century revolution, the First and Second Republics, the civil war, the Franco era and the democratic period from Adolfo Suarez to Jose Maria Aznar.

HIST 334 - The Spanish Civil War (3)

The history of Spain as seen through its most important upheaval in modern times. The war is used as a focal point to concentrate on the various themes, trends and issues of modern Spanish history.

HIST 335 - Plagues and Peoples: Disease and Society in t

This course examines disease in human societies from the plague to western imperialism. Course goals are to analyze contemporary views of disease, healing, and effects of pandemics. Topics include: sickness and culture, global biological exchange, medicine and magic, disease and industrialization, imperialism, and medical science. Prerequisites: HIST 111, HIST 112.

HIST 336 - ENGLISH HISTORY: THE STUARTS, 1603-1714 (

A political, social, cultural, and religious survey of the period.

HIST 337 - ENGLISH HISTORY: THE INDUSTRIAL REVOLU

A study of the economic, social and political circumstances which made England the world's first industrial nation.

HIST 338 - ENGLISH HISTORY: THE VICTORIAN AGE, 183

A political, social, cultural and religious survey of the period.

HIST 339 - History of English Law (3)

Introduction to fundamentals of English law-terminology, concepts, and historical development.

HIST 340 - Italy: 900-1860 (3)

This course will cover the political, social, economic, and cultural history of the Italian peninsula from the Early Middle Ages through the Risorgimento; development of characteristic political forms: communes, territorial states, and foreign dominated duchies.

HIST 341 - Italy: 1860-Present (3)

The history of Italy from Unification to the European Community: the House of Savoy, the First World War, Mussolini and Fascism, D'Annunzio, Gramsci and Croce, Italy and the Holocaust, Christian Democracy, Italian Film, and Red Brigades.

HIST 342 - The Atlantic World (3)

The Atlantic World began to emerge early in the second millennium CE with increased interaction between Europeans, Africans, and, later, Native Americans. This course will examine the social, cultural, political, economic, and military history of the Atlantic World through the 1830s. There are no prerequisites or co-requisites for the course.

HIST 343 - African Economic History (3)

Surveys the varied heritage of African economies as well as performance from the pre-colonial period to the present. Includes agriculture, trade, urbanization, mining and industrialization. Impact of these economic activities on population and environment will be examined.

HIST 344 - Imperialism & Nationalism (3)

A developmental and conceptual approach emphasizing the origins of new imperialism and its manifestations in the 19th and 20th centuries. Includes the rise of North Atlantic powers; imperial control in Africa and Asia; Decolonization; Post-colonial economies.

HIST 345 - Colonial America (3)

Surveys of the foundations of the colonies, development of government structures, as well as social structures up to the Revolution. Although emphasis is on the English colonies, French Spanish North American colonies will also be included.

HIST 346 - FOUNDATIONS of the AMERICAN REPUBLIC, 1

The American Revolution, the Constitution and the early years of the Republic.

HIST 347 - Antebellum America: Nationalism and Sectiona

Aftermath of the War of 1812; development of American political parties; the age of Jackson; Evangelical revivals and reform movements; the coming of the Civil War.

HIST 348 - U.S. CIVIL WAR and RECONSTRUCTION, 1850-

Causes of the war; personalities; factors in the Northern victory; the war on the home front; reconstruction; experience of the freedmen.

HIST 349 - The Gilded Age (3)

The rise of industrialism in the United States and the response of various institutions.

HIST 350 - PROGRESSIVE ERA to the JAZZ AGE, 1890-192

A survey of political, social, economic and cultural developments as American society transformed from a rural-agrarian society to an urban-industrial power and from isolationism to a major force in world affairs.

HIST 351 - PROSPERITY, DEPRESSION, AND WAR 1920-1

The 1920's, the New Deal and World War II.

HIST 352 - Contemporary America, 1945 - Present (3)

The Cold War, civil rights, Vietnam, Watergate, the technological revolution and modern society.

HIST 353 - U.S. Diplomatic Hist to 1900 (3)

An examination of the principles and foundations of American foreign policy to the time of the Spanish-American War.

HIST 354 - U.S. DIPLOMATIC HISTORY from 1900 to 1945 (

The rise of American from its early isolation to the status of a great power at the end of World War II.

HIST 355 - U.S. DIPLOMATIC HISTORY SINCE 1945 (3)

An analysis of foreign policy beginning with the Cold War, focusing on the historical roots of the present status of American diplomacy.

HIST 356 - U.S. SOCIAL and INTELLECTUAL HISTORY to 1

Underlying ideas of American society during settlement of the Colonies, through the eighteenth Century. Includes leading thinkers of the age and a consideration of the development of Colonial social structures.

HIST 357 - U.S. SOCIAL and INTELLECTUAL HISTORY SIN

Underlying ideas of American society; the impact of immigration, agrarianism, urbanization, industrialization, technological development and reform movements.

HIST 358 - American Slavery (3)

American slavery as a social, political, and economic institution. Themes include the introduction and institutionalization of slavery in America; the slave experience(s); evolving perceptions of slavery; how events changed perceptions and how perceptions influenced events; and slavery as the ultimate cause of the Civil War.

HIST 359 - American Women (3)

Surveys the position of women from the United States colonial beginnings to the present. Deals with women's role in the family and society, with women's movement for change, the education of women, the suffrage movement, and women in the working world.

HIST 361 - Civil Rights in America, 1865-1965 (3)

This course examines the hundred-year struggle to secure civil rights for African-Americans from Reconstruction through the Civil Rights Movement. Students will examine the factors creating a racially segregated society and the efforts undertaken by civil rights groups to dismantle the Jim Crow Society.

HIST 362 - Public Policy Since 1945 (3)

This course examines the history of American public policy since 1945. Among topics discussed include the development of the welfare state; civil rights; social policy; drug control policy; and urban policy.

HIST 363 - The Saint Louis Region (0-3)

Examines the rich and varied heritage of St. Louis, its social, cultural, and intellectual dominance of the American Heartland, its contributions in business, religion, politics and the arts.

HIST 364 - History of the American West (3)

A survey of the trans-Mississippi frontier, covering the mining, cattle, and farming frontiers, the cause for the great migration, and society and culture of the frontier, and the frontier in American myth.

HIST 365 - Race and Religion in the Trans-Atlantic World,

This course examines the history of race policy in the Trans-Atlantic World from the 15th through the 20th Centuries. Focusing on Latin America, Caribbean, United States, and Africa, students will develop a comprehensive understanding of the history and development of religious race-based consciousness in the modern world.

HIST 366 - North American Environmental History (3)

This course surveys the environmental history of what is now the United States from the fifteenth century to the present.

HIST 367 - U.S. Economic History to 1865 (3)

This course examines economic history of United States from the colonial times through the civil war. Among topics to be discussed include mercantilism; economic causes of the American revolution; slavery and the Civil War.

HIST 368 - U.S. Economic History to 1865 (3)

This course examines U.S. economic history since the Civil War to the present. Among the topics to be covered include the second industrial revolution; the rise of the corporation; the Great Depression; government-business relations in the postwar period; the rise of organized labor; government economic policy.

HIST 369 - American Military History (3)

This course will examine American military and naval history from the earliest times to Vietnam and Iraq.

HIST 370 - U.S. Constitutional History (3)

This course examines the origins, drafting, and ratification of the U.S. Constitution and its subsequent history as revealed in landmark supreme Court decisions and in constitutional crises from Nullification to Watergate. Attention will also be given to the growth of American law and the development of the legal profession.

HIST 371 - The Catholic Reformation (3)

This course examines a major transition in the history of the Catholic Church (1500-1700) as church reformers sought to correct abuses in the church, provide greater pastoral care, and confront Protestantism. Will also explore the impact of Catholicism on social life, intellectual thought, and political development.

HIST 372 - Cultural Encounters 1500-1700 (3)

This course explores the cultural interaction between Europeans and indigenous peoples in Asia, Africa, and the America from the time of exploration to colonization. Focus on missionary endeavors and political development.

HIST 373 - Daily Life in Early Mod Europe (3)

Examination into the social life and daily routines of ordinary people in Europe from 1500 to 1800. Course focuses on material life, popular religion, gender relations, urban and rural labor, and community construction.

HIST 374 - The British Empire (3)

Survey of British empire from late eighteenth century to end of the twentieth century. Topics include: cultural and material foundations of empire; collaboration and resistance; dynamics of race, gender, and class, role of art and literature, new national and local identities; decolonization and independence, and contemporary legacies of empire.

HIST 375 - Women in Modern Europe (3)

This course surveys the history of European women from the Enlightenment to the present. In addition to restoring women's voices to history, we will examine well-known historical events from the perspective of women's history and examine the historical roots of issues and debates still informing the lives of European women.

HIST 380 - Autobiography and History (3)

The autobiographical genre from St. Augustine's confessions to contemporary autobiography as literature and its relation to history.

HIST 381 - Islamic Civilization (3)

Survey of political, intellectual and cultural currents in the Islamic World, past and present, including aspects of Islam as religion; science, medicine and technology in Islamic societies; art and architecture; philosophy and theology; interaction between Islamdom and Christendom; Islamic history in the Middle East, South Asia, Southeast Asia, and Central Asia as well as Africa; European Colonialism; globalization of Islam and contemporary Islam.

HIST 382 - Islamic Middle East (3)

This is survey course of the history of the Middle East from the rise of Islam to 16th century. We will examine the rise of Islam, the early Islamic empire/caliphate and aftermath including the process of political fragmentation and cultural continuity in Muslim societies from Spain to North India. We will focus on political, intellectual and religious currents through an examination of primary texts.

HIST 383 - Modern Middle East (3)

The subject of this course is the history of the modern Middle East from the 17th century up to the present. The course will address political, social, and cultural history within the framework of an Islamic civilization and examine modern concerns such as nationalism, colonialism, statehood and impact of outside powers, and the response of the people of the Middle East to this challenge.

HIST 393 - Special Topics (0-4)

Various topical courses offered from time to time.

HIST 490 - Seminar: European History (3)

A limited enrollment seminar exploring a specific topic in European history. Discussion format based on close reading of primary sources.

HIST 491 - Sem: American History (3)

A limited enrollment seminar exploring a specific topic in American history. Discussion format based on close reading of primary sources.

HIST 492 - SEMINAR: NON WESTERN HISTORY (3)

A limited enrollment seminar exploring a specific topic in Non-Western history. Discussion format based on close reading of primary sources.

HIST 493 - Special Topics in History (3-4)

Various topical courses offered from time to time.

HIST 494 - Honors Thesis (3)

Writing an Honors Thesis (10,000 word minimum), based on a research paper for a previous 300-400 level history course. Must be recommended by the instructor for the previous course who will supervise the thesis with a second reader. Departmental honors for an $\geq A$ grade. Prerequisite: GPA of 3.5 in history, 3.25 overall.

HIST 495 - Senior Residency (0)

This course is required of senior History majors to indicate graduation.

HIST 496 - Internship/History in Practice (1-6)

A practical application of history through an internship with an archive, library, museum, historical site or project.

HIST 500 - Thry/Prac of Hist: An Intro (3)

This course will examine some of the most influential theories of today's intellectual marketplace which affect the study of history. From historical materialism, through structuralism, semiotics, poststructuralism, postmodernism, and critical theory, to gender and narrative history, we will discuss their intellectual essence as well as their usefulness in terms of the insights they offer to the historian. Apart from reviewing various theoretical approaches, we will also discuss their applications by closely examining selected cases of scholarship on American history which employ them as tools of interpretation and as forms of writing about the past.

HIST 510 - Studies in Ancient History (3)

This reading course presents a broad historiographical survey of major issues and interpretations of Ancient History.

HIST 511 - Advanced Studies in Ancient History (3)

This is a reading course that provides an in-depth examination of specific topics in Ancient History. The topic of the course will vary from semester to semester.

HIST 515 - Perspectives in Ancient History (3)

This course will allow graduate students, by contract, to enroll in an upper level undergraduate Ancient History course. The contract would require additional readings and/or a research project. Since this course number involves taking an undergraduate class for graduate credit, a student may register for this course no more than twice in his/her degree program.

HIST 520 - Ancient & Byzantine History (3)

A general examination of the historiography and literature in late ancient and Byzantine history.

HIST 521 - Adv Ancnt & Byzantine Hist (3)

An examination of the historiography and literature in specialized topics in late ancient and Byzantine history.

HIST 525 - Perspectives: Late Ancient and Byzantine History

Lectures and readings on historical events and wider trends in late ancient or Byzantine history.

HIST 530 - Studies Medieval History (3)

An examination of the most important topics in medieval history including historiographic background, literature, and current trends. This course will acquaint the student with the work and thought of the leading scholars in medieval studies as well as differing perspectives.

HIST 531 - Adv Std: Medieval History (3)

An examination of the historiography, literature, and current trends in specialized topics in Medieval history.

HIST 535 - Perspectives Medieval Hist (3)

Lectures and readings on historical events and forces affecting specific periods in Medieval history.

HIST 540 - Studies in Early Modern European History (3)

Study and discussion of secondary literature in Renaissance and Reformation (early Modern European) history.

HIST 541 - Advanced Studies in Early Modern European History (3)

Examination of the historiography, literature, and current trends in specialized topics in Renaissance/Reformation History.

HIST 545 - Prspctvs Rensnc & Rfrmtn Hist (3)

Lectures and readings on events and forces affecting specific periods in Renaissance/Reformation history.

HIST 550 - Studys Modrn European Hist (3)

An introduction to Modern European history from 1600 to the present. This course offers students the opportunity to become acquainted with historiography, methods, and current debate in the specialty.

HIST 551 - Adv Studies Modrn European Hist (3)

Examination of the historiography, literature, and current trends in specialized topics in Modern European history.

HIST 555 - Prspctvs Modern European Hist (3)

Lectures and readings on events and forces affecting specific periods in Modern European history.

HIST 560 - Studies in American History (3)

An introduction to methodology and recent literature, and the study of United States history. Topics will range from colonial through contemporary American history.

HIST 561 - Adv Studies American History (3)

Examination of the historiography, literature, and current trends in specialized topics in United States history.

HIST 565 - Perspectives in American History (3)

Lectures and readings on events and forces affecting specific periods in United States history.

HIST 570 - Themes and Methods in World History (3)

Themes and Methods in World History is designed to introduce students to the field of World History. Students will be familiarized with various theoretical and methodological approaches to World History as well as major debates within the field. Students will develop an understanding of the narrative outline of World History.

HIST 580 - Race, Ethnicity and Culture Proseminar (3)

This course provides an introduction to the key concepts, themes and methods of a historically-focused study of race, ethnicity, and culture in American life. General issues explored in the course include the cultural, historical, and demographic context of race and ethnicity in North America.

HIST 590 - History Teaching Practicum (0)

Required of all graduate teaching assistants, this course covers teaching methods, lecturing, and other topics necessary to prepare an effective teacher.

HIST 680 - Sem: Ancient/Byzantine Hist (3)

Advanced research on a specific topic in late ancient or Byzantine history. Introduction to source collections, library resources, and other research tools.

HIST 681 - Seminar Medieval History (3)

Advanced research in a specific topic in Medieval history. Introductions to essential source collections, library resources, source criticism, archival methods, paleography.

HIST 682 - Seminar: Early Modern European History (3)

Introduction to research in Renaissance and Reformation Europe. Students become acquainted with research tools in Renaissance and Reformation history, to learn paleographic and codicological skills.

HIST 683 - Seminar in Mod European Hist (3)

An opportunity to undertake advanced research, through primary and archival sources and secondary literature, in a specific area of Modern European history (1600 to the present).

HIST 684 - Seminar in American History (3)

An introduction to advanced research in American history. Readings in secondary literature. Students will undertake research, using also primary and archival sources. Thematic and chronological topics.

HIST 685 - Seminar in Ancient History (3)

This is a research seminar. Students will be required to produce a major paper based on original primary research.

Honors (HR)**HR 190 - Crossroads: Intro to Honors (3)**

A cross-disciplinary, team-taught course which provides the entering student with an introduction to University Honors Program course work by focusing on a different theme or topic each year. Materials may draw from a wide variety of disciplines, including Anthropology, Art History, Biology, Fine and Performing Arts, History, Literature, Philosophy, Social Sciences, and Theology. Required of Honors Program students. Every Fall.

HR 496 - Honors Senior Seminar (0-3)

Topics change every year.

Intergrated & Applied Sciencs (IAS)**IAS 552 - Digital Image Processing (0-2)**

Course familiarizes students with state of the art digital image processing techniques and practice remote sensing applications in various fields. Course objective is to demonstrate present applications of remote sensing with software training in ENVI+IDL, SARscape, and provide students with the skills and knowledge to apply remote sensing to their own research problems.

IAS 601 - Interdisciplinary Seminar (0-1)

Each semester, invited speakers from research programs in both academia and industry will give presentations on their work and IAS students will be expected to attend and engage in discussions with the speakers. The choice of speaker and research will be tailored specifically for the IAS program.

IAS 603 - Interdisciplinary Research (0-2)

Each semester students will investigate, present, and discuss the current scientific literature pertaining to interdisciplinary research in science and/or engineering topics.

Intensive English Program (IEP)**IEP 040 - Beginner English I (0-6)**

Four-skill language course. Includes five hours of reading, five hours of writing, three hours pronunciation / conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 0 > 336 or its equivalent.

IEP 050 - Beginner English II (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 337 > 369 or its equivalent.

IEP 060 - Beginner English III (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370 > 399 or its equivalent . Writing score 2+ or its equivalent.

IEP 070 - Beginner English IV (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370 > 399 or its equivalent . Writing score 2+ or its equivalent.

IEP 080 - Intensive English V (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370 > 399 or its equivalent . Writing score 2+ or its equivalent

IEP 085 - Intensive English VI (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 420 > 459 or its equivalent . Writing score 2+ or its equivalent.

International Studies (ISTD)**ISTD 110 - Intro to International Studies (1)**

This is an introduction to the literature and themes of International Studies. It emphasizes intercultural awareness, cultural interaction, and problem solving in an international context. Offered every semester.

ISTD 290 - Intercultural Sem & Practicum (1-3)

This course develops and studies >intercultural awareness, cultural interaction, and problem solving in an international context.> International Studies is the interdisciplinary analysis of global processes that shape international trends and lives of human beings throughout the world. This course gives students a chance to further develop awareness of the methods and topics of International Studies through a broad, humanistic socio-political approach that will serve as a foundation for further international studies in numerous fields offered at Saint Louis University. Seminar-style instruction and discussion will be paired with a practicum element taking advantage of the course's unique format and structure.

ISTD 491 - Intern in International Stdiies (0-3)

This course places emphasis on the integration of academic studies with professional practice oriented toward specific career goals. Students are responsible for setting up the internship under the direction of the advisor. Offered every semester.

Italian (ITAL)**ITAL 110 - Communicating in Italian I (0-3)**

Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 115 - Communicating in Italian II (0-3)

Expansion of oral and written communication skills in areas of daily life and personal interest.

ITAL 120 - Italian for Speakers of Other Romance Languages

Intensive Elementary Italian. Open to students with four years of a Romance Language (or Latin) in High School, or three semesters of College, or equivalent. Equivalent to Ital 110 Plus Ital 115. Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 210 - Interm Italian: Lang & Culture (0-3)

Continued practice in all skills, enabling students. Reading in and discussion of Italian culture.

ITAL 298 - Independent Study (0-3)

Prior approval required of sponsoring professor of department chair.

ITAL 310 - Written Comm. in Italian I (0-4)

Reading and analysis of authentic language materials to develop written expression. Refining of communicative strategies for accurate expression of ideas.

ITAL 315 - Oral Comm in Italian I (0-4)

Development of fluent oral expression through communicative activities stressing listening comprehension, structural accuracy and systematic approach to vocabulary expansion.

ITAL 325 - Love, Sex and Tragedy in the Middle Ages (0-3)

The study of the presence, nature and evolution of themes in the Fourteenth and Fifteenth centuries. No prerequisites. Course will be taught in English.

ITAL 330 - Italian Women's Studies (3)

An introduction to the work of Italian women writers, thinkers, filmmakers, and artists through the lens of gender and feminist theory. Emphasis on the study of women's changing roles and experiences in Italian history, and of class, ethnic, and racial differences within Italian women.

ITAL 340 - Dante's Divine Comedy (0-3)

Analysis of one of the most celebrated and controversial works of Western literature. Particular emphasis on the formal aspects of Dante's poem, on the historical, philosophical and theological background, and how it still relates to our own world. No prerequisites. Course taught in English.

ITAL 345 - Mafia and Antimafia in Italian Culture: Perceptio

A critical exploration of perceptions and representations of organized crime in Italy and the US through the study of literary texts, films, and testimonials. Emphasis on: history of the mafia, the antimafia movement, and the impact of gender on the experiences of mafia victims and perpetrators. Taught in English.

ITAL 350 - Enlightening Tales: The Works of Italo Calvino (

An introduction to Italo Calvino's major works. Investigation of a selection of Calvino's novels, short stories, and essays against the backdrop of post WWII Italy's ideological and aesthetic debates. Emphasis on Calvino's textual conversations with literature, science, and the arts. Taught in English.

ITAL 355 - Women, Knights, Weapons & Love: Medieval a

An introduction to literary masterpieces using the themes of love, war and women from the 13th century through the Renaissance. Readings from major works of selected authors illustrate the dominant intellectual trends and development of literary forms against the rich cultural background of medieval and Renaissance Italy. In English.

ITAL 360 - Power and Play: Pre-Modern Italian Theatre (3)

A critical exploration of the development of literary texts of Italian theatre from the 13th to the 17th century. The course considers art, religion, gender, politics, race, sexual orientation and identity within their historical, religious and philosophical context. Course taught in English.

ITAL 365 - All things Trans-: Modern Italy Across Borders,

A critical exploration of the development of literary texts of Italian theatre from the 13th to the 17th century. The course considers art, religion, gender, politics, race, sexual orientation and identity within their historical, religious and philosophical context. Course taught in English.

ITAL 398 - Independent Study (0-3)

Prior approval required of sponsoring professor and/or department chair.

ITAL 410 - Written Comm in Italian II (0-3)

Description and exposition of topics of particular interest and special fields competence, correct form and clarity of message will be emphasized.

ITAL 415 - Oral Comm. in Italian II (0-3)

Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

ITAL 420 - Dante's Divine Comedy (3)

Analysis of one of the most celebrated and controversial works of Western literature. Particular emphasis on the formal aspects of Dante's poem, on the historical, philosophical and theological background, and how it still relates to our own world. No prerequisites. Course taught in English.

ITAL 425 - Middle Ages to Renaissance (0-3)

The goal of the course is to have the students have a general idea of the major trends in the central centuries of Italian literature and culture. Taught in Italian. Prerequisite: ITAL-315 or equivalent.

ITAL 430 - An Assembly Manual for the Perfect Prince (0-3)

This is a course about perfect government, as it was imagined by the Italian writers from the 13th to the 18th Centuries. Taught in Italian. Prerequisites: ITAL 315 or equivalent.

ITAL 435 - Themes in Italian Literature of the Nineteenth Ce

The goal of the course is to explore and analyze major trends in Italian literature and culture of the 19th century. Taught in Italian. Prerequisites: ITAL 315, or equivalent.

ITAL 440 - History of Italian Literature from the Middle Age

This is a course about Italian literature of central Centuries of Italian Literature. The goal of the course is to have the students have a general idea of the major trends in Italian literature and culture of the time. Taught in Italian. Prerequisites: ITAL 310 and ITAL 315, or equivalent.

ITAL 490 - Italian Studies Capstone (0)

In order to synthesize the Italian Studies Certificate Program, students do a research paper. Subject and length to be specified by the department.

ITAL 498 - Advanced Independent Study (0-3)

Prior approval required of sponsoring professor and department chairperson.

Latin American Studies (LAS)**LAS 100 - Latino Studies: An Overview (1)**

The course provides an understanding of various disciplinary approaches to understanding the dynamics of the Latino population in the U.S. This is a cross-disciplinary introduction to issues that are addressed by the Latino Studies Certificate and to the research that faculty members at Saint Louis University are conducting in the Latino community.

LAS 300 - Introduction to Latin American Studies (3)

This course is designed to give students a general introduction to the societies, cultures, economies, and politics of Latin America. Topics covered include colonialism, and its contemporary legacies, the role of historically-marginalized groups, authoritarianism and violence, and the economic basis of modern Latin American societies.

Latin (LATN)**LATN 110 - Reading Latin I (3)**

Pronunciation, vocabulary, morphology, syntax, and practice in reading. Material includes the first through the fourth declensions; the indicative forms of sum and of the regular verbs; some demonstrative, interrogative, personal, reflexive, possessive, relative, and intensive pronouns

LATN 115 - Reading Latin II (3)

Review of first semester material. Vocabulary, morphology, syntax, and practice in reading. New material includes the regular verb, some irregular verbs, the fifth declension, the comparison of adjectives, the formation and comparison of adverbs, numerals, constructions of time and place, subordinate clauses, and uses of the subjunctive.

LATN 210 - Interm Latin: Language & Lit (3)

Review of material learned during the first two semesters and coverage of remaining grammar; further vocabulary-extensions; extensive practice in reading continuous Latin prose.

LATN 410 - Intro to Post-Classical Latin (3)

A general review of grammar and varied selections of post-classical Latin prose.

LATN 411 - Medieval Latin Readings I (3)

Readings of selections of medieval prose and poetry from Late Antiquity to about the time of Charlemagne. Usually offered in the Spring. In sequence with LATN 412 and LATN 413.

LATN 412 - Medieval Latin Readings II (3)

Reading of selections of medieval prose and poetry from the time of Charlemagne to the Ottonian Renaissance. Usually offered in the spring. In sequence with LATN 411 and LATN 413.

LATN 413 - Medieval Latin Readings III (3)

Readings of selections of medieval prose and poetry from about 1100-1300 A.D. Usually offered in the spring. In sequence with LATN 411 and LATN 412.

LATN 465 - Latin Literature I (3)

History of Latin literature from its beginning to the end of the Golden Age.

LATN 466 - Latin Literature II (3)

History of Latin literature of the Early Empire.

LATN 495 - Senior Residency (0)

Latin majors must enroll in LATN 495 during their final semester of study.

LATN 498 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chairperson required.

LATN 499 - Honors Tutorial in Latin (1-3)

Reserved for Honors Students.

LATN 501 - Latin for Reading (3)

This course is an intensive, comprehensive and rigorous study of the grammar and syntax of Classical and Medieval Latin. It is designed for the graduate who needs the translation tools to understand their Latin sources. Special attention will be directed to translation techniques specific to individual needs. Some previous study or experience with Latin is preferred but not necessary.

Linguistics (LING)**LING 411 - Language & Linguistics (3)**

An introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes.

Mathematics (MATH)**MATH 094 - Intro Elementary Algebra I (3)**

Review of the real number system; linear equations, and inequalities in one and two variables; functions; systems of linear equations. Fall. MATH 094 and MATH 095 together cover the same material as MATH 096, but in two semesters. Credit not given for both MATH 094 and MATH 096.

MATH 095 - Intro to Elementary Algebra II (3)

Exponents, polynomials and polynomial functions; factoring; rational expressions and functions; roots, radicals and root functions; quadratic equations, inequalities and functions. Spring. MATH 094 and MATH 095 together cover the same material as MATH 096, but in two semesters. Credit not given for both MATH 095 and MATH 096.

MATH 096 - Intermediate Algebra (0-3)

Review of the real number system; linear equations, and inequalities in one and two variables; functions; systems of linear equations; exponents, polynomials and polynomial functions; factoring; rational expressions and functions; roots, radicals and root functions; quadratic equations, inequalities and functions. Fall and spring. Credit not given for both MATH 096 and any of the following: MATH 094, MATH 095.

MATH 120 - College Algebra (0-3)

Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH 132 or MATH 141. Fall, spring and summer. Prerequisite: 2 years of high school algebra or a grade of C- or better in MATH 095 or MATH 096.

MATH 122 - Finite Mathematics (3)

Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH 132 or MATH 141. Fall, spring and summer. Prerequisite: 2 years of high school algebra or a grade of C- or better in MATH 095 or MATH 096.

MATH 124 - Mathematics and the Art of M.C. Escher (3)

A SLU Inquiry Seminar. The art of M.C. Escher is used to explore topics in geometry such as symmetry, tessellations, wallpaper patterns, the geometry of the sphere and hyperbolic geometry. Taught in a computer classroom. Fall and spring. Prerequisite: 3.5 years of high school mathematics or a grade of C- or better in MATH 120.

MATH 125 - Math Thinking in Real World (3)

A SLU freshman seminar. In this course, aimed at students in the humanities and social sciences, we study some of the greatest ideas of mathematics that are often hidden from view in lower division courses. Topics selected from number theory, the infinite, geometry, topology, chaos and fractals, and probability. Taught in a computer classroom. Fall and Spring semesters. Pre-requisite: Three years of highschool mathematics or a grade of "C-" or better in MATH 120. (An understanding beyond MATH 114 is needed.)

MATH 126 - Statistics Including Sports and Politics (3)

A SLU freshman seminar. Producing data through the use of samples and experiments; organizing data through graphs and numbers that describe the distribution of the data of one variable or the relationship between two variables; probability; statistical inference including confidence intervals and tests of significance. Pre-requisite: 3.5 years of highschool mathematics or a grade of "C-" or better in MATH 120.

MATH 130 - Elementary Statistics with Computers (3)

Data production and analysis; probability basics, distributions; sampling, estimation with confidence intervals, hypothesis testing, t-test; correlation and regression; crosstabulations and chi-square. Students learn to use a statistical package such as SPSS. Prerequisite: MATH-120 or equivalent.

MATH 132 - Survey of Calculus (3)

Linear equations and graphs; functions and graphs; limits; the derivative; rules of differentiation; curve sketching and optimization; antiderivatives; the definite integral; multivariable calculus and partial derivatives. (Offered fall, spring and summer.) Prerequisite: 3.5 years of high school mathematics or a grade of C- or better in MATH 120.

MATH 135 - Discrete Mathematics (3)

Concepts of discrete mathematics used in computer science; sets, sequences, strings, symbolic logic, proofs, mathematical induction, sums and products, number systems, algorithms, complexity, graph theory, finite state machines. Pre-requisite: A grade of "C-" or better in MATH 120 or equivalent.

MATH 141 - Pre-Calculus (3)

Functions, graphs and models; modeling with linear and quadratic functions; polynomial and rational functions; modeling with exponential and logarithmic functions; trigonometric functions; trigonometric identities and conditional equations; additional topics in trigonometry; additional topics in analytic geometry; parametric equations. Fall, spring and summer. Prerequisite: 3.5 years of high school mathematics or a grade of C- or better in MATH 120.

MATH 142 - Calculus I (0-4)

Functions; continuity; limits; the derivative; differentiation from graphical, numerical and analytical viewpoints; optimization and modeling; rates and related rates; the definite integral; antiderivatives from graphical, numerical and analytical viewpoints. Fall, spring and summer. Prerequisite: 4 years of high school mathematics or a grade of C- or better in MATH 141. 1818 Advanced College Credit

MATH 143 - Calculus II (4)

Symbolic and numerical techniques of integration, improper integrals, applications using the definite integral, sequences and series, power series, Taylor series, differential equations. Fall, spring and summer. Prerequisite: A grade of C- or better in MATH 142. 1818 Advanced College Credit

MATH 165 - Cryptology (3)

A SLU freshman seminar. Aimed at students who require a course at the level of calculus or higher and who are interested in the mathematical basis for cryptology systems. Topics include permutation based codes, block cipher schemes and public key encryption. Prerequisites: 4 years of high school mathematics.

MATH 181 - Informal Geometry (3)

An informal introduction to geometry for Education majors. Does not satisfy the Arts and Sciences requirement in mathematics. Offered occasionally. Pre-requisite: A grade of "C-" or better in MATH 120.

MATH 199 - Honors Course in Mathematics (1-3)

Offered occasionally.

MATH 215 - Computational Linear Algebra (3)

Vectors, matrices and matrix operations, determinants, systems of linear equations, Gaussian elimination, direct factorization, finite-precision arithmetic and round-off, condition number, iterative methods, vector and matrix norms, eigenvalues and eigenvectors, CAS package.

MATH 244 - Calculus III (4)

Three-dimensional analytic geometry, vector-valued functions, partial differentiation, multiple integration, and line integrals. Fall and Spring semesters. Pre-requisite: A grade of "C-" or better in MATH 143.

MATH 266 - Principles of Mathematics (3)

Introduction to the basic techniques of writing proofs and to fundamental ideas used throughout mathematics. Topics covered include formal logic, proof by contradiction, set theory, mathematical induction and recursion, relations and congruence, functions. Fall and Spring semesters. Pre-requisite: A grade of "C-" or better in MATH 142.

MATH 269 - Mathematical Problem Solving (1)

Intended primarily to train students for the William Lowell Putnam Mathematical Competition, this course covers a mélange of ingenious techniques for solving mathematics problems cutting across the entire undergraduate spectrum, including precalculus, calculus, combinatorics, probability, inequalities. Coverage tailored to students' interests. May be repeated for credit. Fall semester. Prerequisite: None.

MATH 298 - Independent Study (0-3)

Prior approval of sponsoring professor and chair required.

MATH 311 - Linear Algebra for Engineers (3)

Systems of linear equations, matrices, linear programming, determinants, vector spaces, inner product spaces, eigenvalues and eigenvectors, linear transformations, and numerical methods. Credit not given for both MATH311 and MATH315. Does not satisfy any requirements for the mathematics major. Spring semester. Pre-requisite: A grade of "C-" or better in MATH 143 and a knowledge of vectors.

MATH 315 - Introduction to Linear Algebra (3)

Matrices, row operations with matrices, determinants, systems of linear equations, vector spaces, linear transformations, inner products, eigenvalues and eigenvectors. Credit not given for both MATH315 and MATH 311. Fall and Spring semesters. Prerequisites - MATH 244 and 266.

MATH 320 - Numerical Analysis (3)

Review of calculus; root finding, nonlinear systems, interpolation and approximation; numerical differentiation and integration. Pre-requisite: MATH 143.

MATH 355 - Differential Equations I (3)

Solution of ordinary differential equations, higher order linear equations, constant coefficient equations, systems of first order equations, linear systems, equilibrium of nonlinear systems, Laplace transformations. Pre-requisite: MATH 244.

MATH 360 - Combinatorics (3)

Advanced counting methods: permutations and combinations, generalized permutations and combinations, recurrence relations, generating functions; algorithms: graphs and digraphs, graph algorithms: minimum-cost spanning trees, shortest path, network flows; depth first and breadth-first searches; combinatorial algorithms: resource scheduling, bin-packing; algorithmic analysis and NP completeness.

MATH 363 - Financial Mathematics (3)

This course covers the theory of interest material for the Financial Mathematics exam of the Society of Actuaries. Time permitting, supplemental material covering financial derivatives will be discussed. Prerequisite: MATH 143.

MATH 370 - Advanced Mathematics for Engineers (3)

Vector algebra; matrix algebra; systems of linear equations; eigenvalues and eigenvectors; systems of differential equations; vector differential calculus; divergence, gradient and curl; vector integral calculus; integral theorems; Fourier series with applications to partial differential equations. Fall and Spring semesters. Pre-requisite: MATH 355.

MATH 371 - Vector Analysis (3)

Vector algebra, differential and integral calculus of vector functions, linear vector functions and dyadics, applications to geometry, particle and fluid mechanics, theory of vector fields. Offered occasionally. Pre-requisite: MATH 244.

MATH 401 - Elementary Theory of Probability (3)

Counting theory; axiomatic probability, random variables, expectation, limit theorems. Applications of the theory of probability to a variety of practical problems. Credit not given for both MATH 401 and MATH 403. Fall semester. Pre-requisite: MATH 244.

MATH 402 - Intro Mathematical Statistics (3)

Probability and random sampling; distributions of various statistics; statistical procedures, such as estimation of parameters, hypothesis testing, and simple linear regression. Credit not given for both MATH 402 and MATH 403. Spring semester. Prerequisites - MATH 401

MATH 403 - Probability and Statistics for Engineers (3)

Analyzing and producing data; probability; random variables; probability distributions; expectation; sampling distributions; confidence intervals; hypothesis testing; experimental design; regression and correlation analysis. Credit not given for both MATH 403 and either MATH 401 or MATH 402. Fall and Spring semesters. Prerequisites - MATH 244.

MATH 405 - History of Mathematics (3)

The development of several important branches of mathematics, including numeration and computation, algebra, non-Euclidean geometry, and calculus. Offered occasionally. Pre-requisite: MATH 143.

MATH 411 - Introduction to Abstract Algebra (3)

Elementary properties of the integers, sets and mappings, groups, rings, integral domains, division rings and fields. Fall semester. Pre-requisite: MATH 315.

MATH 412 - Linear Algebra (3)

Advanced linear algebra, including linear transformations and duality, elementary canonical forms, rational and Jordan forms, inner product spaces, unitary operators, normal operators and spectral theory. Spring semester. Pre-requisite: MATH 411.

MATH 415 - Number Theory (3)

Introduction to algebraic number theory. Topics will include primes, Chinese remainder theorem, Diophantine equations, algebraic numbers and quadratic residues. Additional topics will vary from year to year. Offered occasionally. Prerequisite: MATH 411.

MATH 421 - Intro to Analysis (3)

Real number system, functions, sequences, limits, continuity, differentiation, integration and series. Fall semester. Pre-requisite: MATH 244.

MATH 422 - Metric Spaces (3)

Set theory, metric spaces, completeness, compactness, connected sets, category. Spring semester. Pre-requisite: MATH 421.

MATH 423 - Multivariable Analysis (3)

Introduction to analysis in multidimensional Euclidean space. Sequences and Series of functions, Differentiability, Integrability, Inverse and Implicit function theorems, Fundamental Theorems of Multivariable Calculus (Green's Theorem, Stokes Theorem, Divergence Theorem). Spring semester. Prerequisite: MATH 421.

MATH 441 - Foundations of Geometry (3)

Historical background of the study of Euclidean geometry; development of two-dimensional Euclidean geometry from a selected set of postulates. Offered occasionally. Pre-requisite: MATH 142.

MATH 447 - Non-Euclidean Geometry (3)

The rise and development of the non-Euclidean geometries with intensive study of plane hyperbolic geometry. Offered occasionally. Pre-requisite: MATH 142.

MATH 448 - Differential Geometry (3)

Classical theory of smooth curves and surfaces in 3-space. Curvature and torsion of space curves, Gaussian curvature of surfaces, the Theorema Egregium of Gauss. Offered occasionally.

MATH 451 - Introduction to Complex Variables (3)

Complex number system and its operations, limits and sequences, continuous functions and their properties, derivatives, conformal representation, curvilinear and complex integration, Cauchy integral theorems, power series and singularities. Fall semester. Pre-requisite: MATH 244.

MATH 452 - Complex Variables II (3)

This course is a continuation of MATH 451. Topics covered include series, residues and poles, conformal mapping, integral formulas, analytic continuation, and Riemann surfaces. Spring semester. Pre-requisite: MATH 451.

MATH 453 - Geometric Topology (3)

An introduction to the geometry and topology of surfaces and three dimensional spaces. Topics covered include Euclidean, spherical and hyperbolic geometry, topology of surfaces, knot theory, and the fundamental group. Pre-requisite: MATH 451.

MATH 455 - Nonlinear Dynamics and Chaos (3)

Bifurcation in one-dimensional flows. Two-dimensional flows, fixed points and linearization, conservative systems, index theory, limit cycles. Poincare-Bendixson theory, bifurcations. Chaos, the Lorenz equation, discrete maps, fractals, and strange attractors. Pre-requisite: MATH 355.

MATH 457 - Partial Differential Equations (3)

Fourier series, Fourier Integrals, the heat equation, Sturm-Liouville problems, the wave equation, the potential equation, problems in several dimensions, Laplace transforms numerical methods. Pre-requisite: MATH 355.

MATH 463 - Graph Theory (3)

Basic definitions and concepts, undirected graphs (trees and graphs with cycles), directed graphs, and operation on graphs, Eulers formula, and surfaces. Offered occasionally. Pre-requisite: MATH 244.

MATH 465 - Cryptography (3)

Classical cryptographic systems, public key cryptography, symmetric block ciphers, implementation issues. Related and supporting mathematical concepts and structures. Pre-requisite: MATH 143

MATH 495 - Senior Residency (0)

Required for graduating seniors.

MATH 498 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chair required.

MATH 501 - Linear Algebra (3)

Prerequisite: advanced undergraduate course in modern Algebra. Advanced linear algebra including linear transformations and duality, elementary canonical forms, rational and Jordan forms, inner product spaces, unitary operators, normal operators, and spectral theory. Offered every Spring semester.

MATH 502 - Metric Spaces (3)

Prerequisite: an advanced undergraduate course in analysis. Set theory, real line, separation properties, compactness, metric spaces, metrization. (Offered every Spring semester.)

MATH 503 - Number Theory (3)

Introduction to algebraic number theory. Topics will include primes, Chinese remainder theorem, Diophantine equations, algebraic numbers and quadratic residues. Additional topics will vary from year to year. Prerequisite: MATH 411

MATH 504 - Multivariable Analysis (3)

Sequences and Series of functions, Differentiability, Integrability, Inverse and Implicit function theorems, Fundamental Theorems of Multivariable Calculus (Green's Theorem, Stokes Theorem, Divergence Theorem). Prerequisite: MATH 421.

MATH 506 - Math Methods Engineering I (3)

Prerequisite: Permission of Instructor. Review of vector analysis, curvilinear coordinates, introduction to partial differential equations, Cartesian tensors, matrices, similarity transformations, variational methods, Lagrange multipliers, Cauchy-Riemann conditions, geometry of a complex plane, conformal mapping, and engineering applications. Offered every Fall semester.

MATH 507 - Math Methods Engineering II (3)

Calculus of residues, contour integration, multi-valued functions, series solutions of differential equations, Sturm-Liouville theory, special functions, integral transforms, discrete Laplace and Fourier transforms, basic numerical methods, finite difference methods, and their applications to partial differential equations. Offered every Spring semester.

MATH 511 - Algebra (3)

Simple properties of groups, groups of transformations, subgroups, homomorphisms and isomorphisms, theorems of Schreier and Jordan-Hoelder, mappings into a group, rings, integral domains, fields, polynomials, direct sums and modules. Offered every Fall semester.

MATH 512 - Algebra II (3)

Rings, fields, bases and degrees of extension fields, transcendental elements, normal fields and their structures. Galois theory, finite fields; solutions of equations by radicals, general equations of degree n . Offered every Spring semester.

MATH 521 - Real Analysis I (3)

The topology of the reals, Lebesgue and Borel measurable functions, properties of the Lebesgue integral, differential of the integral. Offered every Fall semester.

MATH 522 - Complex Analysis (3)

Holomorphic and Harmonic functions and power series expansions. Complex integration. Cauchy's theorem and applications. Laurent series, singularities, Runge's theorem, and the calculus of residues. Additional topics may include Analytic continuation, Riemann surfaces, and conformal mapping. Prerequisites: MATH 521 and MATH 531. Recommended: MATH 451. Offered occasionally.

MATH 523 - Functional Analysis (3)

Banach and Hilbert spaces. Linear functionals and linear operators. Dual spaces, weak and weak topologies. Hahn-Banach, Closed Graph and Open Mapping Theorems. Topological Vector spaces. Prerequisites: MATH 521 and MATH 531. Offered occasionally.

MATH 524 - Harmonic Analysis (3)

Fourier Series on the circle, Convergence of Fourier series, Conjugate and maximal functions, Interpolation of Linear Operators, Lacunary Sequences, Fourier Transform on the line, Fourier transform on locally compact Abelian groups. Prerequisite: MATH 521. Recommended: MATH 531.

MATH 531 - General Topology I (3)

Topological spaces, convergence, nets, product spaces, metrization, compact spaces, connected spaces. Offered every Fall semester.

MATH 532 - General Topology II (3)

Compact surfaces, fundamental groups, free groups and free products, Seifert-van Kampen theorem, covering spaces. Offered every Spring semester.

MATH 598 - Graduate Reading Course (1-3)

Prior permission of instructor and chairperson required.

MATH 611 - Algebra III (3)

Categories and functors, properties of hom and tensor, projective and injective modules, chain conditions, decomposition and cancellation of modules, theorems of Masche, Wedderburn, and Artin-Wedderburn, tensor algebras. Offered every other year.

MATH 618 - Topics in Algebra (3)

Various topics are discussed to bring graduate students to the forefront of a research area in algebra. Times of offering in accordance with research interests of faculty. Offered occasionally.

MATH 621 - Lie Groups and Lie Algebras (3)

Lie groups and Lie algebras, matrix groups, the Lie algebra of a Lie group homogeneous spaces, solvable and nilpotent groups, semi-simple Lie groups. Offered every other year.

MATH 622 - Rep Theory of Lie Groups (3)

Representation theory of Lie groups, irreducibility and complete reducibility, Cartan subalgebra and root space decomposition, root system and classification, coadjoint orbits, harmonic analysis on homogeneous spaces. Offered every other year.

MATH 628 - Topics in Analysis (3)

Various topics are offered to bring graduate students to the forefront of a research area in analysis. Times of offering in accordance with research interests of faculty. Offered occasionally.

MATH 631 - Algebraic Topology (3)

Homotopy theory, homology theory, exact sequences, Mayer-Victoris sequences, degrees of maps, cohomology, Kunneth formula, cup and cap products, applications to manifolds including Poincare-Lefschetz duality. Offered every other year.

MATH 632 - Topology of Manifolds (3)

Examples of manifolds, the tangent bundle, maps between manifolds, embeddings, critical values, transversality, isotopies, vector bundles and bubular neighborhoods, cobordism, intersection numbers and Euler characteristics. May be taught in either the piecewiselinear or differentiable categories. Offered every other year.

MATH 638 - Topics in Topology (3)

Various topics are offered to bring graduate students to the forefront of a research area in topology. Times of offering in accordance with research interests of faculty. Offered occasionally.

MATH 641 - Differential Geometry I (3)

The theory of differentiable manifolds, topological manifolds, differential calculus of several variables, smooth manifolds and submanifolds, vector fields and ordinary differential equations, tensor fields, integration and De Rham cohomology. Offered every Fall semester.

MATH 642 - Differential Geometry II (3)

Continuation of MT-A641. Offered every Spring semester.

MATH 648 - Topics in Geometry (3)

Various topics are offered to bring graduate students to the forefront of a research area in geometry. Times of offering in accordance with research interests of faculty. Offered occasionally.

MATH 698 - Graduate Reading Course (1-3)

Prior permission of instructor and chairperson required.

Micah House Program (MH)**MH 110 - Exploring Urban Vocations (1)**

Introduces the challenges facing cities of the future and the wide range of SLU degree programs that address them. Through presentations by professionals, site visits, and shadowing, students explore careers in Healthcare, Education, Housing, Transportation, Urban Design, Engineering, Environment, Law, Criminal Justice, Economics, Public Administration, Social Services, and Community Organization.

MH 490 - Senior Capstone (3)

Under supervision of a faculty member, students conduct research on a theoretical or practical issue involving social injustice and peace in the American city. Examples include philosophical or theological ideals of social order; psychological, sociological, or political obstacles to attaining such ideals; and practical solutions to such problems in fields such as public policy studies, social work, community service, and the health sciences.

Military Science (MILS)**MILS 101 - Introduction to Leadership I (2)**

Examine the challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as cultural understanding, goal setting, time management, mental/physical resiliency, and stress management relate to leadership, officership, and the Army profession. MILS 101 is open to all students and enrollment does not require a commitment to join the US Army.

MILS 102 - Introduction to Leadership II (2)

Investigate leadership fundamentals such as problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercises. Learn fundamental military concepts and explore the Army's leadership philosophy. MILS 102 is open to all students and enrollment does not require a commitment to join the US Army.

MILS 201 - Innovative Team Leadership (3)

Explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and leadership theories. The course continues to build on developing knowledge of leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Enrollment in MILS 201 does not require a commitment to join the US Army.

MILS 202 - Foundations of Tactical Leadership (3)

Develop greater self-awareness as you assess your own leadership styles and practice communication and team building skills. Examine and practice the challenges of leading teams in the complex operational environment. Study dimensions of terrain analysis, patrolling, and operation orders. Explores the dynamics of adaptive leadership in the context of military operations. Enrollment in MILS 202 does not require a commitment to join the US Army.

MILS 301 - Adaptive Team Leadership (3)

This is an academically challenging course where you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, and small unit tactics. At the conclusion of this course you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom practical exercise (PE), a leadership lab, or during a military situational training exercise (STX) in a field environment. Prerequisite for this course is the successful completion of MSL 101 through 202; OR attendance at the Leader's Training Course (LTC). Contact the Military Science Department for more details.

MILS 302 - Applied Team Leadership (3)

Continue to learn and apply the fundamentals of Army leadership, officership, Army values and ethics as you hone your leadership abilities in a variety of tactical environments and the classroom. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend the summer following this course at Fort Lewis, WA. You will receive systematic and specific feedback on your leadership attributes, values and core leader competencies from your instructors, other ROTC cadre, and senior cadets. Prerequisite for this course is the successful completion of MILS 301.

MILS 401 - Adaptive Leadership (3)

This course focuses on practical application of adaptive leadership. Throughout the semester, students will apply the fundamentals of principles of training, the Army writing style and military decision making. Students will study the special trust reposed to Army Officers by the US Constitution and the President of the United States--a special trust given to no other civilian professions. Students will also study the Army officer's role in the Uniform Code of Military Justice, and the counseling and development of subordinates. Prerequisite for this course is the successful completion of the ROTC Leadership Development and Assessment Course (LDAC) or permission of the instructor.

MILS 402 - Leadership in a Complex World (3)

Explore the dynamics of leading in the complex situation of current military operations in the contemporary operating environment. Examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non-government organizations, civilians on the battlefield and host nation support. Significant emphasis is placed on your transition to officership, preparing you for your branch school and first unit of assignment. Prerequisite for this course is the successful completion of MILS 401 or permission of the instructor.

MILS 420 - Sem in Leadership and Ethics (2)

The curriculum in MILS 420 is designed to focus on student (cadet) learning, rather than on any specific subject matter. Focusing on the cadet requires student-centered objectives and conscious attention to how the cadets interact with the subject matter presented. Learning occurs during class in the same way it does outside the classroom: Through both structured and unstructured experiences in which the cadets interact with the instructor, each other, and the instructional material. All seminar material is focused on experiential and participatory learning. Cadets meet independently with the instructor to determine both focus areas and instructional schedule. Instructional material includes a focus on the ethics of the military profession, an examination of various theories of leadership, and applied leadership and ethical decision making in historical settings.

MILS 422 - Leadership & Ethics (3)

Identify and resolve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as it relates to leading as an Army officer.

MILS 450 - Modern American Military History (3)

A survey of US military involvement beginning with the Treaty of Versailles following World War I and concluding with the current Global War on Terror. Students will follow a chronological study of crucial battles of World War II, Korea, Vietnam and conclude with in-depth case studies from Iraq and Afghanistan. The class focuses on both tactical and strategic lessons learned and the political and cultural influences that effect the way wars are fought. Prerequisite for this course is sophomore status and good standing in the ROTC program.

Modern Language (MLNG)**MLNG 110 - Contemporary Issues (0-3)**

This class studies American culture through topics of global issues, social justice, and cultural diversity. A servicelearning component will allow students to have an practical application of the knowledge, as well as leadership training in service projects in the urban setting of St. Louis. Required readings and movies will be about different sub-cultures within the United States and a variety of global issues.

MLNG 120 - Cultural Keywords: Comparing Studies of W

This class offers an introduction to the main intellectual, artistic, and cultural movements of Western Culture from Western and non-Western perspectives. The periods studied: Classic Greek/Romans, Middle Ages, Modern Age, including Neoclassicism, Romanticism, Realism, and Modernism. These movements will be compared with periods and philosophies from non-Western cultures, including China, India and Muslim cultures. Prerequisite: English Language Exam score at the EAP 120 level.

MLNG 130 - Hollywood & History:Storytelling through Hist

Through the use of storytelling from both history and film, the course looks at the wide diversity of narratives in the American culture. Movies and field trips will connect the topics to local events and historical sites. The goal is to help international students understand aspects of the American culture that can help them as background information in future classes or programs, both in the U.S. and in their home countries.

MLNG 200 - Cross-Cultural Preparation for Study Abroad (

The course is for students from all fields who aspire to develop cross-cultural competence through studying abroad. Students will deepen their understanding of cultural influence on behavior and values, acquire knowledge about the country they will be going to, and develop skills for cross-cultural encounters.

MLNG 201 - Cross-Cultural Inquiry for Study Abroad (1)

This 1-credit course gives students who simultaneously take MLNG 200, also 1 credit, the opportunity to analyze cultural influences further, research their host countries more extensively, and examine more deeply what studying abroad can add to their lives. Co-requisite MLNG 200.

MLNG 202 - Cross-Cultural Re-entry from Study Abroad (1)

The course gives students a framework for moving from questions of simply what happened while studying abroad to deeper questions of what the cultural journey students have returned from can mean in their lives. Students reflect on what cross-cultural competence signifies and how studying abroad developed their abilities.

MLNG 210 - The Global Villa (0-1)

Participants in the Global Villa Learning Community discuss a variety of cultural and historical topics from French, German, Spanish-speaking countries as well as International Studies. Exposed to more than one culture, students gain deeper intercultural awareness and connect with multiple disciplines to become better-informed citizens in an increasingly complex world.

MLNG 320 - Israeli Culture: From the Birth of Zionism to t

Introduction to modern Israel, its culture and people. From the birth of Zionism in nineteenth century Europe, to the ingathering of the Jewish people, the creation of the State of Israel, and on to the present. Topics include conflicts between Jews and Palestinian Arabs, between religious and secular Israelis and gender issues.

Manresa Program (MP)**MP 200 - Foundations for Catholic Stud (3)**

This course provides the background knowledge and categories necessary for further course work in the Manresa Certificate Program: the basics of Catholic belief, Catholic spirituality and practices, the history and cultural influence of Catholicism in selected areas of art, culture, and society.

Medieval & Ren Studies (MR)**MR 200 - Intro. to Medieval Studies (1)**

Two introductory lectures by representatives of each of the 6 Humanities Departments and the Department of Political Science, designed to provide an overview of the medieval world from the perspective of the respective discipline; there will also be one-hour introductions to the Vatican Film Library and the St. Louis Room's Rare Book Collection in the Pius XII Library. This also functions as a stand-alone course serving as a primer for medieval studies and as a vehicle for attracting new students. It is not conceived as a prerequisite for any other particular course, but would be required of students during the semester in which they declare their intention to pursue the Certificate, if they have not already taken the course.

MR 210 - The Medieval World (3)

Introduction to Medieval Studies is a course meeting three times per week for fourteen weeks. Students will be exposed to the strong medieval tradition at SLU, and will gain an appreciation for the middle ages through this class.

MR 400 - Medieval Synthesis (2)

Capstone course, offered each semester, requiring the Medieval Studies Certificate candidate to write a research paper on a medieval topic approached from an interdisciplinary point of view, written with the guidance of a member of the faculty.

MR 491 - Internship in Medieval and Renaissance Studies (

The Internship is designed for senior level students who are going to pursue a graduate degree in medieval studies and who desire to work with a non-SLU entity (St. Louis Art Museum, for instance) on a project defined as constituting one semester of work. The student must first meet with a faculty member amenable to guide the internship, then present a signed internship form to the CMRS Director of Undergraduate Studies. The internship should entail 120-140 hours of work on a particular project through a semester.

Music (MUSC)**MUSC 100 - Approaching the Arts: Music (3)**

Introduction to the appreciation and understanding of the basic elements, genres, and style periods of Western music. Classical and popular styles will be presented; some live concert attendance will be required. Fulfills Fine Arts Core Requirement for non-majors.

MUSC 110 - Music Fundamentals (3)

An introductory course in music notation and the basic building blocks of western musical thought. Includes study of pitches, clefs, key signatures, scales, intervals, rhythms, symbols, terms, and basic harmony. Fulfills the Core Arts requirement for non-majors. If needed, it can serve as a preparatory study of music theory for music majors, but does not count toward the music degree.

MUSC 115 - History of Jazz (3)

An introduction to the development of Jazz and related American styles through lecture and extensive audio-video examples. Course work includes reading and listening assignments, two exams, one review of a live performance, and one brief paper. Fulfills Arts & Sciences Core Arts requirement for non-majors. May be used as a music literature elective for music majors.

MUSC 116 - Music in Saint Louis (3)

Music in St. Louis examines the rich and varied history of music in St. Louis including the development of Ragtime, the St. Louis Symphony, The MUNY, Opera Theatre of St. Louis and the emerging hip hop scene of the last 15 years. Requirements include papers, exams, and one field trip

MUSC 117 - World Music (3)

Introductory course to musical cultures around the world. History, sources, and aesthetic principles in each culture will be examined and compared with western society's Eurocentric styles. Students will learn to identify musical elements and characteristics unique to each culture, and acquire vocabulary for intelligent, respectful discussion of the topics.

MUSC 118 - Music of the African Diaspora (3)

A study of the musical traditions of people of African descent outside of Africa with special emphasis on the influence of African music on popular music in America. Special attention will be given to historical and social context. No prerequisites required.

MUSC 126 - Piano for Beginners 1 (2)

A small group lab class for students with little or no previous training at the keyboard. Introduction to basic keyboard knowledge and techniques includes reading notes in treble and bass clefs, rhythm symbols and patterns, keyboard geography, five-finger exercises, beginning scales, key signatures and primary chords in major keys, common musical terms, control of dynamic levels and articulations, and performance of simple solos and duets. Satisfies 2 credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 127 - Piano for Beginners 2 (2)

A small group lab class for students at the Late Elementary-Early Intermediate level with limited prior training (1-2 years) in music-reading and keyboard skills. Students should already be familiar with most major keys, and able to read and play simple melodies and basic chordal accompaniments. Studies include one-octave major and minor scales, hand-over-hand arpeggios, simple chord progressions, harmonization, transposition, and sight reading exercises. Solos and homework are assigned from class piano textbooks; techniques learned are applicable to all styles of music. Satisfies two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit. Prerequisite: MUSC126 or consent of instructor.

MUSC 140 - Lower Division Class Music (1-2)

Small group instruction in class voice or instrumental family. An Applied Music Fee is required.

MUSC 201 - Applied Music: Voice (1-2)

Private studio lessons in voice. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 202 - Applied Music: Piano (1-2)

Private studio lessons in piano. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 203 - Applied Music: Guitar (1-2)

Private studio lessons in guitar. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 204 - Applied Music: Woodwinds (1-2)

Private studio lessons in woodwind instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers required.

MUSC 205 - Applied Music: Brass (1-2)

Private studio lessons in brass instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers required.

MUSC 206 - Applied Music: Strings (1-2)

Private studio lessons in string instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers required.

MUSC 207 - Applied Music: Percussion (1-2)

Private studio lessons in percussion instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers required.

MUSC 210 - Applied Music: Majors Only (1-2)

Applied Music course taught by full-time music faculty. For admitted and declared Music Majors only, in process of completing required number of credits on major instrument. Private half-hour or hour-long lessons weekly; individualized, sequential instruction in classical repertoire and technique. No Applied Music lesson fee is attached to this course.

MUSC 226 - Music Computer Skills (1)

Hands on instruction in the use of MIDI software and hardware. Programs in Music Notation, Music Sequencing, and Computer Assisted Instruction will be practiced and evaluated.

MUSC 227 - Music Theory I (3)

The first of the four-semester sequence of intensive theoretical study required of all music majors. Students enrolled in this class should be literate musicians with considerable prior experience performing/reading music. Specific topics include review of basic principles of notation, major and minor scales, key signatures, intervals, triadic harmony, figured bass, melody and two-voice counterpoint, fundamentals of diatonic harmony, and part writing in two, three, and four voices. Course work includes lecture-discussion of chapters, assigned workbook pages, frequent chapter tests, sight singing practice, and weekly computer assignments in ear training. It is strongly recommended that non-pianists concurrently study class piano.

MUSC 228 - Music Theory II (3)

Second course in the required sequence for music majors. Continuation of Theory I; includes treatment of triads in inversion, cadences and beginning musical form, non-harmonic tones, and diatonic seventh chords.

MUSC 230 - Intro to Music Therapy (3)

This course gives an overview of basic principles of music therapy, including its history, research methods, characteristics of diverse populations served, and treatment process (referral, assessment, treatment plan, documentation and evaluation). Course includes field trips to clinical settings, and exploration of ethical issues and student's attitudes and motives as helpers.

MUSC 236 - Music Literature Seminar (3)

Seminar offered on varying musical genres, including "American Popular Music," "The Oratorio," "Piano Repertoire," "Italian Opera," and "The Symphony." Significant stylistic characteristics of music and composers in musical, social, historical frameworks. Course work includes research paper/presentation, concert attendance, formal analysis of musical examples. Prerequisite: Students should already be musically literate, familiar with standard musical notation and terms.

MUSC 240 - Vocal Coaching (1)

A studio course for advanced voice students. Individual half-hour sessions weekly preparing advanced vocal repertoire with a professional vocal coach. Musicianship studies; diction and translation work in English, German, Italian, and French; and professional performance techniques for juries, recitals, contests, and auditions. Co-requisite: enrollment in MUSC201 (Applied Music: Voice Lessons).

MUSC 250 - Intermediate Piano 1 (2)

Small group class, early Intermediate level, for students with several semesters of previous training. Technical, functional studies in scales, chords, transposition, harmonization, sight reading. Standard classical repertoire from 18-21st centuries, assigned individually. Fulfills two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 251 - Intermediate Piano 2 (2)

Small group class, upper Intermediate level (sonatinas, easy inventions and preludes). Technical and functional studies in preparation for Piano Proficiency Exam (required of music majors). Standard classical repertoire from 18-21st centuries, assigned individually. Two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 285 - Piano Proficiency Exam (0)

Examination by Music Faculty in keyboard skills. All Music Majors must pass before enrolling in Music 485, Senior Capstone. Skills: Intermediate-level repertoire; scales, arpeggios, and chord progressions in all major and minor keys; transposition and harmonization of melodies; sightreading; performance of national anthem. Co-requisite: Piano IV or instructor's permission.

MUSC 327 - Music Theory III (3)

Third course in the required sequence for music majors. Study of secondary dominants, chromaticism and altered chords, modulations, and binary-ternary forms; traditional and contemporary harmonic usage.

MUSC 328 - Counterpoint (3)

Required of theory majors. Study of two, three, and four-part writing of common period style and analysis of contrapuntal forms.

MUSC 329 - Music Theory IV (3)

Fourth course in the required sequence for music majors. Continuation of the study of the complex harmonic vocabulary of the late 19th/20th centuries, including extended chromaticism and tertian harmony, modes, Neapolitan and augmented sixth chords, enharmonic modulations, serialism, parallelism, aleatoric works, pandiatonicism, etc.

MUSC 330 - History of Music I (3)

In this class students will thoroughly examine the traditional canon of Western European Art Music from antiquity through the Middle Ages, Renaissance, Baroque eras, ending with the music of J.S. Bach in 1750. The course includes lecture/discussion, listening, score study, and reading of primary and secondary sources. In addition to mastering factual data, students will understand and be able to discuss the role of music in Western culture from Rome to 1750 and recognize important works.

MUSC 331 - History of Music II (3)

In this class students will thoroughly examine the traditional canon of Western European Art Music from the middle of the eighteenth century through the Classical, Romantic and Modern eras, ending with the music of the last 20 years. The course includes lecture/discussion, listening, score study, and reading of primary and secondary sources. In addition to mastering factual data, students will understand and be able to discuss the role of music in Western culture from 1750 to the present and recognize important works.

MUSC 335 - Music of Women Composers (3)

A survey course studying representative music written by women composers from the Middle Ages to the present. Keyboard, vocal, and instrumental works will be examined. Writings about specific women composers will be discussed, and recordings and scores will be compared with works from the music history canon. Course work will require reading, listening to specific works, and attendance at concerts.

MUSC 336 - Music Literature Seminar (3)

A seminar offered periodically, on varying historical and musical subjects; examples include "American Popular Music," "History of the Oratorio," and "Piano Repertoire." Course covers the significant characteristics of selected musical style periods, genres, or composers, examined in their musical, social, and historical frameworks. Course work includes presentation of a research paper, two exams, reading and listening assignments, formal of musical examples, and attendance at live musical presentations.

MUSC 342 - University Chorale (0-1)

Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude. Repertoire is chosen from the Renaissance through the Twentieth Century. The main concert always occurs at the end of the semester and usually takes place in the College Church. University Chorale provides an artistic opportunity for singers to be exposed to learn high quality choral music presented in a public concert. Within this context, singers will also be taught singing skills to enhance their vocal abilities. All of the primary basics of healthy singing and musicality will be stressed. This includes (1) a deeper understanding and application of breathing skills, (2) understanding and applying motions and movements that underlie both relaxation and released energy, (3) developing mental imagery so that the process of singing takes place internally, (4) learning the correct diction for all languages that are represented in the repertoire and (5) developing musicianship in which the singer is able to apply the principles of sustained legato and expressive singing. Participation and complete preparation is essential for every concert. At the beginning of the semester the director will clarify those compositions that need to be memorized and those that will be sung with musical scores. Only high quality choral music shall be rehearsed and presented in public performance.

MUSC 343 - Swing Choir (0-1)

A choral ensemble open to all singers interested in Swing, Jazz, and Show Choir repertoire. Class meets weekly for one 2 hour rehearsal period and performs at least one concert per semester.

MUSC 344 - University Mastersingers (0-1)

Highly selective small vocal ensemble, with frequent public performances of early choral music and a capella works. Entrance by audition only. An advanced concert choir of approximately thirty five carefully chosen singers, with a selected core (16-18 singers) featured in Fall madrigal concerts from the Renaissance. Musical selections will vary with each semester. For the fall semester considerable emphasis will be to prepare concert music ranging from 20th century spirituals to a wide variety of traditional classical works and to madrigals for the smaller select ensemble from the Renaissance period. A full-length oratorio is prepared for the spring semester. All university choral groups generally join the Mastersingers for this event. This ensemble is highly sought after both within the University and the community at large. Concert engagements should be anticipated throughout the semester but especially during the Christmas season. The director, however, will be sensitive to other demands and time conflicts that students have as it relates to their course work when making such commitments. The Mastersingers also play a significant role as ambassadors for the University. Their appearance at events including the University commencement service that takes place in mid-May is a required event for members of this ensemble.

MUSC 345 - Jazz Ensemble (0-1)

Rehearsal of music from the jazz repertoire with the goal of a public performance at the end of the semester. The primary focus of the band is a traditional big-band (5 saxes, 4 trumpets, 4 trombones, rhythm). Smaller improvisation oriented combos will be drawn from the larger group.

MUSC 346 - String Ensembles (0-1)

Jazz Ensemble Class consists of rehearsal of music from the jazz repertoire with the goal of a public performance at the end of the semester. The primary focus of the band is a traditional big-band (5 saxes, 4 trumpets, 4 trombones, rhythm), and smaller, improvisation oriented combos will be drawn from the larger group. **Guitar Ensemble** The goal of this course is to work together to prepare and present a program of guitar ensemble music for a public concert. Students are exposed to a new repertoire, and gain experience in working with other musicians.

Symphonic Band Large instrumental ensemble for winds, brass, and percussion instruments. Preparation and performance of high-level music written or arranged for large concert band. **String Ensemble** Small chamber group (4-16 students) for violins, violas, cellos, and string basses, rehearsing and performing high-level music written or arranged for string ensemble or string symphony.

MUSC 347 - Pep Band (0-)

Undergraduates & alumni playing wind, brass, and percussion instruments with great enthusiasm at Men's and Women's Basketball games. Fall: Weekly rehearsals, late August - early November. Spring: Performances at home games, Chaifetz Center, January - March. Repertoire: Big Band Era to the present. Prerequisite: previous instrumental ensemble experience.

MUSC 348 - Guitar Ensemble (0-1)

Guitarists work together as a whole and in smaller units to prepare and present a program of guitar ensemble music for a public concert. During this process students are exposed to a variety of classical repertoire from the major style periods, and gain experience in working with other musicians.

MUSC 349 - Concert Band (0-1)

The Concert Band consists of experienced musicians (flutes, clarinets, French horns, saxophones, oboes, bassoons, percussion) who perform traditional concert band literature including marches, concert works, and popular selections. There is a final concert at semester's end.

Prerequisite: Previous concert band experience.

MUSC 349 - SLU Concert Wind Ensemble (0-1)

The SLU Wind Ensemble is an eclectic, variable-sized group of experienced wind players (flutes, clarinets, French horns, saxophones, oboes, bassoons) who learn and perform classical concert music from all style periods both on and off campus, with a final concert at semester's end. Prerequisite: Previous wind ensemble experience.

MUSC 350 - Piano Ensemble (0-1)

Lab course for advanced pianists in collaborative techniques, focuses on the musicianship skills need to accompany vocal-instrumental solos and ensembles, and to play duet and chamber repertoire. Students rehearse and perform with other musicians in lessons and rehearsals, and for departmental juries, auditions, and concerts.

MUSC 385 - Junior Recital/Research (0)

Preparation for Senior Capstone, taken during fifth or sixth semester, under supervision of primary music advisor. Performance Majors: Junior Recital, 30-40 minutes long, comprising representative classical works at appropriate performance level. Studies Majors: Examination of standard research tools & techniques, producing working bibliography of musical reference materials.

MUSC 427 - Music Analysis (3)

Required of theory majors. Study of recent theoretical concepts and application of them to the analysis of musical structures of various periods; emphasis on contemporary composition.

MUSC 441 - Conducting (3)

Theory and practice of conducting vocal and instrumental organizations. Required of music majors.

MUSC 485 - Senior Capstone (0)

Senior Recital or Lecture-Presentation required of Music Performance and Music Studies Majors. Senior Recitals are 50-60 minutes long, comprised of several groups of classical music selections of varying style periods, and are performed from memory for the public in a University venue. Senior Lecture-Presentations are readings or demonstrations of studies in related fields, supervised by the student's primary advisor, and delivered in a University classroom or auditorium.

Portuguese (PG)**PG 105 - Intro Brazilian Portuguese (5)**

Development of writing, reading, speaking and listening skills. Offered occasionally.

PG 106 - Interm Brazilian Portuguese (5)

Continuation of PG 105. Offered occasionally.

Philosophy (PHIL)**PHIL 105 - Intro to Phil: Self & Reality (3)**

This course will focus primarily on the writings of Plato and Aristotle as central figures in that historical period when Western humanity began to use and to develop reason systematically as an instrument for understanding the world and its place in that world. Students will be introduced to the Greek contributions to logic, metaphysics, and ethics.

PHIL 205 - Ethics (3)

This course undertakes a systematic analysis of fundamental problems and issues involved in questioning whether and how moral discourse can be rationally grounded; the utilitarian-deontological debate; questions concerning different levels of moral discourse; competing notions of justice and the relationship between morality and religion.

PHIL 320 - Philosophy of Being (3)

The real as real, its radical principles and common characteristics. The claims of metaphysics to deal systematically with the nature and structure of all reality. Metaphysical support of philosophical anthropology, philosophy of God, religion and ethics. Criticisms of metaphysics by Hume, Kant, recent thinkers.

PHIL 325 - Philosophy of Religion (3)

What is God's nature? What reasons are there for believing God exists? In this course, we approach these sorts of questions using tools and methods of philosophical investigation in order to engage students in reasoning about God. The course draws on classic texts of Western thought and on contemporary philosophical discussions. Prerequisites: PHIL-105 & 205.

PHIL 330 - Philosophy of the Human Person (3)

Systematic or historico-systematic treatment of main philosophical problems, such as the mind-body problem; the unity of man; survival and immortality; sensation and intelligence; the emotions, their interplay with intelligence and volition; freedom vs. determinism; the person in and with or against society. Every semester.

PHIL 335 - Philosophy and Good Life (3)

This course will examine the idea of the good life: what's important in life? Topics may include: theories of well-being; happiness; the meaning of life; the examined life; morality and the good life; and religious vs. secular conceptions of the good life. Prerequisites: PHIL 105 and 205.

PHIL 336 - Medical Ethics (3)

Ethical problems of medicine, nursing and the life-sciences. Every semester.

PHIL 338 - Business Ethics (3)

Reflection on ethical issues relating to contemporary business practices and institutions.

PHIL 340 - Ethics & Engineering (3)

This course examines the moral and social issues that arise in the practice of engineering, e.g., risk assessment, use of proprietary information, whistle-blowing, environmental impact. The course applies moral theories and casuistic analysis to cases. Every fall.

PHIL 341 - Computer Ethics (3)

This course examines the moral, legal, and social issues raised by computers and electronic information technologies for different stakeholder groups (professionals, users, business, etc.). Students are expected to integrate moral theories and social analysis for addressing such issues as intellectual property, security, privacy, discrimination, globalization, and community. Prerequisite: PHIL 205.

PHIL 342 - Environmental and Ecological Ethics (3)

This course will survey a number of environmental problems, looking at philosophical and ecological approaches to the issues. Topics may include: the moral status of animals, plants, ecosystems and species: poverty vs. the environment; global justice; consumerism; motivating people to care for the environment; mass extinctions; global climate change. Prerequisites: PHIL 105 and 205.

PHIL 343 - Philosophy of Law (3)

A critical survey of the major Western conceptions on the nature of law and on the relationship between law and morality.

PHIL 345 - Disaster Narratives (3)

To help students reflect on the nature and implications of disasters, including disease, climate change, and war. We will consider disasters from the standpoint of their real-life effects upon human beings, both with respect to innocent victims caught by forces beyond their control and with respect to perpetrators of disasters.

PHIL 348 - Jewish Life: Bible to Mid Ages (3)

This course offers a study of the concept of peoplehood during the Biblical period, the response to the rise of Christianity, the destruction of the Second Temple and the use of Rabbinic law and lore. Students will also have the opportunity to experience Jewish life through an understanding of the holiday cycle, the life cycle and attendance at a local synagogue for Sabbath worship. Every fall.

PHIL 349 - Jewish Life: MidAge to ModTime (3)

This course offers a study of the Golden Age of Spain, Jewish Mysticism, the Enlightenment, 19th century Nationalism, Zionism, the Holocaust and the rise of Modern Israel. Students will examine how these historical phenomena shaped the modern Jewish concepts of Torah, God, Israel and ritual observance. Jewish philosophers from Maimonides to Martin Buber will be studied and students will have an opportunity to attend a local synagogue to experience Sabbath worship. Every spring.

PHIL 350 - The Stranger as a Sociological/Philosophical P

This course examines the philosophical, sociological, and literary texts that explore the critical and moral potential that strangers offer for individuals, cultures, and societies and for sociological and philosophical theory. The course will also seek to understand better structures and processes of exclusion. Prerequisites: PHIL 105 and 205

PHIL 360 - Science and Religion (3)

This course surveys the relationship between scientific and religious thought from the perspective of major developments in the history of science. Prerequisites: PHIL 105 and 205.

PHIL 365 - Topics in Science, Tech & Soc (3)

Issues and themes connected with the relationships between science, technology, and human values: e.g., the role of science and technology in society; technology and ethics; critical theory of technology; philosophy of engineering; artificial intelligence and human nature; and science as a social process. Prerequisites: PHIL 105 and 205.

PHIL 380 - Language and Argument (3)

The critical assessment of arguments and argumentative processes as found in actual social contexts and institutions. The course draws on the range of perspectives and tools available from formal and informal logic, dialectical analysis, rhetoric, linguistic philosophy, fallacy theory, and social analysis. Prerequisites: PHIL 105 & 205

PHIL 404 - Symbolic Logic (3)

This course develops a theory of valid reasoning. The logic (and semantics) of propositions, quantifiers, properties, relations and identity are covered. It also examines the concepts of consistency, logical truth, logical form, logical equivalence, validity, and related notions. The student should emerge more attuned to how deductive arguments work in actual use and able to evaluate them. Prerequisite: PHIL 105 and 205 or two mathematics courses or some combination of these.

PHIL 406 - Logic for Pre-Professionals (3)

This course is designed to provide pre-law (and other pre-professional school) students with a comprehensive treatment of modern formal and informal logic both in the area of argumentation and decision-making. Spring semester.

PHIL 407 - Reasoning: Probability & Uncertainty (3)

This course explores philosophical problems of reasoning under conditions of uncertainty, and major approaches to solving such problems. Included are discussions of concepts of probability, statistical inference, and scientific evidence. Prerequisites: PHIL 105 and 205, or two mathematics courses or some combination of these.

PHIL 408 - Advanced Symbolic Logic (3)

This course examines the meta-theory of sentential and first-order logic. The proof theory and model-theoretic semantics for a standard formal language will be developed. Included are proofs of completeness, compactness, and Loewenheim-Skolem theorems. Problems in the philosophy of logic may be raised along the way. Prerequisites: PHIL 404.

PHIL 409 - Topics in Advanced Logic (3)

This course examines some non-classical systems of logic. Examples include one or many of the following: modal, intuitionistic, paraconsistent, free, fuzzy, and multi-valued logics and their metatheories. The course may cover probability theory, computability theory, or the philosophy of logic. Such topics in the philosophy of logic include possible worlds, necessity, existence, logical consequence, logicism, and theories of conditionals. Prerequisite: PHIL 404.

PHIL 410 - Survey of Epistemology (3)

This course surveys central problems of epistemology. What is knowledge? What is justification? Do we know anything at all? Topics may include: various puzzles and paradoxes (including the lottery and surprise exam paradoxes); the problem of skepticism; foundationalism and coherentism; externalism and internalism; defeasibility; truthtracking; reliabilism; virtue epistemology; proper function; and contextualism. Prerequisites: PHIL 105 and 205.

PHIL 412 - Topics in Epistemology (3)

In this course we concentrate on an epistemological topic, such as skepticism, contextualism, virtue epistemology, or the value of knowledge. Prerequisites: PHIL 105 and 205.

PHIL 415 - Philosophy of Science Survey (3)

This course explores some of the most prominent themes in recent philosophical studies of the sciences. Students should emerge with a deeper understanding of the meaning and status of scientific research and knowledge. Readings include discussions of particular endeavors from a range of scientific disciplines. Prerequisite: PHIL 105 and 205.

PHIL 416 - Philosophy and Physics (3)

In this course we will survey the philosophical dimension of physics through its historical development, its methods, and the content of its theories. The course should be accessible to diligent students from both humanities and science backgrounds. The course's mathematical content is self-contained. PHIL 105 and 205 are prerequisites.

PHIL 417 - Topics: Philosophy of Science (3)

This course takes a close look at philosophical problems and arguments relating to a particular scientific discipline, a particular aspect of scientific research, or a particular development of an aspect of the history of science. Prerequisites: PHIL105 and PHIL205

PHIL 418 - Philosophy of the Social Sci (3)

Consideration and evaluation of the analytic, phenomenological, and Marxist approaches to the social sciences. Representative thinkers in each approach will be studied. Problems of scientific laws in social sciences, type-construction, and objectivity in the social sciences.

PHIL 421 - Topics in Metaphysics (3)

Through an examination of one or more topics in contemporary metaphysics (including but not limited to: universals; individuation of concrete particulars; propositions, facts and events; necessity and possibility; persistence through time; realism-versis-anit-realism; vagueness; free will; personal identity; material constitution). Prerequisites: PHIL 105 and 205.

PHIL 422 - Survey Philosophy of Language (3)

This course surveys classical issues in contemporary philosophy of language. Topics include: meaning; truth; reference and descriptions; names and demonstratives; propositional attitudes; modality. This introductory course presupposes no previous acquaintance with philosophy of language. It is not, however, an elementary course since philosophy of language discussions reach into other areas of philosophy, such as logic, epistemology, and metaphysics. Prerequisites: PHIL 105 and 205.

PHIL 426 - Philosophy of Mind (3)

In this course, we will survey a range of topics in the philosophy of mind, including: the mind-body problem; physicalism; dualism; mental causation; consciousness; mental representation. Prerequisites: PHIL 105 and 205.

PHIL 428 - Biology and Mind (3)

Courses in physiological psychology say little about higher-level cognitive capacities, whereas cognitive psychology courses often ignore their neural underpinnings. In contrast, Biology and Mind employs a framework that combines neurobiological and cognitive considerations. Employing this framework, we first examine visual perceptual and imaging capacities, after which we explore philosophical issues concerning the conscious, causal, and creative aspects of such cognition. Prerequisites: PHIL 105 and 205.

PHIL 430 - Survey of Ethical Theory (3)

A survey of recent ethical theory, focusing on two questions. First, what is the nature of morality? E.g., are there objective moral facts? Second, what does morality require of us? E.g., can it ever be immoral to promote the best consequences? Prerequisites: PHIL 105 and 205.

PHIL 431 - Topics in Ethics (3)

An in-depth examination of one or more topics in ethics. Topics might include: virtue ethics; metaethics; moral realism and anti-realism; well being; happiness; moral evil; moral responsibility; ethics and human nature; recent work in deontological ethics (and/or consequentialism); theories of practical reason; morality and the emotions; moral relativism; moral psychology; and God and morality. Prerequisites: PHIL 105 and 205.

PHIL 432 - Feminism and the History of Ethics (3)

An examination of classic texts in moral philosophy and their authors's writings on women, with feminist responses to each. A fundamental guiding question is to what extent do views about gender matter for moral theory. Prerequisites: PHIL 105 and PHIL 205. Familiarity with feminist work is desirable but not required.

PHIL 433 - Philosophy of Law (3)

A critical survey of the major Western conceptions on the nature of law and on the relationship between law and morality.

PHIL 434 - Game Theory and Ethics (3)

Treating game theory - the mathematical theory of individual rational choice in strategic situations - this course analyses pure conflict, static variable-sum, dynamic, repeated, and bargaining games, as well as utility theory. Applications are made in evaluating the contractarian political, economic, and moral theories of contemporary Hobbesians, Kantians, and Humeans. Prerequisites: PHIL 105 and 205.

PHIL 435 - Survey of Social and Political Philosophy (3)

This course will read and consider critically the works of selected major figures in the history of social-political philosophy. Prerequisites: PHIL 105 and 205.

PHIL 436 - Topics in Social & Political Philosophy (3)

This course considers in depth selected issues in social-political theory, such as equality, democracy, rights, critical social theory, intersubjective understanding, collective action and solidarity, and social explanation. Prerequisites: PHIL 105 and 205.

PHIL 440 - History of Ancient Greek Philosophy (3)

This course engages classical philosophical problems through close study of one or more of the main figures or issues in ancient Greek thought. Prerequisite: PHIL 105 and 205.

PHIL 450 - Medieval Philosophy (3)

This course introduces students to some of the central texts and thinkers of the medieval period (c.400-1500 a.d.). The aim of the course is to engage students in the scholarly work of reading and interpreting medieval philosophical texts and in the philosophical work of evaluating the arguments and positions such texts contain. Prerequisite: PHIL 105 and 205.

PHIL 455 - Topics in Medieval Philosophy (3)

A systematic treatment of a particular topic or figure from the Middle Ages. Potential subject matter might involve the philosophical views of a particular scholar (e.g. Augustine) or it might involve the development of thought on a general topic (e.g. free will). Prerequisites: PHIL 105 and 205.

PHIL 456 - Philosophy of Thomas Aquinas (3)

A systematic treatment of important topics in the thought of Thomas Aquinas, including theories in metaphysics, epistemology, philosophy of human nature and action, ethics, and philosophical theology. Prerequisites: PHIL 105 and 205

PHIL 460 - History of Modern Philosophy (3)

A survey of developments in Western philosophy from the seventeenth through nineteenth centuries. The course examines Descartes, Leibniz, Locke, Hume, and Kant, and may cover other figures (e.g. Spinoza, Berkeley, Hobbes, or Hegel) at the instructor's discretion.

PHIL 465 - Topics in Modern Philosophy (3)

Examines select themes and/or thinkers in the history of philosophy from the seventeenth through the nineteenth century. Topics may include a specific thinker (e.g. Descartes), a related group of thinkers (e.g. the rationalists), or a philosophical topic as discussed in the modern period (e.g. social contract theory). Prerequisites: PHIL 105 and 205.

PHIL 470 - Contemporary German Philosophy (3)

Nineteenth and twentieth century philosophical thought in Germany.

PHIL 471 - Survey Continental Philosophy (3)

This course will cover the nineteenth and early twentieth century origins of continental philosophy; the relation between the philosophies of Edmund Husserl and Martin Heidegger; and the directions continental philosophy has taken subsequently, such as existentialism, phenomenology, deconstruction, and critical theory. Prerequisites: PHIL 105 and 205.

PHIL 472 - Topics Continental Philosophy (3)

This course takes up major topics discussed within continental philosophy, such as: intentionality; phenomenological methodology; freedom; the life-world; consciousness; intersubjectivity; deconstruction; ethics; the body; death; being; temporality; and transcendental foundations. Prerequisite: PHIL 105 and 205.

PHIL 475 - Latin American Philosophy (3)

Survey of Latin American philosophy, with an emphasis on twentieth-century works. Themes include the origins of Latin American thought, the philosophical repercussions of political independence, positivism in Latin America, the question of Latin American identity, and the possibility of a distinctive Latin American philosophy. Pre-requisites: Phil 105; Phil 205.

PHIL 476 - Spanish Phil: Unamuno & Ortega (3)

Systematic analysis of two 20th century Spanish philosophers: Ortega y Gasset and Unamuno. Major themes in Ortega: fundamental reality, perspectivism, vital and historical reason, the I and the world. Major themes in Unamuno: the tragic sense of life, the polarities: life vs. death, reason vs. will; and personal immortality. Fall semester.

PHIL 480 - Topics and Movements in Contemporary Philos

Specific theme and focus of course to be determined by instructor. Course offered at Departmental discretion.

PHIL 481 - Philosophy of Feminism (3)

A critical examination of the feminist challenge to traditional conceptions of law, morality and epistemology. The philosophical and methodological assumptions underlying the feminist challenge will be explored.

PHIL 482 - Philosophy and Race (3)

A critical examination of the philosophical bases of multiculturalism; the biological and socio-cultural significance of race; varied philosophical approaches to racial identity; the epistemic and ethical dimensions of interracial interpretation and prejudice; and the questions posed about the philosophical tradition by its relationship to victims of racial prejudice. Prerequisite: PHIL 105 and 205.

PHIL 483 - Person and Action: The Philosophical Anthropol

Using the writings of Karol Wojtyla (Pope John Paul II) on the philosophy of human nature (The Acting Person) and special ethical issues (War, Labor, Sexuality, Justice), this course will suggest the outlines for a systematic philosophy based upon Thomism, phenomenology, personalism, and collectivism. Prerequisites: PHIL 105 and 205.

PHIL 484 - Catholic Social Thought (3)

This course focuses on understanding the meaning of social justice as it has developed in the Catholic intellectual tradition, especially as expressed in the social encyclicals of the last 100 years. Prerequisite: PHIL 105 and 205.

PHIL 485 - Topics in Philosophical Anthropology (3)

This course is an intensive treatment of a topic or topics within the ongoing discussion about what it means to be a human person. For example: human nature and uniqueness; immortality; embodiment; love and friendship; freedom; and other topics related to the quest to understand what it means to be human. Prerequisite: PHIL 105 and 205.

PHIL 486 - Prob in Philosophy of Religion (3)

This course consists in an in-depth examination of one or two topics in the Philosophy of Religion, broadly construed. Specific topics might include issues such as: the problem of evil; God's nature and attributes; proofs for God's existence; faith and reason; religion and morality; the meaning and nature of religion, etc. Prerequisite: PHIL 105 and 205.

PHIL 487 - Systematic Survey (3)

This course, principally for student in the College of Philosophy and Letters, serves as a "capstone course." Students write small papers on philosophy of human nature, epistemology, ethics, and philosophy of God and mutually criticize each other's papers. Finally, they produce their own full synthesis. Prerequisites: PHIL 105, 205 and permission of the instructor.

PHIL 495 - Senior Residency (0)

Required of all undergraduate philosophy majors in the semester during which they plan to graduate.

PHIL 510 - Problems in Epistemology (3)

Topics such as the meaning of truth and knowledge, and the diversity of kinds and contexts of knowing. Offered annually.

PHIL 520 - Problems in Metaphysics (3)

Topics such as substance, identity, time, space, and being. Offered annually.

PHIL 530 - Problems in Ethical Theories (3)

Questions such as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

PHIL 540 - Probs in Soc & Pol Philosophy (3)

Topics such as the state, rights, sovereignty, democracy, freedom, property, and the meaning of justice. Offered annually.

PHIL 580 - Systematic Synthesis (3)

Discussions of human nature, knowledge, ethics, and God culminate in individually formulated syntheses of students' views on the fundamental problems of philosophy. Offered annually.

PHIL 600 - Sem on Maj Philosphr in Ethics (3)

A philosopher who has made significant contributions to the field of ethics, e.g., Plato, Aristotle, Aquinas, Kant, Mill, Hare. Offered annually.

PHIL 605 - Sem on Maj Philosphr in Pol Phil (3)

A philosopher important for contributions to political philosophy such as Plato, Aristotle, Hobbes, Locke, Rousseau, Hegel, Marx. Offered annually.

PHIL 610 - Sem on Maj Philosphr in Metaphy (3)

The metaphysical views of a major figure in the area such as Plato, Aristotle, Augustine, Aquinas, Heidegger, or Whitehead are explored. Offered annually.

PHIL 615 - Sem on Maj Philosphr in Epistem (3)

The epistemological position of a major theorist, such as Descartes, Hume, Kant, Husserl, Habermas, Popper, or Peirce is examined. Offered annually.

PHIL 620 - Philosophy of Science (3)

Major figures and issues in the philosophy of science such as the nature of scientific theory, scientific objectivity, relativism in science. Offered every other year.

PHIL 622 - Advanced Logic (3)

An axiomatic survey of the first-order predicate calculus, and of first-order theories in general, terminating in proofs of Godel's theorems. Offered occasionally.

PHIL 626 - Prob in Philosophy of Religion (3)

Explores problems such as the nature of God, proofs for God's existence, divine properties, etc. Offered every other year.

PHIL 630 - Advanced Ethics (3)

Extensive examination of such questions as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

PHIL 632 - Advanced Metaphysics (3)

Thorough exploration of such topics as substance, identity, time, space, and being. Offered annually.

PHIL 634 - Advanced Epistemology (3)

Examination in depth of topics such as the meaning of truth and knowledge and the diversity of kinds and contexts of knowing. Offered annually.

PHIL 636 - Sem in Political Philosophy (3)

Exhaustive study of such topics as the state, rights, sovereignty, democracy, freedom, property, and the meaning of justice. Offered annually.

PHIL 638 - Seminar in Aesthetics (3)

Analyses of the meaning of beauty and the character of aesthetic judgments. Offered occasionally.

PHIL 640 - Ancient Philosophy (3)

An advanced level seminar in which major figures and topics in the ancient period are examined. Offered annually.

PHIL 645 - Medieval Philosophy (3)

Seminar study on a sophisticated plane of major philosophers and issues of the medieval era. Offered annually.

PHIL 650 - Modern Philosophy (3)

Major philosophers and issues of the modern period. Offered annually.

PHIL 655 - Contemporary Philosophy (3)

Major philosophers and issues in contemporary philosophy. Offered annually.

PHIL 680 - Prospectus (3-6)

A survey of the area of proposed dissertation research. Research questions are posed. Interest in the topic is focused. Culminates in a written prospectus and its oral defense before the potential dissertation committee. Offered every semester.

Physics (PHYS)**PHYS 101 - Physics and the World Around Us (3)**

Basic concepts of physics emphasizing the meaning of modern developments of the science. High school mathematics required. Fulfills three credit hours of the general science requirement. For non-science majors; does not apply toward the area of concentration with a major in physics.

PHYS 105 - Intro to Physics of Human Body (3)

Discusses the physics of certain aspects of the working of the human body. Fulfills three credit hours of the general science requirement. Primarily for non-science major in physics.

PHYS 111 - Introduction to Physics (1)

Broad survey of physics. Introduction to computational and laboratory methods. Enrollment limited to students majoring in physics.

PHYS 113 - Introduction to Astronomy (1-3)

Modern concepts of the physical nature of the astronomical universe. Fulfills three credit hours of the general science requirement. For non-science majors; does not apply toward the area of concentration with a major in physics.

PHYS 115 - Einstein's Universe (3)

The life and science of Albert Einstein and his multi-faceted impact on modern physics and society is explored. Primarily for non-science majors, may be taken as allied elective by physics majors. Preq: High School Algebra or equivalent.

PHYS 122 - General Physics I (0-4)

Prerequisite: High school algebra. Lectures, demonstrations, and laboratory in mechanics and heat. For School of Allied Health Professions students only. Fall semester.

PHYS 124 - General Physics II (0-4)

Lectures, demonstrations and laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. For School of Allied Health Professions students only. Spring semester. Prerequisite: PHYS122.

PHYS 131 - Physics I (3)

Lectures and demonstrations in mechanics and heat. PHYS132 should be taken concurrently with PHYS131. Fall semester. Prerequisite: High school algebra and trigonometry.

PHYS 132 - Physics I Laboratory (1)

Should be taken concurrently with PHYS131. Laboratory in mechanics and heat. Fall semester.

PHYS 133 - Physics II (3)

Lectures and demonstrations in electricity, magnetism, wave motion, sound, optics and modern physics. PHYS134 should be taken concurrently with PHYS133. Prerequisite: PHYS131. Spring semester.

PHYS 134 - Physics II Laboratory (1)

Laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. Should be taken concurrently with PHYS133. Spring semester.

PHYS 135 - Aviation Physics (0-4)

Units and measurement; vectors; force and motion; energy; momentum; gravitation; forces of drag and lift; rotational motion; equilibrium of forces during flight; harmonic motion; selected topics in fluid mechanics and thermodynamics; electricity; electrical energy; magnetism; electromagnetic induction; linear and wave optics; atmospheric optics; laboratory experiments relating to the topics above. Fall and Spring semesters. Prerequisite: Knowledge of high school algebra and trigonometry.

PHYS 161 - Engineering Physics I (3)

Calculus and vector approaches to study of kinematics, statics and dynamics; work and energy; impulse and momentum; circular motion and gravity; rotational motion and equilibrium; vibrations, waves and sound; heat; fluid mechanics; elasticity. Prerequisite: MATH-142.

PHYS 162 - Engineering Physics I Laboratory (1)

Laboratory experiments to illustrate and supplement material in PHYS161. Corequisite: PHYS161 Fall and Spring semesters.

PHYS 163 - Engineering Physics II (3)

Calculus and vector approaches to study of electric charges, forces, fields and potentials; electric current; magnetic forces and fields; electromagnetic waves; light and geometrical optics; mirrors and lenses. Prerequisite: MATH153, PHYS161 and PHYS162. Corequisite: PHYS164. Fall and Spring semesters.

PHYS 164 - Engineering Physics II Laboratory (1)

Laboratory experiments to illustrate and supplement material in PHYS163. Prerequisite: MATH152, PHYS161 and PHYS162. Corequisite: PHYS163. Fall and Spring semesters.

PHYS 261 - Modern Physics (3)

Lectures three hours per week. At the level of Beiser's Concepts of Modern Physics. Prerequisite: One year General Physics. Prerequisite or Corequisite: MATH143. Spring semester.

PHYS 262 - Modern Physics Lab (1)

Prerequisite: One year General Physics. Prerequisite or Corequisite: MATH143 & PHYS261. Spring semester.

PHYS 275 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing. Offered every semester.

PHYS 311 - Classical Mechanics (3)

The elementary theory of the statics, kinematics and dynamics of particles and rigid bodies. At the level of Symon's Mechanics. Prerequisite: MATH244

PHYS 312 - Advanced Classical Mechanics (3)

Continuation of PHYS311, continuum mechanics and introduction to the analytical methods of Lagrange and Hamilton. Prerequisite: PHYS311.

PHYS 331 - Optics (3)

Lectures and demonstrations three hours per week. Physical and geometrical optics One year General Physics, MATH 244

PHYS 332 - Optics Laboratory (1)

The fundamental experiments of modern optics are repeated in this course. Three hours per week. It is to be taken concurrently with PHYS331.

PHYS 341 - Thermodynamics and Statistical Mechanics (3)

At the level of Schroeder's Thermal Physics. Prerequisite PHYS163 & MATH244 Corequisite: MATH355.

PHYS 351 - Analog & Digital Electronics (0-4)

Lecture-laboratory six hours per week. Fundamentals of digital circuits with applications to computers. Operational amplifiers. Interfacing of computers with experimental equipment for data collection and control. One year General Physics, MATH 244

PHYS 375 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: PHYS275. Offered every semester.

PHYS 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing. Offered every semester.

PHYS 386 - Physics Research I (0)

First of three course sequence required for B.S. degree in Physics.

PHYS 401 - Topics in Modern Physics (3)

Survey of kinetic theory, atomic, molecular, solid state, nuclear, and particle physics. Prerequisite: PHYS-261 and MATH-355 or equivalent.

PHYS 403 - Mathematical Methods in Physics with elemen

The course introduces a variety of powerful mathematical techniques of great utility to physics. Topics covered include differential and integral equations, complex analysis, Green's functions, and variational methods, including Lagrangian and Hamiltonian formalisms. Mathematical methods are illustrated with examples from modern research topics.

Prerequisites: PHYS 261 and MATH 370.

PHYS 411 - Intro to Biophysics (3)

This course covers the basic concepts in biophysics at the fluid, cellular, macromolecular, and molecular levels, including diffusion processes, self-assembly, cooperative transitions, ion pumping, basic ideas of ζ molecular machines ζ , and passage of action potentials in neurons. Prerequisite: PHYS 341 Thermodynamics and Statistical Mechanics or Instructor Permission.

PHYS 421 - Electricity & Magnetism I (3)

Lecture three hours per week. At the level of Griffiths, Introduction to Electrodynamics. Spring semester, Prerequisite: MATH355

PHYS 422 - Electricity & Magnetism II (3)

Lecture three hours per week. Electromagnetic Fields at an advanced level, a continuation of PHYS421. Prerequisite: PHYS421. Fall semester.

PHYS 441 - General Relativity (3)

This course is an introduction to Einstein's Theory of General Relativity. The special theory of relativity is reviewed, tensor analysis is introduced, and the general theory is approached through an examination of curved spacetime and geodesic trajectories. Applications including black holes and cosmology are explored. Pre-req: PHYS 261, MATH 355

PHYS 461 - Quantum Mechanics (3)

At the level of Griffiths, Introduction to the Quantum Mechanics. Prerequisites: PHYS 261 and PHYS 311, MATH 355.

PHYS 462 - Application of Quantum Mechncis (3)

Further development of Quantum Mechanics with applications to statistical mechanics, quantum optics, atomic, nuclear, particle and solid state physics. Spring semester. Prerequisite: PHYS 461.

PHYS 475 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisite: PHYS375. Offered every semester.

PHYS 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisite: PHYS376 or Senior standing. Offered every semester.

PHYS 487 - Physics Research II (0)

Second of three course sequence required for B.S. degree in Physics.

PHYS 488 - Senior Inquiry: Research Project (3)

Third of three course sequence required for B.S. degree in Physics (3 Cr), or satisfies senior inquiry requirement for B.A. degree in Physics (0-3 Cr).

PHYS 498 - Advanced Independent Study (1-3)

Prior permission of sponsoring professor and chairperson required.

PHYS 501 - Nanoscience and Nanofabrication Frontiers (3)

Nanoscale Science and Nanotechnology applications have become increasingly important for industry and manufacturing. This course is designed to introduce concepts and take a detailed look at how to study, understand and present interdisciplinary science. The course will be devoted to several topics in Nanoscale physics, Nanochemistry, Nanomaterials, Nanofabrication and Nanolithography.

PHYS 503 - Mathematical Methods in Physics (3)

This course introduces a variety of powerful mathematical techniques of great utility to physics. Topics covered include differential and integral equations, complex analysis, Green's functions, and variational methods, including Lagrangian and Hamiltonian formalism of classical mechanics. Mathematical methods are illustrated with examples from electrodynamics, statistical, quantum, and classical mechanics.

Philosophy & Letters (PLJ)**PLJ 487 - Systematic Synthesis (3)**

This course, principally for students in the College of Philosophy and Letters, serves as a "capstone course." Students write small papers on philosophy of human nature, epistemology, ethics, and philosophy of God and mutually criticize each other's papers. Finally, they produce their own full synthesis. Prerequisites: Phil 105, 205, and permission of the instructor.

PLJ 499 - Integration Seminar (1-3)

Integration, application, and deepening of paired courses in philosophy and theology. Restricted to Jesuits and students in the College of Philosophy and Letters.

Pre-Law Studies (PLS)**PLS 100 - Introduction to Law (3)**

The purpose of the course is to provide students an introduction to the law and legal principles. The structure of the court system, civil litigation and methods of alternative dispute resolution will be examined. Elements of the following areas of substantive law: torts, contracts, property, trusts and estates, corporations, family law, and criminal law and procedure will be examined.

PLS 200 - Intro Legal Research & Writing (3)

This course has two main objectives (1) to introduce students to the basics of legal research and writing and (2) to introduce students to the fundamentals of legal reasoning and analysis. Students will be required to complete a series of research and writing exercises and a final legal analysis paper.

PLS 210 - Introduction to Legal Analysis (3)

This course is a much more in-depth exploration of the process of legal analysis. Students will engage in case briefing, statutory and regulatory analysis, and consideration of secondary sources. Several in-depth writing assignments are required.

PLS 220 - Law: Service Learning (0-3)

This course offers exposure to a variety of contemporary legal and policy issues as they intersect with race, ethnicity, gender, socioeconomic status, and other underrepresented classifications. The course will focus on issues that affect diverse populations regionally, across the country, and internationally. Classes will include discussions, role playing, and other interactive activities designed to improve understanding of the course material. Students will be evaluated on multimedia reflections, online and class participation, individual and group research and presentations.

PLS 250 - The Anatomy of the Lawsuit (2)

Students will study the fundamental principles of a civil jury trial from its inception through the trial and post-trial phases by following one case. The course will teach basic civil practice procedure as well as the relationship between the judicial system, attorneys, and parties in a civil cause of action. Students will develop a basic understanding of trial advocacy and its place in the American system of justice.

PLS 293 - Special Topics (1-3)

Pre-Law Studies topics course, content varies by section and semester.

PLS 310 - Introduction to Trial Advocacy (2)

This course teaches students how to prepare a legal case for a jury trial. Students learn the basic building blocks of a jury trial, the development of trial strategy, and the use of evidence at trial. The course focuses on advocacy techniques and the application of those techniques to the court setting. In conjunction with this course, students are required to simultaneously enroll in PLS320 (Introduction to Trial Advocacy Lab) where students will use the techniques in a practical setting as members of the undergraduate mock trial teams.

PLS 320 - Intro to Trial Advocacy Lab (0-2)

Students apply jury trial techniques learned in PLS 310 (Introduction to Trial Advocacy). Students are introduced to, and participate in, mock trial competitions sponsored by the American Mock Trial Association as members of the undergraduate mock trial teams representing Saint Louis University. Students act as both attorneys and witnesses in the mock trial setting to further their understanding of the jury trial process.

PLS 340 - Trial Advocacy Practicum Lab (0-2)

Students explore trial advocacy at an advanced level by participating in mock trial competitions sponsored by the American Mock Trial Association as both witnesses and attorneys. Students enrolling in this course must first complete PLS 310 (Introduction to Trial Advocacy) and PLS 320 (Introduction to Trial Advocacy Lab) or receive instructor permission.

PLS 350 - Introduction to Environmental Law (3)

This course will provide an overview of environmental law. The course will address the following environmental laws: common law environmental remedies; National Environmental Policy Act; the Clean Air Act; the Water Pollution Act; Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Endangered Species Act; Toxic Substances Control Act; and the Federal Insecticide, Fungicide, and Rodenticide Act. The students will be taught the basic provisions of these laws and how to identify when factual situations trigger the application, requirements, and restriction of these laws.

PLS 375 - Issues in Health Law (3)

This course provides the opportunity to explore basic law as it applies to health-related issues and the health-care community. Special emphasis will be given to those laws that directly affect health-care businesses and care delivery such as the Health Insurance Portability and Accountability Act (HIPAA), the American Recovery and Reinvestment Act (ARRA), the Genetic Information Non-Discrimination Act (GINA), and the Americans with Disabilities Act (ADA). The student will also be introduced to the concepts of medical ethics and will explore the interplay between law and major ethical issues in health care. This is a rotating course that will address various areas of law. Possible courses include Sports Law and Race, Gender and Justice. This course will not substitute for MGT 218.

PLS 390 - Intro to Appellate Advocacy (1-3)

This course introduces students to the role of appellate courts in the American justice system. Students learn and apply the basic elements of appellate argument including brief writing and oral advocacy. Students use a case problem to explore written and oral advocacy techniques in the court of appeals. Students prepare and present an oral argument at the end of the semester based upon the case problem.

PLS 400 - Comparative Legal Systems (3)

This course will build on the student's understanding of the American system of law. This course will broaden student's perspective of legal systems beyond their region. The student will also learn more about their own jurisdiction within the context of this global system. We will offer two different sections of this course which we will alternate. One section will focus on religious law. The other section will focus on a comparative analysis of nation-state's laws.

PLS 405 - Foundations of Law (3)

This course is open to Pre-Law Scholars. Pre-Law students who have a GPA of 3.6 or higher can petition the course instructor for inclusion in the course. This is a seminar conducted by faculty of the School of Law. A final paper and class participation are major determinants of the grade.

PLS 410 - Legal Internship (1-6)

Interns work in private legal service agency and federal, local, and state judicial systems. In selecting their internships, students are directed by the Pre-Law program and the Political Science department. Ideal for students interested in a legal career. Students MUST have secured their internship before enrolling in this course. If the student has any questions, please contact the Pre-Law program.

Political Science (POLS)**POLS 150 - Introduction to Comparative Politics (3)**

This course introduces students to the logic, method, and theoretical approaches of comparative politics. It examines the institutions of government in various kinds of political systems around the world, particularly liberal democratic systems in advanced industrial countries, postcommunist regimes, and new democracies in developing countries. It also investigates the process of political change, particularly modernization, democratization, globalization, state-building, and pressures on welfare state.

POLS 151 - Politics of Developing World (3)

This course is an introduction to the domestic politics of developing countries in Africa, Asia, Eastern Europe, and Latin America. Topics include democracy and authoritarianism, economic development, political conflict, the role of political institutions, and political culture.

POLS 160 - Introduction to International Politics (3-4)

Role of power, ethics, law, public opinion, effectiveness, of various techniques of international relations; diplomacy, propaganda, subversion. Crucial problems. Proliferation of nuclear weapons, revolutionary warfare, hunger. How should we respond to the challenge?

POLS 170 - Foundations of Political Theory (3)

This course introduces students to political theory through competing answers to such questions such "What is the difference between brute force and legitimate authority?" or "What are 'rights' and where do they come from?" Thinkers regularly studied include Plato, Aristotle, Hobbes, Locke and Rousseau. Reserved for freshmen and sophomores.

POLS 201 - Ethics and Politics (3)

This course challenges students to explore the relationship between moral values and political choices. Focusing on contemporary political issues, problems, and policies, we examine how different political philosophies, including Catholic social justice principles, provide different frameworks for judging the consequences of our political choices.

POLS 210 - The American Constitution (3)

This course explores basic themes in the American Constitution's popular sovereignty, separation of powers, and federalism; and the historical struggles between various government actors over the allocation of political power in the American constitutional system from the Constitutional Convention in 1789 to the recent conflict over terrorism and state power.

POLS 212 - The American Congress (3)

This course examines the lawmaking in the U.S. Congress through a semester-long simulation. Students explore concepts such as representation, legislative process, and group decision making.

POLS 214 - The American Presidency (3)

An examination of the institution of the presidency, and the ways the President marshals his political resources to provide leadership to American society.

POLS 215 - Black Politics (3)

This course explores the dynamics of race and ethnicity in American political life. How has race shaped American political life? What role do political institutions play in constructing and maintaining racial categories? Can we use these institutions to overcome racial boundaries? Fulfills the A&S Diversity in the U.S. requirement.

POLS 216 - Campaigns and Elections (3)

How age, sex, religion, occupation, education, ethnicity, group memberships, etc., explain why individuals do or do not participate in electoral activities, mainly voting and campaigning. Factors determining partisan and ideological direction of such activity; significance of elections and their outcomes for the individual and the system.

POLS 220 - American State & Local Government (3)

Government and administration of states and their subdivisions; states constitutional position; federal-state, federal-city, state-city relationships.

POLS 221 - Civic Renewal: Service Learning and Commun

Focuses on the Civic Renewal movement and academic and practical insights about citizens' participation in their communities. Topics include: racial/ethnic alienation; loss of efficacy to corporate lobbyists, political strategies, and media personalities; enhancing democratic participation. Service learning project investigates complexities of civic renewal through the eyes of the justice system.

POLS 222 - Urban Politics (3)

This course offers an overview of the politics of American cities. It examines the economic, social, and political interaction of different individuals and institutions in an urban environment, provides basic knowledge of American cities. We further examine the interaction and conflict between cities and suburban areas.

POLS 230 - Public Administration (3)

Theoretical and practical field of public administration. Focus on: 1. the development of public administration as an academic field; 2. organizational theory and society; 3. administrative principles; 4. public administration and public affairs; 5. future challenges in public administration.

POLS 232 - U.S. Public Policy (3)

This course will serve as an introduction to the U.S. public policy process including the questions of how values, institutions and political actors shape policy outcomes. Enrollment requires Intro to American Government (POLS 110) or permission of the instructor.

POLS 251 - West European Politics (3)

Comparative study of political and governmental institutions and policy processes of France, Germany, England.

POLS 252 - Introduction to African Politics (3)

Study of governments and political processes in Africa. Examines salient themes such as the nature of African traditional heritage; the colonial experience; nationalism and independence; the challenge of nation-building; African political parties; the role of the military and contributions of different theories to the understanding of African politics.

POLS 253 - Soviet and Post Soviet Politics (3)

This course uses the experience of the Soviet Union and Russia to understand change in political and economic systems, from collapse of existing governments to the revolutionary reconstruction of society to growing autocracy. Past developments are used to illuminate political and economic changes occurring since the collapse of communism.

POLS 254 - Ethnicity and Internal War (3)

This course investigates conflicts within existing states, especially conflicts that appear to be based in the primary collective identity and cultural and personal features of individuals. It examines conflicts in Yugoslavia, Northern Ireland, and South Africa, and in other areas of the world. Fulfills the A&S core Cultural Diversity requirement.

POLS 255 - Political Systems of the Sub-Sahara (3)

Examines governmental institutions and political processes. Emphasis is on traditional political systems, colonialism and the African experience, rise of nationalism, single-party systems, military regimes, and competitive party systems. The simple formulation of these themes presupposes comparisons among some of the many cultures of Africa

POLS 256 - The Politics of Asia (3)

Course examines the three waves of: 1. Asia's traditional order and both its collapse and persistence in the face of the Western imperial onslaught, 2. The development of Asian nationalism out of this colonial legacy and 3. The subsequent clash between Marxist revolution and liberal democracy in Asia's quest for modernization.

POLS 257 - Introduction to Latin American Politics (3)

This course is intended to be a multi-disciplinary introduction to Latin America. It examines the cultural factors that provide a unique context in which Latin American nations develop and analyzes both the challenges and the opportunities for economic and political development in the region. The course concludes with an examination of four country case studies.

POLS 258 - Politics of Mexico (3)

Course focuses on the dynamics of Mexican politics from independence to the present. It examines issues of economic development, revolution, authoritarianism and democracy, and the role of civil society. In addition the course addresses US-Mexico relations and the impact of the Mexican diaspora in the US on Mexican politics.

POLS 260 - Introduction to International Political Econom

Explores the interaction of economic and politics in global affairs by examining Realist, Liberalist, and Marxist approaches. Special emphasis is placed on the political and economic dimensions of the postwar international monetary, financial, and trading systems. Topics include, globalization, foreign debt, multinationals, international development, and regional economic organizations.

POLS 261 - Introduction to Diplomacy (3)

An exploration of diplomatic method and of its contribution to the conduct of international relations. Nature and characteristics of diplomacy. The negotiation process. Diplomatic immunities. Different types of diplomacy and their essential traits.

POLS 264 - International Terrorism (3)

Terrorism as a major problem of world affairs; identifies different types of terrorism and analyzes their complex causes; examines policies and techniques used to combat terrorism.

POLS 265 - War & Peace in the Middle East (3)

Analysis of the major issues of Middle East politics and of their effects on the course of international relations. Examination of the foreign policies of all the states of the region in their historical context. Discussion of current trends.

POLS 266 - Middle East/International Pol (3)

Analysis of the major issues of Middle East politics and of their effects on the course of international relations. Examination of the foreign policies of all the states of the region in their historical context. Discussion of current trends.

POLS 270 - Issues in Political Philosophy (3)

Course introduces students to the subfield of political theory by examining issues in the history of political thought - such as the idea of democracy; or of freedom; or the relationship between individuals and the state - through close reading of texts. Not open to students who have taken POLS 170.

POLS 282 - American Foreign Policy (3)

Assessment of extent of formal and informal influence within the decision-making process exerted by governmental and non-governmental agencies on current U.S. foreign policy. (Offered occasionally.)

POLS 300 - Methods in Political Science (4)

Behaviorist-traditionalist dichotomy, the nature of science, application of scientific methods, quantification of political phenomena, function of theory and theory building, surveys and computers.

POLS 302 - Methods: Social Movements (3)

This course uses the study of social movements to explore a variety of social science research approaches. By the end of the semester, students should be better able to conceive and conduct independent research projects, to think critically about social knowledge, and to understand major methodological debates in Political Science.

POLS 309 - Aldermanic Internship (1-6)

Interns serve in offices of members of the Board of Aldermen of the City of St. Louis as openings become available. Interns are in a position to observe important aspects of the day-to-day operation of the government of a large city.

POLS 310 - Judicial Politics (3)

Organization and procedures of American federal and state courts. Factors affecting judges' rulings and interpretation of law. Topics may include: politics of judicial selection, case studies of major decisions or social issues, and scope of judicial authority to implement social change.

POLS 313 - Civil Liberties and Civil Rights (3)

This course surveys the various constitutional protections that may be employed by individuals against the state under the U.S. Constitution, the long struggle for racial equality in America, and the application of equal protection principles to other protected classes. Fulfills the A&S Diversity in the U.S. requirement.

POLS 314 - Public Opinion and Mass Communication (3)

Major media and processes through which political ideas are communicated; nature, techniques, effects of propaganda and other forms of political communication; relationship of public opinions to policy-making. Offered occasionally.

POLS 315 - American Presidential Elections (3)

Presidential nominating process and campaign; backgrounds of presidential candidates, interplay among candidates, issues, parties, interest groups, media and political strategies; considers presidential election reforms. Offered occasionally.

POLS 318 - Federal Government Internship (1-6)

Interns serve in federal agencies or offices of elected officials, in Washington, DC or locally, and gain experience and insight into the functioning of the federal system. Students keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 319 - Campaign Practicum (1-6)

This course examines theories of leadership to incorporate gender issues and ethics in reviewing the call to responsible citizenship and the obligation to build just social institutions. Students will be encouraged to develop skills in reflection on their own commitment to create a just society. Prerequisite: Second semester sophomore standing. Permission of instructor required. See faculty member before accepting internship.

POLS 320 - Women and Political Leadership (3)

This course examines theories of leadership to incorporate gender issues and ethics in reviewing the call to responsible citizenship and obligation to build just social institutions. Students will be encouraged to develop skills in reflection on their own commitment to create a just society. Prerequisite: Second semester sophomore standing.

POLS 321 - Shelter in America (3)

Using the 1949 Housing Act as a starting point, this course examines the history and the successes and failures-- of the federal government's involvement in sheltering all Americans. Topics include public housing, affordable rental housing, homelessness, Fannie Mae and Freddie Mac, neighborhood rehabilitation, and community development.

POLS 325 - American Politics and Film (3)

Politics and Film considers the American movie industry's changing perspectives on U.S. political institutions and processes. Award winning cinema classics are analyzed both as art and as political communication within the context of their historical settings. Students research a particular work in terms of context, art, and political communication.

POLS 329 - State or Local Govt Internship (1-6)

Interns serve in state or local agencies or other government offices located in Jefferson City or in the St. Louis area. Students keep journals and write an essay relating their experiences to assigned readings or course work. At least one previous course in American Politics preferred.

POLS 331 - Administrative Law (3)

Legal issues concerning public administrative agencies, their relationships with other governmental institutions, private corporations and the general public. Sovereign and limited immunity, primary jurisdiction and exhaustion, standing and ripeness; estoppel; discretionary justice.

POLS 332 - Politics, Policy & Inequality (3)

In this course we examine how economic inequality influences American politics and policy and, in turn, how these policies shape economic inequality. Prerequisite is Introduction to American Politics (POLS 110) or permission of instructor.

POLS 339 - Administrative Internship (1-6)

Students who have satisfied course prerequisites in public administration employ classroom administrative theory while working in a public administration agency under the direction of experienced administrators. Student keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 341 - Government Decision-Making: Organization Be

Application of organization behavior theory to the decision-making process of governmental administrative agencies; impact of organization on governmental policies.

POLS 349 - Administrative Internship (1-6)

Students who have satisfied course prerequisites in public administration employ classroom administrative theory while working in a public administration agency under the direction of experienced administrators. Students keep journals and write an essay relating their experiences to assigned readings or course work.

POLS 350 - The Asian Miracles (3)

This course explores the politics and processes of economic development in the four Asian "Tigers" -- Singapore, Hong Kong, South Korea, and Taiwan. It examines competing explanations for their successful performance and emphasizes the role of government, the sociopolitical causes and consequences of development, and linkages with the international economy.

POLS 351 - Rebirth of Democracy (3)

This course examines the nature of democracy and the recent trend toward democratic reform around the world, but especially in Eastern and Central Europe and Latin America. The course also examines the theoretical and practical interconnections between political and economic reform and between democratic and market systems.

POLS 352 - Communism, Capitalism and Social Justice (3)

This course examines the Marxist critique of capitalism, focusing on theoretical and practical solutions to the problems of politics in Marxist thinking. Students will investigate why real-world Communist systems largely failed to achieve the goals to which they were dedicated and will examine alternative models of social and economic organization.

POLS 353 - Comparative Revolutions (3)

This course is a theoretical and historical examination of the nature of revolutions, their origins, progress and results. Special focus is given to the Bolshevik, Chinese, Nicaraguan, and Iranian revolutions, and to the collapse of communist regimes in Eastern Europe.

POLS 354 - Latin American Social Movements (3)

This course focuses on organized social movements in Latin America with a combination of theoretical analysis and case studies of specific social movements. Issues covered in the course include class and labor movements, gender and sexuality, race and ethnicity, and the globalization of social movements.

POLS 356 - Political Process - Latin America (0-3)

In-depth survey of the main political, social and economic issues and processes in Latin America for the last twenty years. Course analyzes current trends and the impact of globalization, changing gender roles, and new social movements of peasants and indigenous peoples. U.S-Latin American relations considered in historical perspective.

POLS 357 - Third World Development (3)

This course focuses broadly on the challenge of development in the Third World, and especially on the political dimensions of the process of development. It analyzes critical variables that influence the development path of Third World nations, with particular emphasis on culture, economics, colonialism, and democratization. The second part of this course explores the dynamics of developing countries by examining cases from Latin America, Africa, and Asia.

POLS 360 - Problems of Globalization (3)

This course explores the political, economic, and cultural dimensions of globalization. It examines the following key question: What causes globalization? What are its effects? How can countries cope with these effects? Other topics examined include, state autonomy, the democratic deficit, the IMF and WTO, equity, cultural imperialism and social justice.

POLS 361 - Multilateral Diplomacy (3)

Characteristics of multilateral diplomacy. How it is carried out; methods and techniques. Multilateral negotiations. In what ways multilateral diplomacy differs from bilateral diplomacy. Various forms of multilateral diplomacy and what they contribute to the management of international problems.

POLS 362 - International Organization and the Managemen

Nature of the international legal system, application of international law; sources, major legal issues and how the system copes with them; state territory; nationality; jurisdiction; international agreements; state responsibility; international claims.

POLS 363 - Global and Transnational Feminism (3)

This course offers an advanced survey of the field of theory and political activism referred to as transnational feminism. Students are introduced to the history of feminist work in international political and economic forums (e.g. the UN and World Bank), as well as to on-going feminist efforts in the context of current social movements around the globe.

POLS 364 - International Law (3)

The course examines the nature of the international legal system, how the law is made and applied, and the challenges presented by global society. It studies the main components of this body of law such as jurisdiction, the law of the sea, law of treaties, settlement of disputes and the laws of war.

POLS 365 - International Relations of Africa (3)

Examines the major goals and objectives which African states project and endeavor to attain in the international political and economic system. Impact of the international system on African states.

POLS 367 - Pol Devlpmnt in Contemp Spain (3)

A century of political reshuffling. Study of historical factors in the political development of Spain and their consequences in contemporary politics. Focus on the Second Republic, the Spanish Civil War, Franco, the Church and religion, the establishment of the new middle classes, the reign of King Juan Carlos I, the Spanish Armed Forces, and the emergence of democratic Spain.

POLS 368 - Foreign Service Internship (0-6)

Interns serve in agencies or nongovernmental organizations concerned with the conduct of foreign relations abroad, in Washington or in St. Louis. Students keep journals and write an essay relating their experiences to assigned readings or course work. At least one previous course in International Relations preferred.

POLS 369 - Overseas Fieldwork (1-6)

Students work at overseas agency or organization. Students keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 371 - Ancient and Medieval Classics in Political Tho

This course traces the development of Western political thought from its beginnings in the Greek city-state to end of the Middle Ages. Thinkers addressed may include: Plato, Aristotle, Cicero, Augustine, Aquinas. Alternate years

POLS 372 - Renaissance and Modern Political Theories (3)

This course is a survey of modern political thought. Issues addressed include the rise of humanism, individualism, and liberalism; changing interpretations of natural law; constitutionalism and checking of absolutism; the Enlightenment. Among writers considered are Hobbes, Locke, Rousseau, Hegel, Marx, Nietzsche, and Mill. Alternate years.

POLS 374 - Capitalism, Racism, Patriarchy: Theorizing St

This advanced course in political theory teaches students to analyze systemic relations of power. We first address the idea of structural rather than individual power; then examine the logics of capitalism, racism and patriarchy; then consider the whole that they jointly comprise. Prereq: One theory course or permission of instructor.

POLS 375 - Modern Democratic State (3)

Philosophy and theory of democratic government in the context of institutions and processes of nineteenth and twentieth century Western democratic systems; fundamental tenets of popular participation in the decision-making process.

POLS 376 - Feminist Theory:Justice (3)

Feminist Theory: Gender Justice examines the various ways of understanding gender by looking at a variety of theories and philosophical perspectives within feminist thought, especially as it is formed by political philosophy including liberal, radical, Marxist and postmodern feminism. Sub-field in political science is Political Thought.

POLS 377 - Postmodern Poitics: Sex/Race/Class (3)

This course will examine postmodern thought with a focus on poststructuralism, semiotics, and deconstruction. The course will critically interrogate these approaches and examine the politics of the construction of self, communities, cosmologies, understandings of agency and responsibility, and issues of social justice by focusing on class, race, and sex.

POLS 378 - Disability Theory and Politics (3)

This course applies insights from disability studies to Western political thought in order to examine the political nature of disability and the disabling nature of politics. In this course, students are exposed to varying definitions, cultural representations, social justice issues, human rights concerns, and bioethical debates related to disability.

POLS 379 - Topics in Political Theory (3)

This course focuses in depth on selected thinkers and themes in political theory. Topics vary from semester to semester. Sample topics include Kant and Contemporary Theory, Theories of Political Action, Marx and Capitalism.

POLS 380 - The Structure of Poverty: Globally and Locally

This course examines the theoretical and empirical literature on the social, political, and economic structures that produce and perpetuate cycles of poverty. Students will get a first hand view of the structure of poverty as they engage in service learning projects at the well-established, nonprofit organization, Queen of Peace Center.

POLS 381 - Latin American-U.S. Relations (3)

This course examines relations between the United States and the countries of Latin America. It focuses on both the history of US-Latin America relations as well as current issues. Topics range from economic relations and trade, security, drug trafficking, democracy and human rights, and the role of international organizations.

POLS 385 - Feminism in Action (3)

This course addresses feminist activism on a wide range of issues (including domestic violence, rape, education and health care), and in a variety of forms (including writing, theater, public protests and coalition building). It gives students the opportunity to study the scholarship of activism and to participate in feminist action.

POLS 388 - Legal Internship (1-6)

Interns work in law firms, in the legal department of large corporations, or in public agencies involved in the judicial process. In selecting their internships, Political Science majors are guided by the faculty member directing this program. Ideal for students interested in a legal career.

POLS 396 - Women Leaders Internship (1-6)

Interns work with women in leadership positions in governmental or nongovernmental civic organizations, or collaborate on research projects related to women leaders in the public sector. Students keep journals and write an essay relating their experiences to assigned readings on gender justice and the role of women in public policy.

POLS 397 - Metropolitan Environment (3)

An interdisciplinary course presenting the political, social, economic, educational, and religious dimensions of metropolitan areas. Socio-demographic trends and methods for analyzing neighborhoods will be discussed. The political and governmental system with an emphasis on its state and local manifestations will be presented. These topics will be explored against the background of cultural diversity which exists in society.

POLS 399 - Research Internship (1-6)

Students work with Political Science professor on professor's research. Instructor's permission required.

POLS 411 - American Political Institutions (3)

Course examines design and contemporary function of America's political institutions, including the three constitutionally-defined branches of government, parties and interest groups. Historical and contemporary readings on organization of Congress and the Executive; mobilization of societal interests for political action; how representative and responsive these institutions are; whether they produce a good policy. Prerequisite: a previous American politics course.

POLS 412 - Civil Rights: A Moot Court Seminar (3)

This course examines civil rights law in the U.S. since mid-20th century. Students serve as lawyers and justices and retry Supreme Court cases on school desegregation, the Civil Rights Act of 1964, affirmative action, school busing, sex discrimination, and sexual orientation discrimination. Permission of instructor required.

POLS 414 - Political Parties (3)

This course examines the role of political parties and interest groups in the US representative process, elections and governance.

POLS 416 - Advanced Topics: American Presidency (3)

Studies the executive policy-making process, recruitment processes; Office of the President; bureaucracy's role, effect of presidential style and personality on policy processes. Prerequisite: a previous American politics course.

POLS 417 - Electoral Politics (3)

An analysis of the dynamics of party alignment, realignment, and of nomination and election to public office in American national government.

POLS 425 - Urban Classics (3)

In-depth consideration of major authors and publications about various aspects of urban life, which literature has also contributed to the growth of urban affairs as a discipline. Offered alternate Fall semester.

POLS 430 - Administration of National Policy (3)

How responsibly public officials perform in implementing public policies. Principles of accountability in democratic government; public interest theory; achievements and failures of bureaucracy, regulatory problems; discretionary power of public administrators; how to check administrative abuses. Offered occasionally.

POLS 435 - Intro to Geographic Info System (3)

Focus on Geographic Information Systems analysis of the politics and legal issues involved in selected functional categories of urban public policy. Offered Fall semester.

POLS 450 - Russian Political Culture (3)

This course examines the fundamental political beliefs and values of Russians, focusing on whether Russians today have the right attitudes to sustain democratic institutions. To understand what people think, we examine various kinds of sources: works of fiction, political philosophies, historical analyses, first-hand accounts, ethnographies, and quantitative public opinion studies.

POLS 451 - Seminar: Democratization (3)

This course examines the process of developing new democratic systems, with particular focus on Eastern and Central Europe, theories of democratic transition, and interconnections between democratic and market systems. Prerequisite: Junior-level standing and a previous course in comparative politics.

POLS 452 - Political Change (3)

This course examines major theoretical approaches to understanding and explaining periods of political change, focusing mostly on Latin America. Attention is given to both long-term and immediate causal processes and their consequences. Topics include revolution, democratization, social mobilization, and protest. Pre-requisite: junior-level standing and a previous course in comparative politics.

POLS 454 - The European Union: Politics and Political Ec

Reviews history of European integration and stages of EU's development. Addresses practical and theoretical aspects of governance, member-states, political economy issues, the implications of EU enlargement, and the US-EU relationship. Includes a compulsory Brussels trip to visit EU institutions. Prerequisites: Senior standing & ECON 190.

POLS 461 - International Relations: Theory and Practice (3)

Course addresses multiple IR theories. Part I critiques IR theories. Part II analyzes contemporary political, economic and cultural conflicts. Part III applies theories to conflict resolution. Students learn to evaluate conflicts, apply theory and predict solutions. Prerequisites: Senior standing & at least one intro-level course in each required subfield.

POLS 462 - Global Diplomacy (3)

This course examines diplomacy used by international actors to address the problems confronting international society. Problems addressed include peace and security; the maintenance of order in the world; economic stability; sustainable development; and the protection of human rights, the environment, and global social justice. Pre-requisite: prior IR class.

POLS 464 - Problems of International Terrorism (3)

This course provides an in-depth examination of selected problems related to global terrorism and the struggle against it. Pre-requisites: junior level standing and a previous course in International Relations.

POLS 465 - Use of Force in International Relations (3)

Role and limitations of military power in international politics. Military power as an instrument of foreign and military policy and its influence on the behavior and relations of nations. Alternatives to the continued reliance on the use of military power within the international system.

POLS 466 - Asymmetric Warfare (3)

This course examines the lessons of Western intervention in Vietnam and other insurgencies during the Cold War with the view of assessing their relevance to the two Gulf Wars and other interventions of the 9/11 Era. Prerequisite: Research Methods or consent of instructor.

POLS 468 - Foreign Service Internship (0-6)

Interns serve abroad or in Washington in agencies concerned with the conduct of foreign relations. They may also work for nongovernmental organizations (some of them located in St. Louis) concerned with diplomatic relations or foreign policy.

POLS 469 - Theories of World Politics (3)

An advanced field seminar of the theories of world politics. Students will analyze key writings in the basics of the field, borrowings from other disciplines, and contemporary critiques. Coverage includes realism, liberalism, political economy, political psychology, international security, marxism, critical studies, constructivism, and feminism. Prerequisite: POLS 160, or equivalent.

POLS 473 - Seminar: Contemporary Political Ideologies (3)

Development of modern political ideologies from mid-nineteenth century to present. Course focuses on ideas and social-political contexts associated with ideologies such as liberalism, Marxism, feminism, green politics, and liberation theology. Students consider the ramifications of viewing the world through particular ideological lenses. Prerequisite: junior-level standing or permission of instructor.

POLS 474 - Marx's CAPITAL (3)

Marx's CAPITAL is a seminal work of social philosophy and political economy, providing the foundation for any number of fields of 20th century inquiry—including critical theory and cultural theory. The upper-level seminar consists of a very close reading of Volume 1. Previous coursework in political theory subfield (as per department guidelines), or permission of instructor.

POLS 475 - American Political Thought (3)

From 1765 to the present. Eighteenth century consensus, nationalism versus sectionalism, nineteenth century reform movements, pragmatism and progressivism, current liberalism and conservatism.

POLS 480 - Theories of Constitutional Interpretation (3)

Course explores justification for the judicial review in the U.S. Why do unelected judges in America possess the power to invalidate democratically-enacted laws? Students read historical, legal, philosophical, and empirical works and develop their own ideas about the role of constitutional courts. Prerequisite: a previous American politics course.

POLS 482 - Senior Inquiry (3)

Undergraduate seminar which rotates among departmental faculty members. Topics change each semester. Emphasis is placed on a research term paper.

POLS 484 - Inquiry: Politics of Health (3)

Course offers students political and analytical insights into understanding health policy issues in the U.S. and developing world. It examines how power relations and values affect choices on health issues. Of particular interest in this course is the AIDS pandemic in Africa. Prerequisite: Methods or permission of instructor

POLS 485 - Inquiry: Politics of Health (3)

This course examines the gap between the "is" and the "ought" of political systems, and portrays the politics of the future as emerging from human choice based on core values. Students will then construct their own future systems based on their core values. Prerequisite: Methods or permission of the instructor.

POLS 486 - Political Thought of Asia (3)

An examination of the political thought of Asia that has emerged from three eras: the traditional pre-Western order, the onslaught of European colonialism, and the independent Asia that arose after World War II. The focus will be on China, Japan, and India. Prerequisites: POLS 170 and a course on Asia.

POLS 490 - Research Design (3)

An independent research project under a project director and a faculty committee in any of the subfields of Political Science. A requirement for students in the Political Science Honors Thesis Program, which is designed for students with a strong record in political science courses who want to apply to graduate school or top law schools. Permission of the Honors Thesis Program director and project director required. Counts as one 400-level seminar.

POLS 491 - Political Science Honors Thesis (3)

An undergraduate thesis written in any of the subfields of Political Science under the direction of a Political Science faculty member. For members of the Political Science honors Program only. A requirement for this program. Permission from the Department Chair and Thesis Director required.

POLS 495 - Senior Residency (0)

Required of all graduating seniors in their final semester.

POLS 497 - Political Science Internship (0-6)

Student work in political science relevant area, such as on research projects with professor, with research governmental agencies, legislators, or legal institutions. For advanced students. Permission of instructor required.

POLS 498 - Advanced Independent Study (1-6)

Students examine a topic of their own choosing and write a substantial paper under the direction of a professor. Permission of the instructor is required.

POLS 502 - Advanced Topics in Research Methods (3)

This course focuses on the application of qualitative and quantitative methods in political science. Topics examined in this course include survey design, experimental design, focus groups, field research, case study analysis, interview techniques, analysis of variance, linear regression, and in introduction to non-linear models.

POLS 510 - Seminar in American Politics (3)

This is a graduate seminar in American Politics. It is designed to provide an overview of the literature and theoretical concepts associated with political science as it relates to American government and politics. The topics we cover include campaigns and elections, mass behavior, public opinion, institutions of government, and policymaking.

POLS 511 - American Political Institutions (3)

Course examines design and contemporary function of America's political institutions, including the three constitutionally-defined branches of government, parties and interest groups. Historical and contemporary readings on organization of Congress and the Executive; mobilization of societal interests for political action; how representative and responsive these institutions are; whether they produce good policy.

POLS 513 - American Race Relations (3)

The theme of this course is the transformed nature of racism and its effect on racial inequality. The course examines the degree to which racism and privilege are systemic, institutionalized features of U.S. society, focusing on the structural, ideology, and public-policy factors that created and sustained patterns of racial inequality.

POLS 514 - Political Parties (3)

Through the Constitution is largely silent about them, political parties and interest groups perform indispensable functions in modern democracies. Despite their importance, these institutions are often misunderstood by the public and there is a deep ambivalence toward these political organizations. In this course we will pursue a detailed understanding of parties and organized interests in America — how and why parties and organized interests form, what they do, and what we might want them to do.

POLS 515 - Gender and American Politics (3)

This course examines the ways in which women shape, and are shaped by, American politics and public policy. We explore the history, approaches, findings and controversy in research about women in American politics and political science from a range of theoretical and methodological approaches. Crosslisted as WGST 515.

POLS 517 - Seminar in Electoral Politics (3)

An analysis of the dynamics of party alignment, realignment, and of nomination and election to public office in American government systems.

POLS 518 - Graduate Internship (1-3)

Interns work in Government agencies/offices, nonprofit organizations, or interest groups under the guidance of a preceptor from the sponsoring organization and under a course director from the political science department who develop a graduate level professional experience following department internship guidelines. Every semester.

POLS 520 - Seminar in American State Politics (3)

This course will focus on the comparative study of U.S. State politics. The topics we cover include campaigns and elections, mass behavior, public opinion, institutions of government, and policy making. The overarching theme of the course will focus on the process of representation in the American states.

POLS 530 - Administrative Law (3)

Administrative law is the study of the regulatory behavior of our governmental agencies from a legal perspective. Specifically, the focus is on how public administrators must uphold procedural due process while conducting regulatory business. Topics include: legal-administrative relations, rule making, adjudication, administrative discretion, judicial review of agency actions, and administrative search and seizures.

POLS 532 - Environmental Politics and Policy-Making (3)

This course investigates why governments make environmental laws; the competing values that influence environmental policy; and the institutions, processes and political actors that shape the creation and implementation of environmental laws in the U.S. We also consider the U.S. role in global efforts to address climate change.

POLS 550 - Russian Political Culture (3)

This course examines the fundamental political beliefs and values of Russians, focusing on whether Russians today have the right attitudes to sustain democratic institutions. To understand what people think, we examine various kinds of sources: works of fiction, political philosophies, historical analyses, first-hand accounts, ethnographies, and quantitative public opinion studies.

POLS 551 - Democratization (3)

This course examines the nature of democracy and the recent trend toward democratic reform, focusing especially on the experiences of Central Europe and Latin America. The course also examines the relationship between political and economic reform and between democratic and market systems.

POLS 552 - Political Change (3)

This course is designed to familiarize students with major theoretical approaches to understanding and explaining periods of political change. Political change involves understanding both the long-term causal processes and their consequences and the more immediate causes and consequences of political change.

POLS 555 - Politics of Economic Development (3)

This course undertakes an advanced study of the development of the modern state and of how states interact with various other forms of political community as well as with markets and other states. Students examine how ongoing processes of economic globalization have rendered the concept of *the state* problematic.

POLS 562 - Global Diplomacy (3)

The course is concerned with the kind of diplomacy that enables international actors to address the problems confronting international society: problems addressed include peace and security; the maintenance of order in the world; economic stability; sustainable development; and the protection of human rights, the environment, and global social justice.

POLS 564 - Problems of International Terrorism (3)

This course provides an in-depth examination of selected problems related to global terrorism and the struggle against it.

POLS 566 - Asymmetric Warfare (3)

This course examines the lessons of Western intervention in Vietnam and other insurgencies during the Cold War with the view of assessing their relevance to the two Gulf Wars and other interventions of the 9/11 Era.

POLS 569 - Theories of World Politics (3)

An advanced field seminar of the theories of world politics. Students will analyze key writings in the basics of the field, borrowings from other disciplines, and contemporary critiques. Coverage includes realism, liberalism, political economy, political psychology, international security, marxism, critical studies, constructivism, and feminism.

POLS 570 - Politics, Rhetoric and Culture (3)

This course examines the relationship between politics and rhetoric. Does communication reflect political reality or create it? What are the political effects of different rhetorical styles? We will examine classical writings on rhetoric as well as contemporary democratic and rhetorical theory.

POLS 571 - Citizenship & Social Differenc (3)

This course will examine several aspects of the embodied nature of citizenship. Looking specifically at the interplay between citizenship (as an identity, legal status, and practice) and socially constructed identities predicated upon perceived bodily differences (gender, race, and disability), we will examine the following preliminary questions: Historically, how and why has the American state denied women, people of color, and people with disabilities citizenship status? Should civil, social, and political rights, which are contingent upon citizenship status, be universal rights, or group-differentiated rights? How should we expand/amend conventional definitions of citizenship and political participation to account for the lived experiences of women, people of color, and people with disabilities? How do social constructed and maintained inequalities- via sexism, racism, and ableism- influence the practice of citizenship? Overall, this course will attempt to integrate the insights from feminist theory, critical race theory, and disability studies into an analysis of what it means to be an American citizen.

POLS 573 - Contemp Political Ideologies (3)

Development of modern political ideologies from mid-nineteenth century to present. Course focuses on ideas and social-political contexts associated with ideologies such as liberalism, Marxism, feminism, green politics, and liberation theology. Students consider the ramifications of viewing the world through particular ideological lenses.

POLS 576 - Feminist Theory (3)

Begins with the history of feminist scholarship from the pre-modern period and 19th century and proceeds to examine liberal, socialist/Marxist, radical, postmodern, and global feminism. Critical reviews of each theory will include issues of race/ethnicity, class, sexuality, and spirituality. Offered each fall semester.

POLS 577 - Feminist Epistemologies (3)

Examination of how feminist scholarship has recontextualized epistemological issues in the philosophy of science, eco-feminism, hermeneutics, mysticism, and phenomenology. Students will write and present papers to demonstrate their integration of feminist theory and feminist epistemological issues within their own major fields of study. Offered each spring semester.

POLS 578 - Graduate Internship (1-3)

Interns work in government agencies/offices, nonprofit organizations, or interest groups under the guidance of a preceptor from the sponsoring organization and under a course director from the political science department who develop a graduate level professional experience following department internship guidelines. Every Semester.

POLS 580 - Theories of Constitutional Interpretation (3)

Course explores justification for the judicial review in the U.S. Why, in a democratic system, do unelected judges possess the power to invalidate laws approved through the democratic process? Students read historical, legal, philosophical, and empirical works and develop their own ideas about the role of constitutional courts. Prerequisite: one American politics course

POLS 584 - Politics of Health (3)

Course offers students political and analytical insights into the understanding of health policy issues in the U.S. and developing world. It examines how power relations and values affect choices on health issues. Of particular interest in this course is the AIDS pandemic in Africa. Prerequisite: Methods or Permission of the instructor.

POLS 585 - Politics of the Future (3)

This course examines the gap between the "is" and the "ought" of political systems, and portrays the politics of the future as emerging from human choice based on core values. Students will then construct their own future systems based on their core values. Prerequisite: Methods or permission of the instructor.

POLS 586 - Political Thought of Asia (3)

An examination of the political thought of Asia that has emerged from three eras: the traditional pre-Western order, the onslaught of European colonialism, and the independent Asia that arose after World War II. The focus will be on China, Japan, and India.

POLS 588 - Graduate Capstone Internship (3-6)

Interns work in government agencies/offices, non profit organizations, or interest groups under similar conditions to POLS 518. In addition, interns prepare either a Policy Recommendation Paper, formal Grant Proposal, or Professional Quality Paper as specified in department capstone guidelines. Every Semester.

POLS 595 - Study for Special Exams (0)

Required of all graduating MA students in their final semester.

POLS 598 - Graduate Independent Study (1-3)

Students embark on a course of individual study on a course not available in the regular curriculum in an area of faculty expertise. Schedule and workload are to be determined by the faculty instructor in accordance with the mutually agreed upon pedagogical objectives of the course. Every Semester.

POLS 599 - Thesis Research (0-6)

For students completing an MA thesis. Permission of the instructor and the director of graduate studies is required.

POLS 670 - American Political Thought (3)

This course focuses on selected ideas, issues, and institutions that have been central to the U.S. Constitution and the practice of American constitutionalism, from the founding era to the present. Readings emphasize seminal works in American political thought, which are supplemented by historical accounts, illustrative literature, and contemporary analyses. Offered every year.

Pre-Professional Health Std (PPHS)**PPHS 100 - Foundations of Medicine (1)**

This course provides a broad survey of premedical studies, the preparation for medical school admission and the medical profession. The class will address the specifics of medical school admission requirements and processes, academic coursework at the undergraduate and professional school level, the training of the physician and typical routines of a medical practice. The sequence of events from undergraduate coursework to becoming a licensed physician will be discussed. The class will examine how this sequence plays an integral part in the development of a capable physician.

PPHS 102 - Intro to Helping Professions (2)

This course explores career opportunities in the helping professions. Eleven professions are reviewed including clinical laboratory science, communication sciences and disorders, education, health information management, nuclear medicine technology, nursing, nutrition and dietetics, occupational science, physical therapy, psychology and social work. Students receive presentations from faculty in each of these areas and engage in a number of assignments to increase their knowledge of those professions in which they are most interested.

PPHS 105 - Freshmen Sem - Medical Scholar (0)

This course is required (and is limited to) freshman Medical Scholars. A variety of activities are planned with some lectures, hands-on activities, and networking with the SLU School of Medicine students and faculty.

PPHS 193 - Foundations of Medicine (1-2)

This course provides a broad survey of the premedical studies, the preparation for medical school admission and the medical profession. Throughout the course, the class will address the major topics of medical school admission requirements and processes, the academic coursework at both the undergraduate and professional levels, the training of the physician and the typical routines of a medical practice. The course follows the chronological sequence a traditional student will follow to become a licensed medical doctor. The class will look at these chronological events and examine how they play an integral part into the development of a capable physician.

PPHS 200 - Introduction to Medical Research Class (2)

The Introduction to Medical Research Class is a lecture-based course designed to introduce undergraduate students to clinical research in an academic medical setting via lectures and group work. Throughout the course, the class will address a range of topics including medical ethics, research modalities and tools in evaluating studies. Attending emergency medicine faculty from Saint Louis University Hospital will teach the course. The class will look at how clinical research and the application of evidence-based medicine is used to change treatment standards in patient care.

PPHS 201 - Intro to Medical Research-Lab (2)

The Medical Research Lab will allow students to apply the skills learned during the Introduction to Medical Research Class. In the Medical Research Lab class students will work under the auspices of a primary investigator and possibly medical student teaching assistants to participate in a clinical research project. The project will primarily involve working in shifts in the emergency department to identify participants who would be eligible for active studies, consent these participants (if applicable), and to collect data from these participants. Other duties may include data/spreadsheet management, data entry, and analyzing information.

PPHS 424 - Geriatric Medicine Internship (3)

This course is designed to introduce undergraduate student to the practice of geriatric medicine in a residential setting. Throughout this course students will participate in a variety of activities designed to foster greater awareness of the challenges and rewards of geriatric medicine. The internship consists of three hours per week volunteering, shadowing and actively engaging with residents at Beauvais Manor on the Park, and one hour per week participating in a class discussion. Students will be supervised by attending faculty from Saint Louis University's School of Medicine, Department of Internal Medicine (Division of Gerontology and Geriatric Medicine) and supervising staff from Beauvais Manor.

Psychology (PSY)**PSY 101 - General Psychology (3)**

Provides a basic and general knowledge of the theoretical, scientific, and conceptual foundations of psychology, including biological, cognitive, emotional, developmental, cultural and social aspects. Includes key concepts and principles, methods for collecting and evaluation evidence, and application of psychological knowledge. This course is a prerequisite for all upper division courses.

PSY 154 - The World of Work: Billiken Bridge to Success (

This course is designed to introduce you to the working world. Individual and group projects will be used to help you learn about industries, the global economy, and how they affect one another. Various careers and self-reflection activities will assist you in your educational and career goals.

PSY 194 - Career Decision Making (1)

Assists students who are deciding on a major or career. This course is designed to help students gain an understanding of self and world of work and to become familiar with career-related resources. This course does not fulfill Social Science requirement.

PSY 205 - Foundations of Research Methods and Statistic

Fosters understanding of psychology as a science. Integrates introduction to basic designs, hypothesis generation, ethics, and writing conventions with computation of descriptive statistics and conceptual overview of inferential techniques. Preparation for: reading empirical articles, applied and advanced courses, working on faculty research, senior inquiry research projects. Team exercises in lab.

PSY 290 - Intercultural Sem & Practicum (1-3)

Theoretical and practical introduction to intercultural awareness. Discussion of readings and issues in weekly seminars. Consideration of cultural conditioning, values, and assumptions of participants and of international students in student-led conversation groups and extracurricular activities. Meets new core curricular requirement in cultural diversity.

PSY 306 - Psychologica Res Methds/Stats (0-4)

Aims at a practicing and theoretical understanding of statistics and basic research methods, and at developing computer literacy. Application of both descriptive and inferential statistics within correlational and experimental designs. Computer literacy includes data entry, simple statistical packages; laboratory. Offered once a year.

PSY 308 - Laboratory Techniques in Psych (1-3)

Research methods in various areas of experimental psychology.

PSY 310 - Brain, Mind & Society (3)

The course examines core features of the human mind that render it wholly different from the mental faculties of even our closest genetic relatives. The biological origins of the brain, the shaping of the mind by culture, and the human capacity for morality and religiosity are among the topics addressed.

PSY 312 - Cognitive Psychology (3)

Discussion of higher-order cognitive processes, including memory functioning, reasoning, thinking, problem-solving, language production and comprehension.

PSY 313 - Physiological Psychology (3)

Neural basis of behavior, including sensory and motor systems, ingestive behaviors, sleep, aggression, learning, and psychological disorders.

PSY 316 - Learning & Memory (3)

Covers theoretical and applied perspectives of learning and memory. Topics include habituation, classical and instrumental conditioning, memory components and processes, and underlying neural mechanisms. Integrates these topics with their application to daily functioning, with special emphasis on attention and motivation.

PSY 321 - Developmental Psych: Child (3)

Introduction to theory, research methods and empirical findings in the field of developmental psychology. Special emphasis given to normative psychological development from conception to puberty, including aspects of cognitive, language, social, emotional, and personality development.

PSY 323 - Developmental Psych: Adol (3)

Introduction to theory and research in the developmental psychology of adolescence. Emphasis given to the diversity of normative psychological development from puberty to adulthood, including aspects of physical, cognitive, social, emotional, and identity development.

PSY 330 - Social Psychology (3)

Introduction to the scientific study of social behavior focusing on how people relate to, think about, and influence each other. Topics include attitude formation and change, social cognition, conformity, group decision-making, aggression, altruism, prejudice, and interpersonal attraction and relationships.

PSY 331 - Personality Theory (3)

Dominant personality theories of Freud, Jung, Adler, Skinner, Maslow, Rogers, Kelly, etc., are presented within a historical and contemporary context. Emphasis on application of theory to personal situations through small group discussions and student log.

PSY 341 - Psychology of Work: Introduction to Industrial

This course will provide students with an overview of the field of organizational behavior and assist them in developing self knowledge useful to their pursuits in organizational settings. Primary areas of concentration include issues related to individuals, groups/teams, organizations and countries/cultures. Prerequisites: PSY 100, PSY 205 Encouraged.

PSY 345 - Counseling for Helping Profess (3)

Combines theory and practice to examine topics affecting helpers and those seeking assistance, including cultural, legal, and ethical issues confronting professional helpers. Emphasis on establishing rapport, attending, and other basic counseling skills. Some advanced skills and interventions are presented to facilitate effective helping.

PSY 401 - Adv. Res Meth & Stats (0-4)

Course combines statistics, research design, research methods and actual research experience. Inferential statistics including probability theory, sampling distributions, t-test, correlation, factorial analysis of variance and non-parametric. Methodologies including quasi-experiments and special control procedures. Students do at least one research project including analysis of results and write-up in American Psychological Association format: laboratory. Offered once a year.

PSY 411 - Sensation & Perception (3)

A survey of psychophysics, sensory systems; object, space, and event perception.

PSY 413 - Cognitive Neuroscience (3)

The purpose of this course is to develop an advanced understanding of the biological bases of mental activity. Course includes a focus on how the brain and mind are involved in perception, attention, learning and memory, language, movement, emotions, decision-making, and consciousness. Pre-requisites: either PSY 312 or PSY 313.

PSY 414 - Psychopharmacology (3)

Behavior and physiological effects of drugs which alter behavior through their effects on neurotransmitters; these drugs include alcohol, nicotine, caffeine, tranquilizers, stimulants, depressants, narcotics, hallucinogens, and marijuana.

PSY 415 - Science of Sleep (3)

Survey course on the principles and practices of sleep research. Both the applied and basic research areas are emphasized. Basic topics include physiological and anatomical dimensions, circadian rhythms, drugs and dreaming. The applied topics emphasize clinical sleep disorders.

PSY 426 - Psychology of Women (3)

The study of what it means to be female, biologically and psychologically. Topics include the development of sex roles, gender role stereotyping and its consequences, traditional and recent psychological theories and their application to women and girls.

PSY 427 - Cross-Cultural Psychology (3)

In this course, we explore how the processes of human development - from infancy to old age - vary across the globe. Within the cultures we examine the lives of infants, children, adolescents, adults, and older adults, with a special focus on family.

PSY 432 - Close Relationships (3)

Theory and research in nonverbal communication (facial expression, personal space kinesics, etc): impression formation; interpersonal attraction (friendship choice and mate selection); processes of friendship and enmity.

PSY 433 - Psychology of Oppression (3)

The course teaches students how to understand the mechanisms that undermine the appreciation of multiculturalism and other forms of diversity in society. The perspective emphasizes how socially constructed definitions of various groups are used to distinguish sameness and difference among people. Topics include micro- and macro-level theories of oppression, the importance of ideology in oppressive systems, and theories of social change and liberation.

PSY 434 - African American Psychology (3)

The course reviews some of the theoretical perspectives in the psychological study of African Americans, examines some of the biases in past research, reviews current research in the field, and applies current theory and research to other areas of psychology (clinical, organizational, etc.)

PSY 435 - Health Psychology (3)

The course is an overview of health psychology from a social psychological perspective. Topics include: Theories of health behavior, stress and coping, personality, social support, smoking, alcohol use, weight control, chronic illness, health care utilization and adherence, and designing persuasive interventions.

PSY 439 - Abnormal Psychology (3)

A survey of mental disorders, their signs, symptoms, underlying causes and treatment, with more emphasis on signs and symptoms.

PSY 441 - Organizational Psychology (3)

Interaction among person, environmental and organizational factors as they relate to such topics as personnel selection, motivation, job satisfaction, management, leadership, etc. in profit-making organizations.

PSY 442 - Psycholog Tests & Measuremnts (3)

Theory and techniques in the measurement of intelligence, personality special aptitudes and interests. Emphasis on test construction, evaluation and interpretation.

PSY 446 - Marital Rel, Sexuality & Paren (3)

Explores the interrelationships among marital relations, sexuality, and parenting integrated by the theme of psychological communication. Format is lecture/discussion.

PSY 447 - Small Group Behavior (3)

Experiential learning course: from learning basic human communications skills to applying these skills in small groups. Effective small groups functioning from the viewpoint of systems theory. Topics: participative management, decision making, problem solving, organizational change, etc.

PSY 448 - Psychology and Law (3)

Examines laws, the legal system, and legal processes from the perspective of principles in psychology, as well as the use and effect of psychology in the formation and implementation of laws; and examines the influence of law on social science research and medical/mental health professions.

PSY 472 - Studies: Developmental (3)

Prerequisites: PSY 101 for all upper division courses. PSY 321 is strongly recommended for course.

PSY 479 - Practicum (1-6)

Requires volunteering (e.g., 135 hours earns 3 credits) at a human services agency or other psychology-related organization arranged by the student. Student keeps a journal or writes final reflection for a supervising faculty member recruited by the student. Does not satisfy senior inquiry requirement. Majors only.

PSY 480 - Undergraduate Research (1-6)

Outside-the-classroom research activity done under faculty supervision.

PSY 486 - History of Psychology Capstone (3)

Covers the history of modern experimental and applied psychology, from psychology's origins in philosophy to contemporary developments. Includes the beginnings of scientific psychology, early theoretical systems, the social context of developments in psychology, and the contributions of ethnic minorities and women. May be used to satisfy senior inquiry requirement. Majors only.

PSY 487 - Capstone Practicum Project (3)

Requires 90 hours volunteering at a human services agency or other psychology-related organization arranged by the student who meets concurrently with a supervising faculty member, keeps a journal, and writes a related 10-page paper. May be used to satisfy senior inquiry requirement. Majors only.

PSY 488 - Capstone Research Project (3)

Student arranges with a supervising faculty member to carry out an individual research project, including study design, IRB approval, data collection and analysis, and APA-style report. May be used to satisfy senior inquiry requirement. Majors only.

PSY 490 - Critical Thinking about Psych (3)

Designed to integrate and apply students' knowledge of psychology. Working in teams, students review the psychological literature and conduct interviews to propose critically informed and empirically grounded action plans addressing a psychology-related topic in the news. May be used to satisfy inquiry requirement. Majors only.

PSY 501 - Seminar in Research (0)

An introduction to faculty research activities for first-year graduate students in psychology.

PSY 503 - Clinical Assessment I (3)

Theory, research, and concepts in clinical assessment, with emphasis on cognitive abilities.

PSY 504 - Clinical Assessment II (3)

Theory, research and concepts in assessment of personality and behavioral disorders for individuals and groups.

PSY 508 - Adv Quantitative Rsch Methods (3)

This course is designed to strengthen and extend students' foundational knowledge of the general principles involved in doing quantitative research in psychology. Topics covered include the measurement of behavior and mental processes (e.g., operational definitions, modalities of measurement (self-report, observational, physiological), measurement reliability and validity); research settings (laboratory, field); research designs (experimental, correlational, quasi-experimental); types of experimental control; internal and external validity; sampling; power and design sensitivity; analysis, interpretation, and reporting of data within various research designs; and research ethics. (Offered every Fall semester). Prerequisite: graduate status in psychology or permission of instructor.

PSY 509 - Psychometric Theory (3)

This course provides an overview of the concepts and issues central to an understanding of psychological measurement. Topics for the course include an overview of basic statistical concepts, scaling, item and test construction, scoring algorithms, item analysis, reliability and generalizability theory and application, validity, prediction and classification, analysis of test dimensionality including factor analysis, test refinement and revision, evaluation of test bias, and item response theory. Emphasis is placed on application of theoretical foundations to practical problems in the aforementioned areas. Following completion of the course, students should be able to critically examine the psychometric properties of tests and write proposals pertinent to test development, refinement, and evaluation. (Offered every Spring semester). Prerequisite: graduate status in psychology or permission of instructor

PSY 510 - History of Psychology (3)

Survey of major events, people and ideas in the history of psychology, primarily since 1860. Emphasis on original sources and historical research.

PSY 511 - Perception (3)

Neural mechanisms of visual and auditory sensation and perception; psychophysics, spatial, pattern, object, color, motion and depth perception.

PSY 512 - Memory & Cognition (3)

This course is designed to provide an overview of basic cognitive skills and abilities, focusing primarily on memory function. Contemporary theories and modes of memory and language are discussed.

PSY 513 - Adv Physiological Psychology (3)

Physiological and neural correlates of normal animal and human behavior with emphasis on a broad spectrum of areas within physiological psychology.

PSY 516 - Learning Theory (3)

Contemporary psychological theories in the field of learning, with an emphasis on their empirical bases of operant and respondent conditioning and their application to behavior analysis.

PSY 522 - Lifespan Dev Psychology (3)

Psychopathology, assessment, and intervention clinical coursework and permission of the instructor. Survey of cognitive, social, and emotional growth across the lifespan and cultural forces that influence development at different stages. Clinical implication (psychopathology, assessment, intervention) are addressed for each developmental stage.

PSY 524 - Adv Developmental Psychology (3)

Selective introduction to theories, methodologies, ethics, and empirical findings of developmental psychology, with a focus on the early stages of the lifespan and an emphasis on individual diversity and the social factors and social contexts that affect development.

PSY 525 - Cognitive Development (3)

This seminar is designed to selectively introduce students to major theories, concepts and recent empirical research in the field of cognitive development. The textbook will provide students with broad overviews of classic and contemporary topics and issues in the field. Assigned readings from the course pack will permit more in-depth examination of current noteworthy topics and will be the primary focus of class discussion.

PSY 527 - Personality Assessment (3)

Selected tests, measurements, and projective devices designed for use in evaluation and remediation of emotional and learning deficits; both theory and practice.

PSY 530 - Adv. Social Psychology (3)

Contemporary and classic theory and research in social psychology. Topics include attitude formation and change, social influence, social cognition, attribution, self and social identity, prejudice and stigma, intergroup conflict, interpersonal attraction and relationships, altruism, and aggression.

PSY 531 - Adv. Personality Theory (3)

Examines in depth a variety of personality theories comparing and contrasting them on a number of construction, substance and validation issues.

PSY 541 - Industrial Psychology (3)

Personnel selection, job analysis, criterion determination and combination, predictive and concurrent validity applied to selection, pre-employment selection, procedures, performance appraisal, job satisfaction, etc. Methodology stressed.

PSY 546 - Adv. Organizational Psychology (3)

Examination of organizational theory with special emphasis on systems theory. Topics include history subsystems, growth, role theory and organizational models cover organizational behavior such as motivation, leadership and change.

PSY 547 - Psychology of Small Groups (3)

Theory, research and practice in small group behavior. Use of laboratory experiential learning methodologies.

PSY 552 - Psychopathology (3)

Survey of psychopathology, primarily emphasizing etiology with secondary emphasis on taxonomy.

PSY 561 - Clinical Interventions (3)

Studies of theoretical, empirical, and conceptual foundations of clinical interventions, including outcome, client, and therapist variables and processes.

PSY 567 - Behavior Therapy (3)

Concepts and applications of models derived from learning theory and oriented toward changing behavior, including systematic desensitization, implosive therapy, covert sensitization and covert reinforcement, assertion training, aversion therapies, token economics, and contingency contracting.

PSY 578 - Program Evaluation (3)

Social action research theory and strategy; emphasis on current methods and models of program evaluation.

PSY 579 - Applied Univariate Statistics in Behavioral Science

This course is designed to strengthen student's foundational knowledge of popular applications of statistical analytic techniques in behavioral science, with emphasis on classical univariate inferential techniques. Topics covered include a review of probability theory and sampling distributions, data evaluation, correlation, multiple regression, analysis of variance (ANOVA), and categorical data analysis and other nonparametric approaches. Emphasis of the course will be placed on conceptual knowledge, application, and interpretation of the results.

PSY 580 - Clinical Assessment Practicum I (0)

Supervised clinical experience in the administration, scoring and interpretation of individual tests of intelligence and academic achievement.

PSY 581 - Clinical Practicum I (0-3)

Supervised clinical experience in psychological assessment and intervention with individuals, couples, and families representing a variety of problems and developmental stages (i.e., children, adolescents, adults).

PSY 582 - Clinical Practicum II (0-3)

Supervised clinical experience in psychological assessment and intervention with individuals, couples, and families representing a variety of problems and developmental stages (i.e., children, adolescents, adults).

PSY 583 - Clinical Assessment Practicum II (0)

Supervised clinical experience in the administration, scoring, and interpretation of objective and projective psychological tests.

PSY 584 - PRC: General-Experimental Psyc (0-6)

Supervised experience in the integrating of the content of experimental psychology with its applications.

PSY 585 - PRC: Applied Psychology (0-6)

Supervised experience in the application of social action research theory and strategy.

PSY 586 - Clinical Research I (0-3)

Presents an overview of current research in psychology, particularly clinical psychology, with focus on research ethics, conceptualization, method and statistics.

PSY 587 - Clinical Research II (0-3)

A focused presentation of an area of current research in psychology, particularly clinical psychology. Special emphasis is placed on the implementation of research projects from data collection through analysis, to written completion and publication.

PSY 588 - Practicum: Psychopathology (0-3)

Supervised diagnostic clinical practicum.

PSY 593 - Analysis: Var & Exp Design (3)

Graduate Status in Psychology or instructor permission.

PSY 600 - Teaching of Psychology (3)

Reading, lectures and supervised experience designed to prepare the student for teaching psychology at the college level.

PSY 602 - Test Theory & Construction (3)

Test theory as it involves scaling, reliability, validity and item statistics. Practice in the construction and evaluation of psychological tests.

PSY 603 - Human Diversity (1-3)

Delivered in three, one-semester-hour modules. Module One introduces issues regarding identity and oppression; exposure to ideas is goal. Module Two experientially focuses on teaching and research; integration of issues. Module Three examined the issues in practice and has a clinical-/professional-practice emphasis.

PSY 604 - Topics: Assessment (3)

Survey of selected measures and research.

PSY 605 - Advanced Multivariate Analysis (3)

Theory and application of factor analysis and other multivariate techniques.

PSY 606 - Topics: Quantitative Psych (3)

Selected topics from the quantitative aspects of psychology, such as information theory, decision theory, Bayesian analysis, computer applications, etc.

PSY 616 - Topics: Learning Theory (3)

Selected current theoretical issues in learning theory.

PSY 619 - Topics: Experimental Psych (3)

Advanced seminar in newly developing areas of experimental psychology.

PSY 629 - Topics: Developmental Psych (3)

Advanced seminar in selected areas of developmental psychology.

PSY 639 - Social Psychology (3)

Advanced topics and current research/theory in specialized areas of social psychology, including attitudes, self and social identity, social identity, social cognition, health, relationships, and prejudice.

PSY 649 - Topics: Organizational Psychol (3)

Advanced seminars in organizational change and development, organizational intervention, training and development., and newly developing areas in organizational psychology.

PSY 650 - Applied Multivariable and Multivariate Statistics

This course will survey multivariable and multivariate techniques commonly used in behavioral science. Topics covered include multiple regression, MANOVA, logistic regression, time-to-event analysis, canonical correlation, principal components analysis, factor analysis, and discriminant function analysis, with a brief introduction to structural equation modeling. Emphasis of the course will be placed on conceptual knowledge, application, and interpretation of the results. (Offered every Spring semester). Prerequisite: PSY 594 or equivalent

PSY 652 - Clinical Child Psychology (3)

Study of diagnostic and assessment processes and approaches with children and adolescents. Equal emphasis on recent literature pertaining to research and to practice.

PSY 659 - Topics: Psychopathology (3)

Advanced seminar on newly developing areas of research and theory in psychopathology.

PSY 660 - Structural Equations Modeling (3)

This is an introductory structural equation modeling course that will cover path analysis, confirmatory factor analysis, and analysis of full structural equation models using latent variables. Emphasis is placed on application, interpretation, and presentation of results using computer software programs.

PSY 663 - Cnsltatn Skills: Theory/Practi (3)

Theories, types and goals of consultation as well as relevant research associated with each type of consultation. Primary focus on training in systems consultation and its evaluation.

PSY 665 - Theories of Child Psychotherap (3)

Study of diverse approaches to intervention with children and adolescents. Equal emphasis on recent literature pertaining to research and to practice.

PSY 666 - Psychodynamic Psychotherapy (3)

Theoretical and empirical literature pertaining to psychodynamic orientations in various modes of psychotherapy.

PSY 668 - Neuropsychological Assessmnt (3)

An overview of the specialty area of neuropsychology. Emphasis is placed on understanding functional neuroanatomy and disorders with known neurobehavioral sequelae. Several approaches to assessment of neuropsychological functioning are reviewed.

PSY 669 - Topics: Intervention Stratgs (3)

Advanced seminar in newly developing areas of intervention strategies.

PSY 678 - Commnty Psych & Prmry Prev. (3)

Concepts and methodologies relating clinical psychology to community problems, including welfare and dependency, crim and delinquency, urban and rural poverty, and problems of aging.

PSY 679 - Topics: Applied Psychology (3)

Advanced seminar in newly developing areas of evaluative/applied psychology.

PSY 680 - Ethics and Professional Issues (1-3)

Ethical standards and issues for psychologist regarding research with human subjects and current ethical and professional issues as they relate to the field of psychology.

PSY 681 - Clinical Practicum III (0-3)

Supervised clinical experience with children, adolescents, adults, couples, families, and groups covering administration, advanced interpretation, integration, report writing, case conceptualization of traditional and specialized assessment instruments, and advanced psychotherapeutic interventions for individuals couples, families and groups.

PSY 682 - Clinical Practicum IV (0-3)

Supervised clinical experience with children adolescents, adults, couples, families and groups emphasizing advanced utilization of client appropriate assessment instruments, advanced utilization of various psychotherapeutic interventions, provision of consultation, and supervised experience in providing supervision to first and second year clinical graduate students.

PSY 686 - Advanced Clinical Research I (0-3)

Presentation of focused areas of current research in psychology, particularly clinical psychology. Emphasis is placed on developing advanced knowledge skills of conceptualization methodology and statistics.

PSY 688 - PRC: Clinical Interventions (0-3)

Applied course in the methods, techniques and practice of psychotherapy.

Research Methodology (RMET)**RMET 375 - Introduction to Research Methods in Health In**

This course is designed to introduce students to the process and methods of research. The purpose is to enable students to become informed consumers of research and to provide them with reference materials that they can use in their careers. Emphasis is placed on reading and understanding empirical research articles. Students are expected to conduct their own research as part of the course. Offered every Spring.

RMET 415 - Introduction to Research Methods in Health In

This course is designed to introduce students to the process and methods of research. The purpose is to enable students to become informed consumers of research and to provide them with reference materials that they can use in their careers. Emphasis is placed on reading and understanding empirical research articles. Students are expected to conduct their own research as part of the course. Offered every Spring.

RMET 491 - Statistical Analysis in Physical Therapy (2)

A survey of several introductory, intermediate, and advanced statistical techniques is presented in a non-quantitative manner. Emphasis is placed on reading and interpreting the statistical analyses presented in numerous applied research studies. Students will also have the opportunity to apply the techniques in designing an hypothetical study. Offered every Spring.

RMET 501 - Intro to SPSS (1)

This course is designed to prepare students so that they can eventually analyze their data for their theses or dissertations. Areas to be covered include: entering data, cleaning and transforming data, running frequencies and other descriptive statistics, and analyzing hypotheses using inferential statistics. Offered Fall and Spring semesters.

RMET 533 - Assessment Meth in Counseling (3)

Psychological tests and standardized methods of assessing interests, personality, aptitude, achievement and intelligence traits of individuals; attributes of tests; uses in school guidance, counseling, therapy and personnel work. The student will take, administer, score and interpret several different standardized tests. Offered occasionally.

RMET 602 - App of Measurement Theories (3)

This course provides information on Psychometric Theories. Generalizability Theory, Classical Test Theory, and Item Response Theory are covered in detail. Applications of these theories in constructing and evaluating measures are presented. Additionally, the course will cover evaluation techniques such as Factor Analysis, Latent Class Analysis and Structural Equation Models. Offered every Fall semester.

RMET 610 - App Biostats for Med Sciences (3)

Exposure at the graduate level to a wide variety of descriptive and inferential statistics. Topics presented will include measures of central tendency, t-tests, analyses of variance, correlation and regression, and nonparametric techniques. The objective is to prepare students to conduct their own data analyses and interpret the findings. Use of a statistical software package is integrated into the course. Offered annually.

RMET 614 - Interpretive Phenomenology: Research Metho

The course will examine phenomenology as a methodology for understanding human actions and for conducting research into human practices. The hermeneutic turn for developing knowledge for practice disciplines (e.g., education, psychology, family therapy, nursing, social work, public administration, and medicine) will be addressed together with issues and skills in conducting interpretive research. Post-modern conceptions of validity for evaluating interpretive research will also be examined.

RMET 625 - Anal. of Variance & Exp. Desig (3)

Consideration of analysis of variance hypothesis testing and confidence interval procedures for single and multiple independent variables. Designs and analyses to increase experimental precision and control extraneous variation are emphasized. Offered every Fall semester and Summer.

RMET 650 - Multivariate Statistical Anal. (3)

Discussion of multivariate statistical techniques with emphasis on applications (knowing when to use, setting up and interpreting computer programs, and interpreting journal article applications). Emphasis is on broad interpretive principles rather than on specific mathematical details. The techniques to be discussed include multiple regression, canonical correlation, principal components, factor analysis, discriminant function analysis, MANOVA, and MANCOVA. Offered every Spring semester and Summer.

Russian (RUSS)**RUSS 110 - Communicating in Russian I (0-3)**

Introduction to Russian: speaking, listening, reading, and writing. Emphasis on the acquisition of communicative skills in simple situations related to personal interests and daily and academic life. Fall Semester.

RUSS 115 - Communicating in Russian II (0-3)

Continuation of RUSS 110. Offered Spring semester.

RUSS 210 - Inter Russian: Lang & Culture (0-3)

Continued practice in speaking, emphasis on functional skills. Gerunds and participles. Readings in and discussion of culture. Offered Fall semester.

RUSS 222 - Russian Culture & Civilization (3)

Understanding Russia today through a comprehensive outline of its multinational, multicultural past: origins, geography, language; Christianization; Westernizers vs. Slavophiles; the new Soviet person; Women in Russia; Russia and the Arts; Breakup of the Soviet Union. Readings in English. Fulfills Cultural Diversity Requirement.

RUSS 261 - Russian Fairy Tales (1)

This course represents a historical and literary introduction to witches, demons, vampires and other dark forces in the Russian folk tradition. Examining classic fairy tales, modern fiction, and visual representations on film and on the web, students will gain an appreciation for the significance of this tradition in Russian culture. No pre-requisites.

RUSS 262 - A Taste of Russia (1-2)

This course is designed to introduce students to Russian culture with particular focus on Russian customs, traditions and attitudes toward food. Exploring the concept of Russian cuisine in literature, arts, holidays, and folk traditions, students will develop a better understanding and appreciation of Russian cultural identity and lifestyle. No pre-requisites.

RUSS 263 - Soviet Agents/Spies on Screen: Filming Espio

This course explores ways in which Soviet and post-Soviet directors examined Russia's history of espionage in connection with her extensive secret police network by comparing their works with those of their Western counterparts in an effort to explore political and cultural dimensions to the portrayal of espionage on screen.

RUSS 307 - Scientific Russian (3)

Introduction to scientific prose in Russian. Emphasis on word formation and the acquisition of scientific terminology. No spoken Russian required. Fall semester.

RUSS 310 - Oral & Written Proficiency I (0-3)

Extensive review and refinement of grammar skills. Continued emphasis on speaking. Regular writing assignments. Fall semester.

RUSS 315 - Oral & Written Prof in Russ II (0-3)

Continuation of RUSS 310. Offered Spring semester.

RUSS 320 - Saints and Sinners in Russian Literature and

The course provides a concise and comprehensive survey of the development of the literary trends in the Golden Age of Russian literature. The students will read and discuss selected works of some outstanding Russian authors of the 19th century and compare some of them to their screen versions.

RUSS 325 - Russian Culture & Civilization (3)

Understanding Russia today through a comprehensive outline of its multinational, multicultural past: origins, geography, language; Christianization; focus on Old Russian period (pre-Petrine); Women in Russia; Focus on the Empresses; Russia and the Arts. Readings mainly in Russian. Fulfills Cultural Diversity Requirement.

RUSS 332 - Dostoevsky Through the Centuries (3)

This course considers Dostoevsky's impact on world culture through an examination of his major works, including Notes from the Underground, Crime and Punishment, and The Brothers Karamazov, and their dialogue with the writings of such famous personages as Friedrich Nietzsche, Sigmund Freud, D. H. Lawrence, and Albert Camus.

RUSS 335 - Chekhov as Dramatist: Performance, Adaptati

The appeal of Chekhov's major plays remain the focus of this course that examines the adaptation, mutation, and appropriation of his drama on stage and screen to encourage an appreciation for the intermedial transpositions of the Chekhov text across cultures, recent histories, and media in Russia, on Broadway, and beyond.

RUSS 410 - Fluency in Russian (3)

Further practice in speaking, listening comprehension, reading, and writing to achieve fluency. Fall or Spring semester. Prerequisites: RUSS 315 or permission of the Instructor.

RUSS 415 - Topics in Russian Grammar (1-3)

Structural review of the morphology of the verb and the nominals, syntax, and word formation.

RUSS 420 - Topics in Russian Literature (3)

Semester-long study of one major Russian author: Pushkin, Lermontov, Gogol, Tolstoy, Dostoevski, Turgenev or Chekhov; or one genre: short story, novel, poetry.

Sociology (SOC)**SOC 101 - Leadership/College Student (1)**

The purpose of this course is to provide students with an introductory framework in leadership development theory. It is meant to encourage students to explore the leadership process and develop one's own leadership potential. The course is designed to be interactive and thought provoking while encouraging self-assessment and skill development. Offered every semester.

SOC 110 - Introduction to Sociology (3)

This introductory course emphasizes fundamental concepts in sociology and their application to contemporary society for the purpose of enhancing the students understanding of the world in which they live.

SOC 111 - Introduction to Sociology: Diversity Emphasis (

This course will survey the field of sociology, stressing important ideas, methods, and results, as well as paying particular attention to points of controversy and disagreement among sociologists to develop critical and analytical thinking. As a survey course, topics this semester will include critical inquiry into the sources of group identities, the structures of diversity or inequalities based on race, gender, class, age and life style, as well as the institutions that promote or challenge those inequalities. Students will engage these topics through readings, group discussions and exercises.

SOC 118 - World Geography (3)

This course provides students with a worldwide overview of the relationship between people and place. Emphasis is given to the relationships among physical geography, environment, population, economy and culture. No prerequisites.

SOC 119 - Cultural Geography (3)

This course will familiarize the student with broad themes in cultural geography. Student will begin to think critically about how humans interact with their environments, analyze daily geographies and complete practice based assignments that explore core concepts of cultural geography.

SOC 120 - Introduction to Anthropology (3)

This course provides an introduction to the primary theories, concepts, and methodologies relating to anthropology. The main subfields of cultural anthropology, archaeology, biological anthropology, linguistics, and applied anthropology are surveyed and their integration is highlighted for a more in-depth understanding of the complexities in modern human societies and behavior.

SOC 150 - The Urban Community: Race, Class, and Spatia

This course will focus on people in racial and ethnic urban neighborhoods in the United States. The course will explore the basic concepts and ideas behind neighborhood, community, race, ethnicity, immigration, ethnic identity, and the spatial hierarchies of cities based on race, ethnic, and class characteristics.

SOC 200 - Research Methods (3)

Students are introduced to key issues involved in sociological research, the design of research to answer distinct types of questions, the nature and techniques of measurement and the major modes of data collection and analysis

SOC 210 - Classical Social Theory (3)

This course provides an overview of social science theories, major theorists, and theoretical formulations. It emphasizes key assumptions, assessing the strengths and weaknesses of each theory, and the historical development of social theory.

SOC 211 - Sociology of Sport (3)

This course investigates the institution of organized sports from sociological perspectives. It reveals how sports reflect American society and contribute to the social construction of that society. The course examines the culture, socialization, social structure, deviance, discrimination, stratification, economics, and politics as it appears in professional and amateur athletics.

SOC 218 - Cities and Space (3)

This course familiarizes students with the concepts of urbanization, with a focus on cities in the context of globalization. The class will also focus on urban processes and politics with an emphasis on processes of immigration and citizenship. Students are evaluated through written projects on themes discussed in the course. No prerequisites

SOC 220 - Cultural Anthropology (3)

This course provides an introduction to the theoretical foundations and methodological approaches of Cultural Anthropology. It focuses on the concept of culture and how it relates to various topics, including ethnicity, language, adaptive strategies, kinship, political systems, gender, and religion. The purpose to the course is to give students a broad perspective on the types of anthropological research and discuss how the work of anthropologists is relevant to understanding the human condition.

SOC 221 - Biological Anthropology (0-3)

The course examines humans within an evolutionary context to better understand ourselves as apart of the natural world. Topics include: the history of evolutionary thought, molecular and population genetics; human variation and adaptation; living and extinct primates; the hominid fossil record; and biological and cultural strategies of humans through time.

SOC 222 - Peace and Conflict Studies (3)

This course introduces students to social science perspectives on peace and conflict by examining cooperation and conflict in human society. Cross-cultural examples and examination of our evolutionary past reveal what is really "human nature."

SOC 224 - Archaeology (3)

Archaeology is the study of past cultures through the analysis of their material remains. This course introduces archaeology as a subfield of anthropology and emphasizes the scientific methods and procedures, tools and techniques used by archaeologists to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and ecofacts.

SOC 230 - American Popular Culture (3)

The course examines main stream (in contrast to high culture) cultural elements that prevail in American society, mainly in the more popular media. It includes myths, morals, music, material consumption, rituals, and icons of mass media.

SOC 249 - Sociology of Medicine (3)

Sociological interpretation of selected aspects of the field of medicine, including health and illness behaviors, professional socialization, analysis of health organization, political and economic aspects of health care delivery, cross national comparisons of health systems. No prerequisites

SOC 250 - Social Ecology (3)

Social ecology is a holistic approach to urban problems recognizing that interactions within the social, institutional, and cultural contexts of people-environment relations support well-being. The causes of urban problems (e.g. sprawl, crime, violence, disease/illness, housing segregation and food insecurity) are sought in social structures, environmental scarcity, and people's socio-economic status.

SOC 260 - Survey of Forensic Science (3)

Students learn scientific methodology, its rules and norms, as applied in the biological and chemical analysis of crime and how these methodologies are used to evaluate legal arguments and solve legal issues. They also learn how the technical/scientific analysis articulates with the different components of the legal system.

SOC 293 - Special Topics (0-4)

This course is designed for experimental courses or courses of special interest that are approved by the departmental faculty prior to offering. This opportunity may take the form of a visiting faculty member or another program requesting a unique course at the 200 level for a single semester.

SOC 301 - Quantitative Analysis (3)

This course introduces the quantitative skills, methods, and techniques necessary for analyzing the implementation and impact of social programs and policies (more specifically, those related to sociology and criminal justice). Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. This is an introductory course in quantitative (i.e., numerically-based information or data) statistical analysis that covers the properties/characteristics of data and variables and presents both descriptive and inferential statistics.

SOC 302 - Qualitative Research (3)

This course introduces the major methodologies and techniques for conducting research into the human condition in its natural context. It includes discussion of the analysis of group behavior, beliefs, rituals, ceremonies, relate to technologies, and generally order their natural world and control their societies. Prerequisite is SOC 200 Research Methods or permission of instructor.

SOC 310 - Contemporary Sociological Theory (3)

This course is an extension of classical social theory with an overview of recent sociological theories, major theorists, and theoretical formulations. It includes the key assumptions of different theories, evaluation of each theory, appreciation of the historical development of theories, and how theories shape our understanding of society.

SOC 318 - Immigration (3)

Students critically engage themes of urban immigration, citizenship and transnationalism, while developing the skills needed for graduate research. They write a professional quality research proposal for a small fieldwork study and participate in the research seminar by helping to critique each other's proposals. SOC 118, World Regions is recommended as a prerequisite by not required.

SOC 320 - Contemporary Anthropological Theory (3)

This course introduces the major theories that inform contemporary anthropology. The course investigates a range of topics including issues of agency, subjectivity, history, social change, power, culture, and representation. The course objectives include: the appreciation of history of the anthropological study, anthropological theory, reading literacy in the discipline, and its communication. Prerequisite: SOC-120, Introduction to Anthropology, and SOC 210, Classical Social Theory.

SOC 321 - Science and Pseudoscience (3)

This course will explore the data surrounding notable claims such as Atlantis, Piltdown man, Shroud of Turin, and other myths and hoaxes in anthropology. Students will learn the nature of scientific inquiry and how the scientific method is applied to archaeological as well as other areas of social science research. No prerequisites.

SOC 322 - Urban Sociology (3)

Sociology of the city and the metropolis. Examines processes of change and resistance to change in the urban community; ethnic and racial groupings; the effects of varying social policies and efforts at urban development. Includes field experience.

SOC 323 - Gender and Society (3)

Examination of the impact of large-scale forces on how gender roles are structured and enacted in our society. Particular attention to be paid to the different experiences of men and women in the labor force, politics, and the family.

SOC 324 - Anthropology of Sex & Gender (3)

This course examines human sexuality in an anthropological context, highlighting the importance of integrating biological and cultural aspects of sexuality. Broad perspectives on sexual behavioral patterns across, and within, human cultures are taken. Topics include sexuality in an evolutionary perspective, the physiology of sex, human sexual practices around the world, and gendered sexuality.

SOC 326 - Peace and Conflict (3)

This course examines cooperation and conflict in human sociality. We compare the underlying assumptions that humans are innately aggressive or war-like with data to the contrary. We look at cross-cultural examples through a series of readings by contemporary social science authors, and also examine our evolutionary past for clues to what is really human nature.

SOC 327 - Environmental Anthropology (3)

This course examines current ecological problems and conservation/management efforts around the world, and combines case studies with classic anthropological theory to explore the ethical, cultural and biological ramifications of habitat use and environmental change. Topics include population growth, large-scale development, biodiversity conservation, sustainable environmental management, indigenous groups, consumption, and globalization.

SOC 328 - Forensic Anthropology (3)

This course is an introduction to the field of forensic anthropology, which involves the analysis of human skeletal remains within the context of a legal investigation. We will explore knowledge of human osteology, dentition, skeletal variation, and pathology to identify human remains.

SOC 329 - Native Peoples of North America (3)

This course is an introduction to past and present indigenous cultures of North America. The course explores the beliefs, behavioral systems, economic and sociopolitical systems, and regional attributes of North America's indigenous peoples.

SOC 330 - Social Psychology (3)

Processes of social interaction and reciprocal influence which arise in and constitute groups. Central emphases is on self image and communication.

SOC 333 - Corporate/White Collar Crime (3)

Analysis of corporate and white collar crime with an emphasis on both the social structural (macro-level) and social psychological (micro-level) factors associated with such activity. Major organizational and criminological theories will be used, discussed, critiqued, and applied in order to provide a framework within such problems can be understood.

SOC 335 - Social Movements (3)

Analysis of selected American social movements since 1930, including their precipitating factors, recruitment strategies and consequences. The role of societal power an ideology as well as that of social identification and meaning on collective action are examined.

SOC 336 - Racial and Ethnic Relations (3)

This course provides an interpretive framework for examining the many issues associated with racial and ethnic identity. We will focus primarily on Western models of race and ethnicity, but we will also explore the different ways these concepts are both imagined and perpetuated in other, non-Western societies.

SOC 338 - Power in U.S. Society (3)

The socioeconomic roots of political affiliation and interest group formation are examined as are the theoretical and practical considerations of the relationship between social structure and political action.

SOC 339 - Cultural Anthropology (3)

Exploration and examination of different societies including tribal, rural, and urban. Analysis of cultural systems, their legacies, and their meaning in contemporary contexts. Emphasis on cross-cultural case studies that highlight the impact of larger forces such as globalization, acculturation, migration, and social and political organizations.

SOC 342 - Organizations: Theory and Practice (3)

This course examines some of the salient sociological models, concepts and problems of organizations. The role of students as citizens of an organizational society and as participants in a variety of occupational, civic and value-based organizations is emphasized.

SOC 343 - Marriage and the Family (3)

Examination of theories and data on different types of families, role assignments, and definitions, pertaining to various types of societies through space and time. modern aspects of family institutions and problems, with an emphasis on the issue of equality of marriage.

SOC 346 - Principles of Social Development (3)

This course looks at the concept of social development which implies value based social change. Sociological thinking is applied to major societal issues both at a national and international level.

SOC 348 - Sociology of Emotions (3)

This course focuses on a deeply personal yet thoroughly social phenomenon, human emotion. It will examine some of the major themes and notable studies that have emerged in recent decades and students are encouraged to understand and creatively apply course concepts to their own lives and the world around them.

SOC 349 - Sociology of Mental Health (3)

This course provides an overview of how western society defines and researches mental health, the causes and consequences of mental health problems, and how institutions respond to mental illness. Topics include: perspectives on mental health, stigma, demographics of incidence/prevalence, treatment and institutional responses. No prerequisites.

SOC 350 - Social Inequality (3)

The different forms of inequality will be examined from different theoretical perspectives. The course examines the causes and consequences of inequality in society as well as alternative approaches to dealing with the inequality. Prerequisites are: SOC-110, Introduction to Sociology, or SOC-120, Introduction to Anthropology, or SOC-190, Introduction to Criminal Justice, and Research Methods, SOC-200, and Classical Social Theory, SOC 210.

SOC 351 - The Structure of Poverty: Globally and Locally (3)

This course examines the structural causes of poverty at the global and local levels from a multidisciplinary perspective. The course focuses on the social, political, and economic structures that produce and perpetuates poverty. The global dimension of the course focuses on developing countries, while the local dimension focuses especially in the St. Louis area.

SOC 357 - Theories of Crime (3)

This course introduces different explanations of criminal behavior, including the individual and contextual levels variables appropriate for different theories. In addition, the course relates the theories to their historical development and the role they play in public policy. The objectives are to describe the historical development of different theories and clarify the assumptions of different theories

SOC 358 - Deviant Behavior: Drugs, Alcohol and Addiction

Deviance takes the forms from simple violations of informal codes of dress (violations) to the systematic eradication of human lives (genocide). Our studies together will consider both individual and systemic deviance, with particular attention paid to deviant behavior on the part of powerful social groups and even entire nations.

SOC 359 - Law and Society (3)

Examination of the complexities and concerns inherent in sociological and legal understanding of the relationship between law and society. Law is examined both as a social force and a social product.

SOC 361 - Forensic Biology (4)

This lecture/laboratory course is an overview of the biological evidence and techniques used in forensic science. Topics include pathology, fingerprinting, forensic anthropology, forensic entomology, serology, DNA, hair analysis, botany and microbial forensics. Prerequisite: SOC 260 Survey of Forensic Science

SOC 362 - Chemical Forensics (4)

Chemical Forensics is the application of physical science to both the collection and analysis of evidence. This course will introduce various methodologies and applications of chemical and physical principles. Prerequisite: SOC 260 Survey of Forensic Science

SOC 363 - Forensic Biology (4)

This lecture/laboratory course is an overview of the biological evidence and techniques used in forensic science. Topics include pathology, fingerprinting, forensic anthropology, forensic entomology, serology, DNA hair analysis, botany and microbial forensics. Prerequisite: SOC 260

SOC 371 - Archaeological Field School (4)

This course offers instruction in survey, excavation, artifact identification, mapping, sediment analysis, laboratory and interpretive techniques. In addition, students will attend lectures and discussions on prehistoric archaeology and material culture in the American Bottom. Prereq.: consent of instructor.

SOC 372 - Archaeological Lab Method (2)

This course introduces archaeology, a subfield of anthropology, and the scientific methods and procedures used to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and ecofacts. Students learn to process, inventory, analyze and interpret the archaeological record and write a preliminary report on their findings.

SOC 393 - Special Topics (0-4)

This course is designed for experimental courses or courses of special interest that are approved by the departmental faculty prior to offering. This opportunity may take the form of a visiting faculty member or another program requesting a unique course at the 300 level for a single semester.

SOC 394 - African-American Religious Traditions (3)

The purpose of this class is to expose the student to the historical and social nature of African American Religion. The course will cover the historical development of African American Religion from its African origins up to and including the Civil Rights Movement with some attention given to contemporary black liberation theology.

SOC 395 - Human Sexuality in the Black Community (3)

In addition to providing general knowledge about human sexuality, this course assists students with gaining an insight into their sexuality and relationships. In addition to examining sexual issues at the personal and relational level, the course focuses on increasing general knowledge and understanding of human sexuality.

SOC 400 - Practicum (1-3)

Field work in criminal justice, forensic science, and sociology at corrections, probation, parole, and other governmental agencies, as well as business and private social service organizations.

SOC 401 - Evaluation Research (3)

This course covers both the theory and methods of evaluation research. It provides students with a basic understanding of the social science approaches and techniques to evaluate non-profit and government agencies. The social and political context in which agencies and social programs operate is incorporated into the analysis. Prerequisites: SOC 200, Research Methods, AND EITHER SOC 301, Quantitative Research OR SOC 302, Qualitative Research OR permission of instructor.

SOC 402 - Forensic Science Practicum I (3)

Fieldwork in forensic science at forensic labs, county morgue, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

SOC 403 - Forensic Practicum II (3)

Continuation of fieldwork in forensic science at forensic labs, county morgues, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

SOC 404 - Sociology Practicum (3)

Fieldwork in governmental agencies, as well as business and private social service organizations. Approval of instructor required. Every Semester.

SOC 405 - Feminist Social Movements (3)

This course analyses the American women's equal rights and suffrage movements of the 19th century to the present. The course makes comparisons with feminist movements in European countries. Permission of the instructor.

SOC 410 - Introduction to Urban Economic (3)

Analysis of the factors determining economic growth of urban areas. Economic considerations relevant to selected urban problems such as poverty, unemployment, housing and transportation.

SOC 418 - Citizenship: The Struggle to Belong (3)

Students critically engage themes of citizenship in the Western tradition while also building the skills needed for graduate research. Students complete an annotated bibliography and write a professional quality literature review during the class. Students participate in the research seminar by helping to critique each other's proposals. No prerequisites

SOC 420 - Urban Ecology: Neighborhoods (3)

Explores methods and theories which contribute to understanding urban neighborhoods and communities and addresses the question, "how people do community."

SOC 424 - Primate Social Behavior (3)

This course examines the social lives of primates. The course includes an introduction to primate evolution and taxonomy and behavioral ecology. The course covers topics such as conservation, behavior, physiology, reproduction, and evolution of social organization will be highlighted.

SOC 426 - Census and Neighborhood Analysis (3)

Examination of analytic approaches to communities and neighborhoods utilizing census and socio-demographic data.

SOC 431 - Issues in Jurisprudence (3)

This course focuses on how the courts operate and fit within our democracy. Students will gain an understanding of the Constitutional guarantees including the Due Process Clause and the Equal Protection Clause and various guarantees contained in the Bill of Rights. Criminal Law and Procedure (Soc 439) is a prerequisite.

SOC 432 - Issues in Law Enforcement (3)

We study the administration of law enforcement agencies, emphasizing the process, role, organization, and management of policing organizations. Specifically, we will pay particular attention to its history, innovations, the rationale for changes, and impediments to policy and program implementation. Introduction to Criminal Justice (SOC 190) is a prerequisite.

SOC 433 - Issues in Corrections (3)

This course examines how various institutional and community sanctions (or corrections) have been used as a method in responding to crime. Correctional concepts, history, processes and contemporary issues in corrections are explored within the social and legal contexts of correctional facilities function. A prerequisite is SOC 233, Introduction to Corrections.

SOC 451 - Constructing Social Problems (3)

This course provides an overview of the constructionist approach to social problems. This class examines how problems are interpretively constructed as discussed and debated by various individuals and groups. The process of making claims about problems is the central concern of this course. SOC 110 is a prerequisite.

SOC 452 - Sociological Social Psychology (3)

An overview of sociological social psychology or symbolic interactionism. Use of classic and current readings to explore interactionist theories and research on topics, including the self, motives, alcohol, emotions, language, and social problems. SOC 110 is a prerequisite.

SOC 453 - Urban Ethnography (3)

This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation. Throughout this course, you will gain hands-on experience by carrying out your own ethnographic research project. SOC 110 Introduction to Sociology is a prerequisite.

SOC 454 - Environmental Impact (3)

This course examines the social, economic and environmental dimensions of sustainability in cities around the world. Also examined are policies and opportunities to address the challenges of sustainability from both developed and developing countries.

SOC 455 - Crime Scene Investigation (4)

Crime Scene Investigation is the application of science to both the collection and analysis of evidence at a crime scene. This course will introduce various methodologies and applications of crime scene processing. SOC 260, Introduction to Forensic Science, SOC 261 Forensic Biology and SOC 262 Chemical Analysis of Crime are prerequisites

SOC 461 - Death Investigation (2)

This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches the tools and techniques necessary to perform such an investigation. Disseminating this information is also covered. The course teaches the 29 national guidelines in Death Investigation: A Guide for the Scene Investigator. SOC 260, Introduction to Forensic Science is a prerequisite. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine.

SOC 463 - Sociology of Religion (3)

The sociology of religious institutions, the emergence, maintenance and change of social organizations around religious implement.

SOC 464 - Demography: Measuring and Modeling Populati

This course covers beginning and intermediate demographic methods. This course consists of lectures, seminars, and labs. Topics to be covered include: Population Dynamics, Economic Dynamics, Social Dynamics, and Applied Demographic Methods and Policy.

SOC 465 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-417, BIOL-417, or SOC-465.

SOC 466 - Intermediate Geographic Information Systems (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography. Prerequisites: one of the courses EAS-417, BIOL-417, or SOC-465. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-418, BIOL-418, or SOC-466.

SOC 467 - Spatial Demography: Applied Statistics for Spat

This course covers intermediate and advanced topics in Spatial Statistics. This course consists of lectures, seminars, and labs. Topics to be covered include: Spatial Autocorrelation, Spatial Regression, Geographically Weighted Regression, and Gravity Models. Pre-requisites (IAS-517 or BIOL-517 or SOC-565) or other introductory GIS course.

SOC 468 - Spatial Analytics of Crime and Deviance (3)

This course covers spatial statistics, Geographic Information Science (GIS), and sociological theories of crime and deviance. Topics to be covered include: hot spot mapping, journey to crime models, temporal and spatial patterns of crime, and risk terrain modeling.

SOC 470 - Applied Spatial Analysis for Social Sciences (3)

This course covers advanced topics in demography, spatial statistics, and Geographic Information Science (GIS). Topics to be covered include: gravity models, spatial segregation, spatial inequality, spatial scaling, journey to crime models, risk terrain models, and hierarchal spatial models. Pre-reqs include: SOC 464; SOC 465; and SOC 466.

SOC 480 - Research Activity: Supervised (1-3)

This course provides students with research experience under the guidance of a faculty member. Student involvement in various components of the faculty member's research project(s) is the typical form. The course provides competitive advantages for students interested in applying to graduate schools.

SOC 489 - Reading Statistics in Research (3)

This course provides background in statistical techniques for judging the legitimacy of an author's claims based upon statistical results. It focuses on understanding what a given technique accomplishes statistically, the types of conclusions that can be reached using a technique and how the results are reported in research articles and dissertations.

SOC 493 - Special Topics (0-4)

Students are introduced to key issues involved in sociological research.

SOC 494 - Sociology Capstone (3)

Provides the opportunity for students to synthesize the knowledge and skills they have gained from previous courses. In the process of examining conventional common sense assumptions, students are encouraged to think critically and deeply about themselves and the world in which they live.

SOC 497 - Capstone in Anthropology (3)

This course allows anthropology majors to write a rigorous 25-page paper that focuses on a single topic in depth. Develop a serious scholarly manuscript that you could use for graduate school applications, or (in exceptional cases) as a paper that could be presented at conferences or submitted to third-tier anthropology journals.

SOC 501 - Organizational Theory and Administration (3)

The theories of organization exist at the intersection of motivation/leadership, politics, and ethics as they relate to policy. Organizational theory is concerned with matters of organizational design, and thus is a useful complement to the study of motivation and leadership taking place in other disciplines. Further, because the social sciences are more tolerant of departures from the rational mode of organizational behavior than economics and business, it is a favorite location for research and teaching on the politics of organizational behavior and policy. Finally, and related point, social science familiarity with cross-cultural research enables students to discuss values and their relation to policy more fluently than those in other disciplines. Thus, policy is well framed by the study of organizational theory.

SOC 510 - Proseminar (3)

This course critically examines the linkage of theoretical and practical issues in criminal justice. Topics include crime causation, policing, adjudication and sentencing, and corrections. offered annually.

SOC 520 - Urban Ecology: Neighborhoods (3)

The objective of this course is to introduce students to the theories, empirical research and methodologies on residential segregation and neighborhood change in American urban cities. The course begins with an overview of the major theories of neighborhood transitions, (e.g. the Chicago School's ecological models of neighborhood invasion-succession models, spatial assimilation theory, etc.) Next, theories of racial residential segregation are examined, with an emphasis on African Americans and other racial/ethnic minorities. Case studies of neighborhoods in Boston, Chicago, St. Louis, New York, Oakland, and Philadelphia are used to illustrate changes in neighborhood racial/ethnic composition and characteristics during the twentieth century. The final part of the course focuses on the consequences of residential segregation, particularly with regards to income, school, and health inequality. A major focus of the course is the research paper. Students are required to write a final research paper based on their neighborhood study. Students will work in teams to carry out the ethnographies, but each student is expected to write his or her own paper. Students are also expected to integrate data from other methodologies covered in the course as well.

SOC 530 - Police Administration (3)

Students examine the components of administering a police agency, including human resource management, budget issues, political and constituent group influence, crime trends, legal issues, and community policing.

SOC 531 - Issues in Jurisprudence (3)

Policy issues regarding court administration are addressed and students examine practical issues facing modern court administration. Offered annually.

SOC 532 - Contemporary Issues in Law Enforcement (3)

Issues in the administration of correctional agencies are addressed, including mission development, management and leadership, policy and practice, human resources, legal issues, and budgeting. Offered Annually.

SOC 533 - Issues in Corrections (3)

This course examines how various institutional and community sanctions (or "corrections") have been used as a method in responding to crime. Correctional concepts, history, processes and contemporary issues in corrections will be explored and discussed within the social and legal contexts in which correctional facilities function. Further, we will examine the theory, practice, and human impact of treating criminal offenders, under correctional supervision, in both community and institutions. Thus, we will study (1) the major themes and issues present within the broad arena of corrections, (2) the conceptual debates and controversies surrounding certain correctional programs and policies, and (3) the current research on community and institutional based corrections activities and their effectiveness.

SOC 540 - Race, Gender, Class and Criminal Justice (3)

This course will provide students with an understanding of how various master statuses, including race, gender and social class influence how people are treated by the criminal justice system as perpetrators, victims and practitioners. The ways in which this differential and adverse treatment of out groups by the system threatens social cohesion and conflicts with Constitutional mandates as well as ideas of justice and equality will also be explored.

SOC 547 - Adv. Issues in CJ Policy (3)

The general public policy process is presented and students examine the various influences on the development and practical implementation of criminal justice policy. Offered annually.

SOC 550 - Social Stratification (3)

This course provides an interpretative framework for examining the many issues associated with social stratification and resulting inequalities. We will focus primarily on Western models of stratification, but we will also explore the different ways this concept is both imagined and perpetuated in other, non-Western societies. The emphasis will be on socioeconomics stratification, but we will also look at other forms of stratification such as gender, race, ethnicity, etc.

SOC 551 - Constructing Social Problems (3)

This course provides an overview of the constructionist approach to social problems.

SOC 552 - Sociological Social Psy (3)

This course provides an overview of sociological social psychology, which is often broadly referred to a symbolic interactionism.

SOC 553 - Urban Ethnography (3)

This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation.

SOC 554 - Environmental Impact of City (3)

This course examines the social, economic and environmental dimensions of sustainability in cities around the world.

SOC 555 - Comparative Theories of Race / Ethnic Relation

This course will examine the issues of racial, ethnic, and cultural minority groups in the U.S. and abroad from historical, economic, political, and sociological perspectives. Students will learn theoretical perspectives to address issues relevant to race and ethnic relations. The course will use a seminar format which will require students' active involvement in presentations and discussion.

SOC 560 - Research Methodology (3)

This course offers general knowledge and basic skills of conducting scientific research. This course focuses on several major research techniques, such as survey, experimental, evaluation, qualitative, and unobtrusive methods. Students will develop a research design in the form of grant proposal, Master's thesis prospectus, Ph.D. dissertation prospectus, or a professional paper as required by individual departments.

SOC 561 - Death Investigation (2)

This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches an individual the tools and techniques necessary to perform a thorough, competent medicolegal death investigation. Proper instruction for disseminating this information is also covered. The course is designed to teach the 29 national guidelines as set forth in the National Institutes of Justice 199 publication, Death Investigation: A guide for the Scene Investigator. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine.

SOC 562 - Probtn, Parole, & Comm Correct (3)

This course describes the operations of community corrections programs, addresses the obstacles and challenges to success, and discusses issues in the future. Offered annually.

SOC 564 - Demography: Measuring & Modeling (3)

This course covers beginning and intermediate demographic methods. This course consists of lectures, seminars, and labs. Topics to be covered include: Population Dynamics, Economic Dynamics, Social Dynamics, and Applied Demographic Methods and Policy.

SOC 565 - Intro to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: IAS 517, BIOL 517, or SOC 565.

SOC 566 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS biography. Each part is instructed by a professor specialized in the particular area. Students may only apply credits towards their graduation requirements from one of the following courses: IAS 518, BIOL 518, or SOC 566.

SOC 567 - Spatial Demography: Applied Statistics for Spat

This course covers intermediate and advanced topics in Spatial Statistics. This course consists of seminars and labs. Topics to be covered include: Spatial Autocorrelation, Spatial Regression, Geographically Weighted Regression and Gravity Models.

SOC 570 - Applied Spatial Analysis (3)

This course covers advanced topics in computational spatial statistics, geoinformatics, and spatial analytics. This course will provide students with state-of-the-art skills to apply cutting-edge geospatial analysis and visualization techniques to study social and economic inequality. Topics include: spatial segregation and inequality, spatial scaling, risk terrain models, and spatial-temporal models.

SOC 575 - Qualitative Analysis, Grounded Theory Method

The course will focus on hands-on learning of developing a research design, collecting and analyzing data, interpreting and presenting the results, and publishing the research results. Grounded Theory Method for data collection and analysis will be a major framework of research design, and students will learn different paradigms in analyzing qualitative data.

SOC 580 - Survey Design & Sampling (3)

This course offers basic knowledge and skills of survey methods so that students will be able to apply various techniques for data collection and analysis. During the course, students will learn basic proposal development, instrument preparation, data collection and analysis, and presentation of the results, through hands-on practice. Students are expected to write publishable/presentable manuscripts as a term paper.

SOC 584 - Research in Criminal Justice (3)

Students learn about research outcomes in criminal justice, conduct their own research projects using proper methodologies, and determine how the results of their research can contribute to understanding criminal justice organizations, issues, policies and programs.

SOC 585 - Program Evaluation & Needs Assessment (3)

Using examples from quantitative and qualitative research, the primary goal of this course is to familiarize students with program evaluation and research in the health field. This course will focus on different types of program evaluation, including formative research, process evaluation and outcome/impact evaluation. Needs assessment will also be covered. Students will learn how to design a program evaluation and how to analyze and report outcomes.

SOC 589 - Reading Statistics in Research (3)

This course provides background in statistical techniques for judging the legitimacy of an author's claims based upon statistical results. It focuses on understanding what a given technique accomplishes statistically, the types of conclusions that can be reached using a technique and how the results are reported in research articles and dissertations.

SOC 594 - Criminal Justice Internship (3)

For students who do not have extensive criminal justice work experience, this internship will expose them to the operations of a criminal justice organization, and they will have the opportunity to examine a policy issue and develop alternative approaches to resolving the identified problem.

SOC 597 - Research Topics (3)

Work specifically with a faculty member in an area of interest that results in a prepared grant proposal or a submission of an article to a professional journal.

SOC 598 - Graduate Reading Course (1-3)

To prepare for comprehensives or to do more in-depth study of a specific criminal justice area.

SOC 610 - Regression Analysis & Non-linear Models (3)

This course offers advanced knowledge and skills of multiple regression analysis, logistic regressions, log-linear and logit models so that students will be able to apply various techniques for data analysis. Students are encouraged to use their own data for course assignments. Students will develop a draft of a publishable/presentable manuscript as a term paper.

Spanish (SPAN)**SPAN 101 - Communicating in Spanish I (0-3)**

Introduction to Spanish language and culture. Prepares student to operate within areas of immediate needs and simple situations.

SPAN 102 - Communicating in Spanish II (0-3)

Continuation of SPAN 101. Prepares the student to function in simple situations related to personal interests and daily life.

SPAN 201 - Inter Spanish: Lang & Culture (0-3)

Continued practice in all skills. Readings in and discussion of Hispanic Culture.

SPAN 215 - Speaking in Spanish (2)

This course is designed especially for students with a basic or intermediate level of Spanish who wish to practice their speaking ability. The objective of the class is to give the student the necessary mechanisms to be able to communicate in Spanish. The pre-requisite is SPAN-115 or equivalent.

SPAN 223 - Latin American Cult & Civil (3)

A critical analysis of historical, political, religious and socioeconomic considerations that have contributed to the creation of the very complex cultural reality that is contemporary Spanish America. Taught in English.

SPAN 224 - Meeting the Other: Hisp Exp (3)

Development of cultural awareness and appreciation of the Hispanic experience as presented by its three main representatives: Spain, Latin America and the Hispanic presence in the United States. Taught in English.

SPAN 298 - Independent Study (0-3)

Prior approval required of sponsoring professor and department chairperson.

SPAN 301 - Written Communication (0-3)

Reading and analysis of authentic language materials to develop written expression. Refining of communicative strategies for accurate expression of ideas.

SPAN 302 - Oral Communication (0-3)

Development of fluent oral expression through communicative activities stressing listening comprehension, structural accuracy and systematic approach to vocabulary expansion.

SPAN 303 - Fluency in Spanish (0-3)

Continuation of SPAN-302. Description, narration and exposition in topics of particular interest and special fields of competence.

SPAN 304 - Advanced Oral Communication (0-3)

Continuation of SPAN 303. Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

SPAN 400 - Advanced Spanish Grammar (0-3)

The objectives of the course are to identify and describe intuitive knowledge that a native speaker of Spanish possesses and to perfect the student's knowledge of various topics of Spanish grammar by means of theoretical explanation and solving practical exercises. Assignments emphasize inductive reasoning as well as original language use.

SPAN 403 - Language and Linguistics (3)

An introduction to the basic concepts and application of linguistic studies, presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes. Taught in English.

SPAN 405 - Span Phonetics & Phonology (2-3)

Theoretical and practical approach to Spanish phonetics and phonology from the dual perspective of the underlying representative of sound units and their pronunciation within syllables, words, and phrases. Auditory comprehensive and sound discrimination practice, with transcription exercises and attention to correct pronunciation.

SPAN 409 - Spanish Sociolinguistics (3)

This course aims to develop students' abilities to notice, investigate and interpret sociolinguistic phenomena in the world around them. Topics include pragmatics, historical changes in Spanish, and dialectical variation. Discussions will center primarily but not exclusively around sociolinguistics of the Spanish-speaking world. Prerequisites are SPAN 410 and 415.

SPAN 416 - Business & Prof Spanish (0-3)

Application of language skills and cultural awareness to specific business and professional practices.

SPAN 419 - Three in One: Hispanic Exper (3)

This course provides an understanding of the language variation, value systems, religious beliefs and assumptions about reality of Hispanic culture in its three manifestations: modern day Spain, Latin America and the Hispanic groups in the United States.

SPAN 420 - Introduction to Spanish Lit (3)

This introduction to Hispanic literature will examine the different genres and representative texts to enable the students to acquire a working knowledge both of the literary history of the genres and the analysis of literary texts in Spanish.

SPAN 422 - Language Acquisition: How It Happens (3)

This course reviews major theories about how second or foreign languages are learned and what factors influence the process. We will discuss what these theories mean to the teacher, the learner, and the policy maker, and what the theories tell us about psychology and linguistics. Taught in Spanish.

SPAN 424 - Contemp Latin Amer Short Story (3)

Short story trends, themes and techniques. Selections from outstanding authors with emphasis on Borges, Cortazar and Marquez.

SPAN 425 - Cultural Stereotypes: Lat Amer (3)

This is a survey course that examines a generous selection of classic Latin American short stories (1839-1945). The texts are considered in the context of the complex cultural transformations that swept Latin American society from Independence to the Second World War. Literary texts are also discussed in relation to other cultural materials (movies, art, music). Texts and materials are organized around 5 different topics: Between Tradition and Politics, The Violence of History, The Many Faces of Modernity, Critical Realisms and Founders of the Present. Recommended prerequisite: SPAN 420.

SPAN 426 - Latin American "Modernism" (2-3)

Survey course that examines the literary expressions of the debate on Modernity and Modernization in Latin America in the period 1820-1920. Topics such as national identity, the creation of modern cities, the education of women and the role of minorities will be examined through an anthology of short stories, articles, poems, essays and comics.

SPAN 427 - Contemp Latin-Amer Poetry (3)

Survey course that analyses a representative group of Latin American poets. Main themes and formal characteristics of these authors will be discussed.

SPAN 428 - Early Latin American Novel (3)

Survey course that examines the Latin American novels written between 1890 and 1940. The class presents an overview of the major movements that informed the novels of the period such as Naturalism, Indigenism, Historicism, Futurism, and other Avant-garde trends. The issues of the construction of national identity and the formation of modern "civilized" societies will be addressed. Prerequisite: SPAN 420

SPAN 429 - Contemp Latin-Amer Novel (2-3)

Survey course that examines the Latin American novels written between 1940 and 1970. Main themes and formal characteristics of these novels will be discussed in the context of the so-called Latin American Boom.

SPAN 430 - Latin-American Thinkers (3)

Systematic analysis of predominant themes among current Latin-American thinkers. Taught in English.

SPAN 431 - Contemporary Latin-Am Drama (3)

Survey course that analyses the development of Latin American Theater through the 20th century. Different schools and trends will be discussed. Occasionally this course will focus on specific issues or group of authors i.e. women playwrights, etc.

SPAN 432 - The African Experience in Spanish America (3)

This course examines the literary contributions of Afro-Hispanic writers from Spanish America and Equatorial Guinea in order to discuss the complexity of the African experience in the Spanish-speaking world from the colonial period to the 21st Century.

SPAN 433 - Latin Am Novel after 1970 (3)

Survey course that analyses a representative group of Latin American novels written after 1970. Main themes and formal characteristics of these novels will be discussed in the context of the so-called Post-modern Era.

SPAN 434 - Identities of the Other in 19th-c. Latin America

Exploration of textual and visual imagery of the foreigner in the nineteenth century, the formative period of modern-day Latin American identities. We will read novels, excerpts, short stories, contemporary essays, and critical theory on the Other, Foreigner, Stranger, and Outsider. Prerequisite: SPAN 420

SPAN 435 - Latin American Testimony (3)

This course examines the diverse strategies used by Latin American testimonial literature to interpret today's realities. Through the analysis of testimonies, the students will develop an understanding of the complexity of Latin American culture and society.

SPAN 436 - Women's Literature in Lat Am (3)

This course introduces the students to the work of Latin American women writers from the Colonial period to the 20th century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society, and the construction of women's identity.

SPAN 437 - Latin-Am Literature & Film (3)

Survey course that examines the relationship between some masterpieces of contemporary Spanish American Literature and their adaptations into film by some of the major directors of Latin American cinema.

SPAN 438 - Cultural Stereotypes: Latin Am (3)

This course is an interdisciplinary approach which confronts stereotypes about Latin American cultures. It involves a vast array of experiences that has established differences, stigmas, and marginalization of Latin Americans. Taught in Spanish. Prerequisite: SPAN 420.

SPAN 440 - Strangers in a Familiar Land: Displacements i

This class discusses literature, films, documentaries and paintings that portray Latin American displacement after 1950. The approach offers a multidisciplinary view of the diverse participants in Latin American realities. We debate the dynamic of border crossing in the global era, specifically with respect to refugees, exiles, excluded and missing people.

SPAN 441 - Spanish Literary Culture (3)

History of the merger of Christian, Arabic and Jewish influences on Spanish literary culture. Offered occasionally.

SPAN 451 - Contemporary Latino Literature (3)

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SPAN 452 - From West Side Story to Hip-Hop: Studies in L

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SPAN 454 - Golden Age Drama (3)

The Spanish theatre of the sixteenth and seventeenth centuries. Analysis of the works of Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcón, Agustín Moreto, and Pedro Calderón.

SPAN 456 - Don Quixote (3)

Analysis of the counter-reformation masterpiece of Miguel de Cervantes. Paradoxical baroque double-vision of reality with resultant vital tension: The baroque sensibility.

SPAN 459 - Spanish Jewry: Medieval Spain (3)

Medieval Spanish Jewish Life under Islam and Christianity. Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardi life in the Diaspora. Fulfills Cultural Diversity Requirement. May be taught in Spanish or English.

SPAN 461 - Spanish Romanticism (2-3)

Doctrinaire romanticism compared and contrasted with authentic Spanish romanticism.

SPAN 462 - 19th Century Spanish Novel (3)

Costumbrism, naturalism and social revolution illustrated in works by Fernán Caballero, José María de Pereda, Emilia Pardo Bazán, Juan de Valera, Benito Pérez Galdós, and Blasco Ibáñez, and Leopoldo Alas.

SPAN 463 - Narrative of the Spanish Civil War (3)

This course is a study of the narrative of the Spanish Civil War, using works that reflect the conflicts and social injustices which existed between the two Spains. This class will analyze the ideological differences which found their end in the tragedy of the Civil War of 1936-1939. Pre-requisites are SPAN 303, 304, and 420.

SPAN 466 - Generation of 98 (2-3)

Ideology, themes and literary styles of major contemporary prose fiction writers: Miguel de Unamuno, Pio Baroja, Valle Incian, Gabriel Miro, Ramon Perez de Ayala and Gomez de la Serna.

SPAN 467 - 20th Century Spanish Thought (2-3)

Major contributors to contemporary Spanish social, philosophical, political and literary thought: Miguel de Unamuno, Jose Ortega y Gasset and F. X. Zubiri, P. Lain Entralgo. Taught in English.

SPAN 470 - 20th Century Spanish Poetry (3)

Antonio Machado, Juan Ramon Jimenez, Pedro Salinas, Aleixandre, Federico Garcia Lorca, Blas de Otero: Nuances of existential dilemmas.

SPAN 471 - 20th Century Spanish Novel (2-3)

Ideological themes and aesthetics of Camilo Jose Cela, Carmen Laforet, Ramon Sender, Juan Goytisoio, Elana Quiroga, A.M. Matute, Delibes, and L.M. Santos.

SPAN 472 - 20th Century Spanish Drama (3)

Themes and aesthetics of Alejandro Casona, Federico Garcia Lorca, Alfonso Sastre, F. Arrabal, and Buero Vallejo.

SPAN 474 - Peninsular Span Ptry 1965-pres (3)

Literary analysis and poetic interpretation of a representative selection of Peninsular Spanish poetry since 1965. Awareness of how the political and social changes the last three decades of the 20th Century influenced the literary production in Spain. Authors include: Pere Gimferer, Jenaro Talens, Luis Antonio de Villena, Jose Miguel Ullan, Miguel D'Ors, Jon Juaristi, Julio Llamazares, Ana Rossetti, Blanca Andreau, Aurora Luque.

SPAN 477 - Spanish Women Poets (3)

Historical analysis and literary interpretation of a representative selection of modern and contemporary Spanish women poets. Discussion of the topics and preoccupations present in their work, and of their contribution to reformulating the male canon in general.

SPAN 479 - Spanish Culture & Civilization (3)

Presentation and discussion of significant cultural, social, economic and political events and issues that have shaped Spain: its institutions, its cultural and artistic developments.

SPAN 482 - The short story in medieval Spain: fear, educa

This course explores short narrative types and their functions during the thirteenth century up to the sixteenth century in Spain. Topics to cover are: the interplay of different cultures, gender roles, ideological uses, and differences between medieval and contemporary short narratives. All texts are provided in modern Spanish. Required: SPAN 420

SPAN 484 - Towards the sentimental novel: the mystic, th

This course explores different ways of conceptualizing and talking of and through love by means of a selection of texts inherited from medieval Spain. The student will be exposed to mystic love, passionate love, antifeminist discourses, medical notions, etc. Required: SPAN 420

SPAN 485 - 16th - 17th Century Spanish Prose (3)

Prerequisites: SPAN 303 304 & 420

SPAN 490 - Between Laughter and Tears: Gender Stereoty

This course explores the portrayal of gender in Spanish comics. It discusses the nature of crying and laughing as expressions of human behavior and the gender stereotypes traditionally associated with them.

SPAN 494 - Practcl Use Span Writting Lang (2)

A spanish-language writing lab for all levels. As part of the course, students gain hands-on experience by producing an entire edition of a university newspaper/magazine.

SPAN 495 - Senior Residency (0)

Required for graduating seniors.

SPAN 500 - Teaching College Spanish (0)

Practice-centered teaching training for college-level Spanish courses. Discussion and application of course development, of current approaches to teaching and of evaluation techniques. Systematic incorporation of technology in the learning process. (Available to Teaching Assistants only. Offered every semester.)

SPAN 501 - Spanish for Reading and Translation (3)

Practice-centered teaching training for college-level Spanish courses. Discussion and application of course development, of current approaches to teaching and of evaluation techniques. Systematic incorporation of technology in the learning process. (Available to Teaching Assistants only. Offered every semester.)

SPAN 502 - Spanish in the World (3)

A comprehensive analysis of Hispanic dialectology and its historical context. Topics covered include the peninsular origins of Spanish, its past and present contacts with other languages, the features which characterize the different varieties of Spanish (including U.S. Spanish), and the lexical, grammatical, and phonetic features which distinguish European and American Spanish. Offered occasionally.

SPAN 503 - Spanish Linguistics (3)

Synchronic and diachronic analysis of the Spanish Language. Phonological development and morpho-syntactical, lexical and semantic change. Dialects. Discussion of special topics. Offered occasionally.

SPAN 504 - Methods and Technology for the Teaching of

Study of effective classroom presentation techniques for areas which are major sources of difficulty for instructors and students. Designed specifically to test classroom application of new approaches to old language problems. (Offered every other year.)

SPAN 505 - Spanish Phonology and Its Place in the Classr

A survey of fundamental concepts in phonology and phonetics so that the students will be able to describe the primary characteristics of the Spanish sound system, how Spanish phonology differs from English, and ways in which some Spanish accents differ from each other. Also discussed are how such concepts can be used to improve the pronunciation and listening comprehension of students of Spanish, students' appreciation of dialectal variation, and one's own control over Spanish pronunciation. Offered occasionally.

SPAN 507 - Spanish Stylistics (3)

This course presents a theoretical foundation of writing styles as models for extensive practice in descriptive, narrative and analytical modes of written expression. (Offered occasionally.)

SPAN 508 - Learning Texts: Traditiona, Authenticity and Vi

This course analyzes the role of textbooks in foreign language classes and how new technologies have changed the concept of publishing. Students will identify desirable characteristics of texts of particular teaching situations, become familiar with technologies that can be used in teaching, and design lessons based on alternative texts.

SPAN 518 - Contemp Span Cult & Civil (3)

This course provides a study of the nature of Spanish society today, with special emphasis on those events that make Spain unique in relation to other Western countries. Topics of discussion will include elements of the economic, cultural, social and religious life of contemporary Spain. (Offered occasionally.)

SPAN 519 - Contemp Span-Am cult & Civil (3)

A critical analysis of historical, cultural, political, religious, socio-economic and demographic considerations that have contributed to the Spanish American ethos, value system, attitudes, behavior, art and ideas. (Offered occasionally.)

SPAN 520 - Intro to Literary Criticism (0-3)

This course introduces the main schools of contemporary literary criticism. Students then apply these theories to interpret specific works from a variety of genres in Hispanic literature. (Offered once a year.)

SPAN 523 - Contemp Latin Am Short Story (2-3)

Trends, themes and techniques. Emphasis on Borges and Cortazar. (Offered occasionally.)

SPAN 524 - Short Stories: History, Histories (3)

This course explores the Latin American short stories written after 1950. This class's approach works to bridge literary texts with cultural production in order to allow for a comprehensive view of the contemporary historical life. The production of authors such as Uslar Pietri, Borges, Juan Rulfo, García Márquez, Julio Cortázar and others is discussed.

SPAN 526 - Latin American "Modernismo" (2-3)

A survey course that examines the literary expressions of the debate on Modernity and Modernization in Latin America in the period 1820-1920. Topics such as national identity, the creation of modern cities, the "education of women" and the role of minorities will be examined through an anthology of short stories, articles, poems, essays and comics. (Offered occasionally.)

SPAN 527 - Contemp Latin American Poetry (2-3)

Survey course that analyses a representative group of Latin American poets. Main themes and formal characteristics of these authors will be discussed. (Offered occasionally.)

SPAN 528 - Early Latin American Novel (3)

Survey course that examines the Latin American novels written between 1890 and 1940. The class presents an overview of the major movements that informed the novels of the period such as Naturalism, Indigenism, the Historicism, Futurism and other Avant-gard trends. The issues of the construction of national identity and the formation of modern "civilized" societies will be addressed. (Offered occasionally.)

SPAN 529 - Boom, Mass Media and Utopia (2-3)

This course discusses the Latin American narratives and essays and the birth of media culture in Latin America. The cultural production discussed is implied in the political context of the so-called cold war. Main novels discussed belong to the so-called Boom of novel. (Offered occasionally.)

SPAN 531 - Women Writing Women: Latin American Wom

This course focuses on the work of Latin American women playwrights from 1980 until today. Particular attention will be given to the way women represent and perform other women on the stage. (Offered occasionally.)

SPAN 532 - Themes in Latin American Literature (2-3)

This course examines the literary contributions of Afro-Hispanic writers from Spanish America and Equatorial Guinea in order to discuss the complexity of the African experience in the Spanish-speaking world from the colonial period to the 21st Century. In addition to the discussion of race and class issues, the class focuses on the subject of Canon formation and Canon exclusion in order to bridge the real and imagined gaps between Afro-Hispanic literature and that written by canonized writers in Spanish America and Spain. (Offered occasionally.)

SPAN 533 - Narratives on the End of Utopias (3)

This course examines recent Latin American trends that broke up the traditional canon of novel and literary conceptions based on Modernist culture. Categories based on hegemonic discourse and hierarchies are debated. (Offered occasionally.)

SPAN 535 - Counter Hegemony Discourses (3)

This course bridges Latin American literary and cultural productions that confront the use and abuse of local and international power. Voiceless people speak about their disenchanting life. (Offered occasionally.)

SPAN 536 - Written by Herself: Latin American Women Wri

This course introduces the students to the work of Latin American women writers from the Colonial period to the 21st century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society and the construction of women's identity. (Offered occasionally.)

SPAN 537 - Latin American Film (3)

This course looks at critical historical moments and issues over five centuries of conflict and change in Latin America through the vehicle of film. We will look at issues of authenticity and voice, some of the pitfalls of using film to understand history, and at the role of cinema in the creation of national and popular memory.

SPAN 538 - Cultural Stereotypes: Lat Amer (3)

This course is an interdisciplinary approach which confronts stereotypes about Latin American cultures. It involves a vast array of experiences that has established differences, stigmas, and marginalization of Latin Americans. (Offered occasionally.)

SPAN 539 - Contemp Span Women Writers (2-3)

This course introduces the student to the study of the narrative written by contemporary Spanish women authors. There will be a specific study, through selected texts, of the most representative movements and tendencies of the post-war narrative and of the various means chosen by the authors to express their literary universe from their condition as women. (Offered occasionally.)

SPAN 540 - Strangers in a Familiar Land: Displacements i

This class discusses literature, films, documentaries and paintings that portray Latin American displacement after 1950. The approach offers a multidisciplinary view of the diverse participants in Latin American realities. We debate the dynamic of border crossing in the global era, specifically with respect to refugees, exiles, excluded and missing people.

SPAN 543 - El Cid/El Amor/La Celestina (3)

Close reading and discussion of three medieval Spanish masterpieces, which have remained modern throughout the ages. Insight into social, historical, literary, and creative issues. (Offered occasionally.)

SPAN 552 - Don Quixote by Cervantes (3)

Study of Cervantes's masterpiece, Parts 1 & 2, with special attention to its literary form and structure. The term Spanish Golden Age, and the concept of the modern novel will be followed by a close textual reading of Don Quixote. A range of critical essays will enrich the study of the primary text. (Taught in Spanish. Offered occasionally.)

SPAN 553 - Golden Age Lyric Poetry (3)

Seminar on the Renaissance and Baroque poets in the sixteenth and seventeenth centuries: Garcilaso de la Vega, Fray Luis de Leon, San Juan de las Cruz, Luis de Gongora. (Offered occasionally.)

SPAN 554 - Golden Age Drama (3)

Seminar on the Spanish theater of the 16th and 17th centuries. Analysis of the works of Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcón, Pedro Calderon de la Barca (Offered occasionally.)

SPAN 555 - Medieval Spanish Jewish Life under Islam and

Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardi life in the Diaspora. (Taught alternatively in Spanish and English. Offered occasionally.)

SPAN 559 - Spanish Jewry: Medieval Spain (3)

Medieval Spanish Jewish Life under Islam and Christianity. Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardi life in the Diaspora. Fulfills Cultural Diversity Requirement. May be taught in Spanish or English.

SPAN 561 - 19th Century Poetry & Drama (2-3)

Poets: Becquer, Espronceda. Dramatists: Duque de Rivas, Garcia Gutierrez, Zorrilla. (Offered occasionally.)

SPAN 562 - Nineteenth Century Novel (3)

Regionalism and naturalism illustrated in works by Jose Maria de Pereda, Emilia Pardo Bazan, Juan de Valera, Benito Perez Galdos, Blasco Ibañez, Leopoldo Alas. (Offered occasionally.)

SPAN 568 - Contemp Spanish Short Story (3)

This course introduces the students to the general study of the Spanish short story of the twentieth-century after the Spanish Civil War from the seventies to the nineties. The focus will be the most significant tendencies of each period, and their principal authors will be studied.

SPAN 570 - Twentieth-Century Poetry (3)

Machado, Salinas, Jimenez, Aleixandre, Garcia Lorca, Blas de Otero, Hierro. Searching for meaning of life in a fragmented world. (Offered occasionally.)

SPAN 571 - Twentieth-Century Novel (2-3)

Themes and styles of Camilo Jose Cela, Carmen Laforet, Ramon Sender, Juan Goytisolo, Elena Quiroga, A.M. Matute, and L.M. Santos. (Offered every other year.)

SPAN 572 - Twentieth-Century Drama (3)

Casona, Buero, Sastre, Garcia Lorca, Arrabal. Probing into the human condition: especially human mortality. (Offered every other year.)

SPAN 573 - Spanish Literature & Film (2-3)

This course explores the connection between the artistic expression of literature and film in modern Spain. Following the reading and discussion of specific literary works, students view and compare a film rendition of the same (Offered occasionally.)

SPAN 574 - From the Poetry of Knowledge to the Poetry of

Study of how Spanish poetry has recorded the different political, social, and cultural changes in the country during the second half of the twentieth-century to the present. Movements studied include: the poetry of knowledge, the *novísimos*, the *post-novísimos*, the poetry of experience, the new sentimentality, the poetry of silence, and the poetry of the turn of the century.

SPAN 575 - Spanish Novel After 1970 (0-3)

This course introduces the students to the study of the Spanish novel after 1970. The class will begin with the years of transition from dictatorship to democracy. There will be a specific study of the most representative movements and tendencies of the Spanish novel after the seventies, with special emphasis on the period from 1975 until the end of the century. (Offered occasionally.)

SPAN 577 - Verbum: the Journey of Women Poets in Cont

Historical analysis of Spain's contemporary women poets' struggle with the canon. Literary interpretation of a representative selection of modern and contemporary Spanish women poets: Rosalía de Castro, Ernestina de Champourcín, Concha Zardoya, Carmen Conde, Gloria Fuertes, María Victoria Atencia, among others. (Offered occasionally.)

Statistics (STAT)**STAT 110 - Introduction to Statistics (3)**

Basic descriptive and inferential statistics. Emphasis on becoming a smart consumer of statistics. Will include the study of examples of statistics in the medical news. Prerequisite: Two years of High School math or grade of C- or better in Intermediate Algebra. Credit not given for MATH 130 or MATH 126 or DSCI 207 and STAT 110.

STAT 126 - Statistics Including Sports and Politics (3)

A SLU inquiry seminar. Producing data through the use of samples and experiments; organizing data through graphs and numbers that describe the distribution of the data of one variable or the relationship between two variables; probability; statistical inference including confidence intervals and tests of significance. Pre-requisite: 3.5 years of high school mathematics or a grade of C-or better in MATH 120.

STAT 130 - Elementary Statistics with Computers (3)

Data production and analysis; probability basics, distributions; sampling, estimation with confidence intervals, hypothesis testing, t-test; correlation and regression; crosstabulations and chi-square. Students learn to use a statistical package such as SPSS. Prerequisite: MATH-120 or equivalent. Credit not given for both MATH 130 and DSCI 207.

Theological Studies (THEO)**THEO 100 - Theological Foundations (0-3)**

Prerequisite to all further courses. This course begins the disciplined reflection on religion in the university. Along with providing the basic vocabulary, method of theology, and key theological concepts, it equips the student with the historical, textual, and comparative methods and skills that are foundational for further study on the university level. Offered every semester.

THEO 210 - Old Testament (3)

Literary and historical study of the Hebrew Bible, its cultural background, main them, the problems modern thought poses for it, and its permanent significance.

THEO 219 - Studies in Jewish Scriptures in the Christian

This course examines the manner in which the Christian Bible uses the earlier Jewish scriptural tradition to articulate and explain the Christian message.

THEO 220 - New Testament (3)

Books of the New Testament; their formation as literary material, message and meaning for the modern world, and transmission via the community.

THEO 221 - History of Christianity (3)

The historical expression of Christian theology in the faith and life of the church, its major figures and movements, relation to cultural developments, and significance for contemporary problems.

THEO 229 - Studies in Christian Scripture (3)

This is a general title for new courses that consider various theological, textual, and hermeneutical questions found in the New Testament.

THEO 232 - Early Church (3)

The history of early Christianity from Jesus Christ to the Council of Chalcedon in 451 A.D. The variety of early Christianity, geographical expansion, Gnosticism, emergence in the Roman world, Christian art, Trinitarian and Christological controversies.

THEO 233 - Medieval Christianity (3)

The history of medieval Christianity from the early Church origins to the dawn of the Reformation. Topics include: inculturation, missionary activity, the papacy, monasticism, saints and pilgrimage, the penitential system, worship and architecture, feudal society, the crusades, the apostolic poverty movement, friars, the medieval university, mysticism.

THEO 234 - The Church & World Since 1500 (3)

This course will examine the history of Western Christianity since the Reformation, focusing on the themes related to development of doctrine. Interactions of the church with intellectual and cultural challenges will be taken up. Future directions of Catholic Christianity, rooted in the foundation of the Second Vatican Council will be considered.

THEO 235 - American Christianity (3)

The history of American Christianity from colonial times to present, Spanish, French English beginnings; Puritanism, the Great Awakenings; Unitarianism, Congregationalism, Methodism; the immigrant churches, Roman Catholic history; Liberalism, Neo-Orthodoxy, Fundamentalism; Black churches, contemporary movements.

THEO 246 - The Christian Sacraments (3)

The Sacraments, the Church as ultimate manifestation of Covenant of the People of God, development of sacraments in apostolic community and patristic age, modern sacramental theology.

THEO 250 - God in Human Experience (3)

Explores how humans have understood the notion of God with emphasis on the Christian traditions, the God of Jesus of Nazareth.

THEO 251 - Jesus and Salvation (3)

The aim of this course is to provide an integrative understanding of Jesus Christ as he has been proclaimed throughout Christian History up to the present time and his role in salvation.

THEO 252 - Christian Beliefs (3)

This course aims at providing a comprehensive understanding of Christian faith by investigating the historical development and interrelation of its main tenets. Attention will be given to how Christian beliefs arise from, and themselves give distinct shape to, Christian practices in the Church and the world.

THEO 253 - The Church: Yesterday & Today (3)

Issues in the contemporary church will be examined in relation to their historical antecedents. Renewal and reform in the modern church will be considered in the light of the Second Vatican Council. An explicit theological method will be introduced and practiced.

THEO 254 - Christian Sacraments (3)

The Sacraments, the Church as ultimate manifestation of Covenant of the People of God, development of sacraments in apostolic community and patristic age, modern sacramental theology.

THEO 259 - Studies in Faith & Reason (3)

General number for new courses in systematic theology.

THEO 260 - Christian Moral Life (3)

An exploration of Christian character (virtues), principles of decision making, conscience formation, authoritative sources (scripture, tradition, magisterium, etc.) with analysis of issues such as war, capital punishment, physician-assisted suicide, abortion, etc.

THEO 261 - Social Justice (3)

This course is designed to engage students in the reality of social injustice while introducing them to the variety of ways in which the Christian tradition responds to this reality. Students will study selections from scripture, Catholic Social Teaching, Christian theologians, and the lives of Christian saints and martyrs. This course fulfills the Cultural Diversity in the U.S. Core requirement by addressing issues of racism, classism, and sexism, and by engaging the works of African American, feminist, womanist, and Latino/a theologians. Students should leave the course with a better understanding of Christian perspectives on social justice that can be applied to their own faith or spirituality, political choices, and way of life.

THEO 269 - Studies in Christian Morality (3)

General number for new courses in Christian Morality.

THEO 270 - Religious Traditions of Asia (3)

Includes various emphases in the following: a) Historical/Doctrinal, b) Scripture, and c) Arts. Survey of Hinduism, the indigenous traditions of China (Taoism and Confucianism) and Japan (Shinto), and Buddhism from its Indian origins to its expansion into East and Southeast Asia.

THEO 271 - Buddhism: Religion and Art (3)

An introduction to a major component in the cultures of south, southeast, and east Asia through both the textual and visual documentation of the Buddhist tradition. From its origins in India, we follow the path of the Buddha through central Asia and into China, Korea, and Japan; by sea and through Burma into the nations of the Indo-Chinese peninsula, with a brief detour to Indonesia during late antiquity.

THEO 272 - Hinduism: Religion and Art (3)

An overview of fundamental beliefs and values of the family of religious traditions collectively known as Hinduism, using primary textual and visual sources from a range of cultural contexts, with special attention to how the story of Hinduism offers insight into the interplay of verbal and visual expression of religious and cultural beliefs and values. Heavy emphasis on the visual arts as primary sources, always attentive to ways Hindus have "translated" words into images and vice-versa.

THEO 273 - Islam: Religion & Culture (0-3)

An overview of fundamental beliefs and values of the religious tradition called Islam, using primary textual and visual sources from a range of cultural contexts, with special attention to how the story of Islam offers insight into the interplay of religion and culture: wherever Islam has taken root, it has become inculturated even as it has Islamized its new host culture.

THEO 274 - Judaism (3)

This course fulfills the Cultural Diversity core requirement. The history of Judaism in biblical times; Talmud and rabbinic tradition; the diaspora and persecution of the Jews; the Enlightenment; Hasidism and Kabbalah; the Holocaust; Zionism; worship, kosher law, life stages, Jewish feast days; contemporary developments.

THEO 275 - Jerusalem: City of 3 Faiths (3)

DESCRIPTION: This course (under this name only) satisfies the criteria for the College of Arts and Sciences Cultural Diversity component of the Core. A survey analysis of the three Abrahamic faiths and their interrelationships focusing on the significance of Jerusalem for each of them historically and today.

THEO 278 - Religions of the World (3)

This course is an introduction to the history, belief-systems, practices, and divisions of the world's major religions. It focuses especially on Hinduism, Sikhism, Buddhism, Jainism, Confucianism, Taoism, Shintoism, Zoroastrianism, Judaism, Christianity, Islam, the Bahá'í Faith, and Native American spirituality. The only prerequisite is Theology 100: Theological Foundations.

THEO 279 - Studies: Non-Christian Religio (3)

General number for new courses in Non-Christian Religions.

THEO 293 - Special Topics (0-3)

To survey the historical, social, and political background of the Hebrew Prophets; their main themes, passages, and relevance to modern times.

THEO 311 - Old Testament: Psalms (3)

To survey the literary, historical, social and political background of the Psalms; their literary forms, main themes, structure, theology and relevance to modern times.

THEO 312 - Pentateuch (3)

This course examines the first five books of the bible, analyzing key figures such as Abraham and Moses, as well as major theological themes such as covenant, the nature of God, the purpose of biblical law, and the Ten Commandments. Prerequisites are THEO 100 and any 200-level theology course.

THEO 319 - Studies in Jewish Scriptures in the Christian

This course surveys various themes and issues that appear in the Old Testament, such as covenant, theodicy, and hermeneutics. Students will read the Old Testament critically, performing exegesis on Old Testament passages by means of sound hermeneutical principles. Prerequisites are THEO 100 and any 200-level theology course.

THEO 320 - Life and Letters of Saint Paul the Apostle (3)

Examines the life and writings of St. Paul, Apostle to the Gentiles.

THEO 321 - Gospels of Matthew, Mark and Luke (3)

Offers a comparative study of the Synoptic Gospels.

THEO 322 - Gospels and Epistles of John (3)

This course examines the writings of John the Apostle and Evangelists.

THEO 324 - New Testament Ethics (3)

This course asks what principles or values are to be found in the New Testament and how these should bear on Christian living today.

THEO 329 - Studies in Christian Scripture (3)

General number for new courses in the New Testament

THEO 330 - Teachers in Early Christianity (3)

Examines selective writings and thought of theologians in the early centuries of Christianity.

THEO 331 - Teachers: Medieval Christianity (3)

Overview of medieval theologians and spiritual writers with specific attention to the origin and development of the diverse schools of thought in the middle ages.

THEO 332 - Mary and Her Sisters (3)

This course looks at a series of important female figures from the scriptural roots of Christianity, especially the multiple Marys of the New Testament. We will read the primary canonical and apocryphal texts describing these women and examine their depiction in art, literature and music throughout history

THEO 333 - The Reformations of the 16th Century (3)

This is a study of the Protestant Reformation and the Catholic Reformation in the 16th century.

THEO 334 - Christians In Middle East (3)

Building the knowledge gained in at least one prior theology course, this offering studies global Christianity with a focus on Christian churches in the Middle East. The course studies the intersection of theological, historical, ethnic, cultural, linguistic, and political factors that shape expressions of the Christian faith in Greece, Turkey, the Caucasus, Syria, Iraq, Iran, Lebanon, Israel/Palestine, Jordan, and Saudi-Arabian Peninsula to Egypt and Ethiopia. It also studies how middle-eastern Christian identities affect immigrant Christian communities in the diaspora in the West.

THEO 335 - African American Religious Traditions (3)

The purpose of this class is to expose the student to the historical and social nature of African American Religion. The course will cover the historical development of African American Religion from its African origins up to and including the Civil Rights Movement with some attention given to contemporary black liberation theology.

THEO 336 - Christianity in Africa & Asia (3)

The impact of Christianity on Africa and Asia with a focus on developments during the 19th and 20th centuries.

THEO 337 - US Hispanic Theology (3)

An introduction to Latino/a theologies in the United States, this course will examine the contributions of Hispanic Americans to the field of theology while exploring specific issues, concerns, and beliefs unique to the Hispanic community. This course brings marginalized cultural perspectives into critical conversations with dominant narratives, highlighting the contributions of ethnic minorities and women, and challenging the church and university communities to embody the Gospel's inclusive vision where there is no longer Jew or Greek, male or female, rich or poor (Galatians 3:28). In forming men and women for others and in deepening spiritual values in an increasingly interdependent and diverse world, we must think in terms of the global dimensions and implications of knowledge. Critical reflection on cross-cultural issues, whether on the local or global level, is a recurrent theme throughout this course.

THEO 338 - Issues in Theology (0)

This seminar is required for all theology majors, after completion of both the 100 and 200 level courses. The seminar is designed to help students integrate their various theology courses and to apply their learning to current issues and contemporary Christian/Inter-religious living.

THEO 349 - Studies in Theology and History (3)

General number for new courses in theology and history.

THEO 350 - Love and the Human Condition (3)

A theological exploration of human existence as constituted by love, desire, sin and the yearning for salvation. Through examination of classic texts/themes from the Christian tradition, this course will focus on the complex relationship between human and divine love. Specific topics to be covered include: affectivity, knowledge, freedom, built, friendship, self-sacrifice, and human sexuality.

THEO 351 - Marriage & Christian Vocation (0-3)

A study of contemporary Christian theology and ethical reflections on marriage, covering sexual, gender, parenthood, divorce and family issues.

THEO 352 - Theology of Death & Suffering (3)

Judeo-Christian response to the mystery of suffering, the meaning of death, healing as a religious experience. Reference to the bible, contemporary Christian theology, and social studies.

THEO 353 - Christian Feminism (3)

This course is designed to offer a broad understanding of the issues and implications of contemporary feminist thought relative to religious traditions, especially the Christian tradition. It will critique theology and anthropology as well as offer constructive visioning of the new ways of living in relationship. The course is oriented toward personal and social transformation.

THEO 354 - Research Seminar: Sources and Methods in T

The purpose of this course is to provide undergraduate majors with the resources and skills necessary to engage in rigorous theological reflection, research, and writing in preparation for participation in the Senior Seminar THEO 491. Prerequisites: THEO 100, THEO 200 level, and Declared Major in Theology.

THEO 355 - Ignatian Humanism (3)

This course integrates history, theology, and the students' lived experience within the context of an analysis and survey of the Jesuit mission and identity that lies at the basis of their Jesuit education at Saint Louis University. In addition to reading and discussion (both classroom and web-based), the course requires three outside of class interviews and fifteen hours of service-learning.

THEO 356 - Religion and Science (3)

This course examines the history and recent development of three disciplines--cosmology, physics, and biology--to show how religion and science have related to one another in the past and relate to one another in contemporary research and reflection. A final part of the course considers some issues that involve multiple scientific disciplines (e.g., extraterrestrial intelligence, environmentalism, etc.).

THEO 357 - Theology of Gustavo Gutierrez (3)

This course (THEO 100 prerequisite) analyzes and evaluates the theology of Gustavo Gutiérrez. The goal is to gain an appreciation for the unique contributions of Liberation Theology to the historical development of Western theology through a directed reading of important primary texts in the areas of Christology, Soteriology, and Ecclesiology.

THEO 358 - Modernity: Crisis of Belief (3)

This course investigates the crisis in traditional belief that accompanied Europe's transition to modernity. It examines various critiques from both the Enlightenment and post-Enlightenment Europe. It also looks at different Christian responses to these critiques. The course aims to deepen students understanding of Western society and its understanding religion.

THEO 359 - Studies in Faith and Reason (3)

General number for new courses in faith and reason.

THEO 360 - Christian Morality & Health Care (3)

Principles of moral theology and their application to the health care provider and consumer. Specific issues include life-prolonging measures, neonatal care, genetics, experimentation, allocation of resources, and spiritual care of the sick and dying.

THEO 362 - Marriage and Family Ethics (3)

An examination of contemporary Christian thought on marriage and family with attention to ethical practices. Controversial issues such as cohabitation, gay marriage, and divorce are also considered. Prerequisites: 200 level Theology course.

THEO 363 - Sex, Gender & Christian Ethics (3)

An introduction to contemporary Christian thinking on sexuality. Students are encouraged to understand the diversity of the Christian tradition, debate the available alternatives, and come to their own well-reasoned positions. Issues covered include premarital sex, gender, contraception, and homosexuality. Prerequisites: 200-level Theology course.

THEO 366 - Faith and Politics (3)

The course is designed to help students sort through the complex relationship between faith and politics. It examines different approaches to bringing faith into the public sphere and treats controversial issues such as abortion, immigration, and gay marriage.

THEO 367 - Poverty, Wealth & Justice (3)

This course examines how people in the U.S. view poverty and wealth. It also considers various and sometimes differing Christian perspectives on poverty and wealth, focusing especially on the Catholic social tradition and its teachings on economic justice, the meaning of work, and the relationship between justice and charity.

THEO 368 - Green Discipleship: Theology & the Environm

This course explores what the Christian theological tradition teaches about how humankind ought to be relationship with the rest of creation. Focus will be on, but not limited to, Christianity and on key theological themes and perspectives while also seeking to discern possible promising foundations for responding to ecological concerns.

THEO 369 - Studies in Morality and Society (3)

An advanced course in ethics. Topic is chosen by instructor.

THEO 372 - Jewish Life and Thought (3)

This course offers a study of the Golden Age of Spain, Jewish Mysticism, the Enlightenment, 19th century Nationalism, Zionism, the Holocaust and the rise of Modern Israel. Students will examine how these historic phenomena shaped the modern Jewish concepts of Torah, God, Israel and ritual observance. Jewish philosophers from Maimonides to Martin Buber will be studied and students will have an opportunity to attend a local synagogue to experience Sabbath worship.

THEO 373 - Islam: Religion and Culture (3)

Overview of fundamental beliefs and values of the religious tradition called Islam, using primary textual and visual sources from a range of cultural contexts, with special attention to how the story of Islam offers insight into the interplay of religion and culture, and the global role of Islam over its 1400 year history.

THEO 376 - Arts of Hinduism and Buddhism (3)

Study of the art and architecture of the Hindu and Buddhist traditions, beginning in India and tracing the footsteps of the Buddha through Central Asia into East Asia (China, Korea, and Japan), and across mainland and insular Southeast Asia. Focus on learning to read non-textual sources and understand religious enculturation.

THEO 379 - Studies in Non-Christian Religious Traditions

General number for new courses.

THEO 380 - Christian Prayer (3)

What happens when someone prays? How have Christianity's saints and theologians understood conversing with God? This course examines the history of Christian prayer as well as the various ways of praying found therein.

THEO 381 - Eucharist: Liturgical Theology and Practice (3)

Explore the meaning of the Mass, its theology and history and its effect on daily life. Gain basic understanding of liturgical theology and practice by reading primary and secondary sources. Experience and reflect upon liturgical music and various styles of Catholic worship in St. Louis. Prerequisite: THEO 100 & 200.

THEO 382 - Spirituality of Nonviolence (3)

The Spirituality of Nonviolence offers students a variety of opportunities to learn, practice and experiment with the power of creative nonviolence to transform their lives and our world. Student will recognize nonviolence as an act of faith in the God of Love and Justice.

THEO 383 - Christian Spiritual Tradition (3)

Studies in the major spiritual trends and key figures within the Catholic, Eastern, Orthodox, and Protestant traditions.

THEO 389 - Studies in Theology and Religion (3)

General number for new courses in theology and religion.

THEO 402 - The Bible and Literature (3)

Study of selected books and passages from Old and New Testaments, as well as selected contemporary books, plays and philosophical essays. Comparison of nature and destiny of the human person and the world. Application of these themes to contemporary life.

THEO 410 - Biblical Interpretation (3)

An examination and survey of biblical hermeneutics, including Old and New Testaments, rabbinic Judaism, the early church, and the history of hermeneutical theory up to the present time.

THEO 411 - Biblical Apocalyptic Literature (3)

Study of this book and the nature of apocalyptic literature. Exegesis of the Book of Revelation as an early example of Jewish-Christian literature.

THEO 412 - The Bible & Literature (3)

Study of selected books and passages from Old and New Testaments, as well as selected contemporary books, plays and philosophical essays. Comparison of nature and destiny of the human person and the world. Application of these themes to contemporary life.

THEO 413 - Prophets (3)

To survey the historical, social, and political background of the Hebrew prophets; their main themes, passages, and relevance to modern times.

THEO 414 - Psalms (3)

To survey the literary, historical, social, and political background of the Psalms; their literary forms, main themes, structure, theology, and relevance to modern times.

THEO 419 - Studies in Jewish Scriptures in the Christian

Examines themes and issues of the Jewish Scriptures as found in the New Testament.

THEO 420 - Synoptic Gospels: Adv Topics (3)

An examination of the Gospels of Matthew, Mark and Luke, with special focus on the distinctive portrait of Jesus each presents.

THEO 429 - Studies in Christian Scripture (3)

General number for new courses in Christian Scriptures.

THEO 431 - Survey: Early Church (3)

This course is a study of the figures, issues, and movements in the development of Christianity from the close of the New Testament to the beginning of the Middle Ages, or in other words, the Apostolic Fathers to Gregory the Great.

THEO 432 - Survey: Medieval Church (3)

This course exposes students to the broad sweep of figures, movements and theological themes in the historical period from late antiquity through the 15th century.

THEO 433 - Survey: Modern Church (3)

This course is designed to expose students to the broad sweep of figures, movements, and theological themes in the historical period from the Reformation to the present day.

THEO 434 - Survey: American Church (3)

This course surveys major developments in Catholic and Protestant Christianity, from the 16th century Spanish influence to the present, with special attention to theological and intellectual issues.

THEO 435 - Medieval Mystics: Love and Knowledge (3)

A review of the theology and mystical experience as found in medieval mystical texts.

THEO 436 - Catholicism Today (3)

A systematic and foundational study of the content and the relationships between human existence, God, Jesus Christ, Holy Spirit, Church, Sacraments, Spirituality, and Morality.

THEO 437 - Women in the Early Church (3)

Observing a widespread ambiguity in women's lives between subordination, exemplary status, leadership roles, and opposition on account of it, this course examines a wide range of primary texts by and about women in the early Christian churches in order to explore the relationship between faith and culture as the context for understanding women's role and status in the early church. We will also employ hermeneutical principles in the interpretation of these texts in order to assess the relevance of their application to the modern context.

THEO 449 - Studies in Theology & History (3)

General number for new courses in theology and history.

THEO 450 - Theology of God (3)

The historical and contextual study of human understanding of God and personal, pastoral implications.

THEO 451 - Theol & Cultural Anthropology (3)

An examination of interplay between theology, culture, and anthropology.

THEO 452 - Church: Mission & Culture (3)

An examination and study of the interrelationship and dynamics of the Church in its mission and the contexts of cultures where it resides.

THEO 453 - Theology of Nature (3)

A study of nature and ecology in the history of Christian theology and spirituality, examining the biblical basis for environmental ethics; the importance of the earth in a Trinitarian, incarnational, and sacramental theology; and a comparison with the environmental sensitivity of other faith traditions.

THEO 454 - Christology (3)

This course is a biblical, historical and systematic theological study of the person and significance of Jesus of Nazareth. As an upper-level course offering, this course presupposes the students' familiarity with the study of theology as ordinarily attested by the successful completion of a 200 and 300 level theology course.

THEO 455 - Women, Evangelization, World (3)

In a theological and historical context, we will examine how Christian women in the Americas, Africa and Asia have understood and shaped evangelization, both in the present and past within their denomination and beyond. After a brief excursion into evangelization and first millennium women, we will examine selected 19th and 20th century U.S. Christian women and move to contemporary women's experience of evangelization.

THEO 456 - Theology of the Human Person (3)

This course explores the meaning of being human from a theological perspective. It examines themes of nature and grace, sin, free will, human knowledge. As an upper-level course offering cross-listed as a graduate course, this offering presupposes familiarity with the study of theology as attested by the successful completion of a 200- and 300-level course.

THEO 459 - Studies: Faith & Reason (3)

General number for new courses in faith and reason.

THEO 460 - Bioethical Controversies (3)

An examination of biomedical issues through an understanding of the nature of ethics, methodology, and process of moral analysis and reflection.

THEO 461 - Spirit/Political Commitment (3)

A study of themes in theology as they relate to politics and the discipline of the spiritual life, through the writings of Gandhi, King, Merton and others. May be taken as a Core course only by students in the School of Social Service.

THEO 463 - Ethics and Liturgy (3)

This course explores the possible connections between liturgy and ethics, worship and morality. It specifically examines the ways in which liturgy, first, is a source for ethics, second, is an object of ethical evaluation, and third, is, as some major Protestant and Catholic theologians recently argue, coterminous with ethics.

THEO 464 - American Spirituality and Landscape (3)

A study of American spiritual traditions from the perspective of their spatial contexts, landscape, and sense of place. The theological understanding and ritual practice of sacred place will be considered in Native American, Spanish/French, Catholic, Puritan, Evangelical Protestant, Shaker, and Catholic Worker traditions (among others).

THEO 465 - War and Peace in the Christian Tradition (3)

This course examines Christian perspectives, from the early church to the present, on the ethics of war and peace. It explores developments in church teachings about pacifism and nonviolence, just war, crusades, total war, outlawing of war, the responsibility to protect vulnerable populations, and responding to the threat of terrorism.

THEO 466 - Theology of Nature (3)

A study of nature and ecology in the history of Christian theology and spirituality, examining the biblical basis for environmental ethics; the importance of the earth in a Trinitarian, incarnational, and sacramental theology; and a comparison with the environmental sensitivity of other faith traditions.

THEO 467 - Social Ethics: Christian Faith in the Public Sp

The course gives students an understanding of contemporary Christian Social Ethics. Christian theological debates on war, human rights, economic justice, capital punishment, the environment, and the family will be addressed. Prerequisites are successful completion of a 100, 200, and 300 level courses.

THEO 468 - La sangre de los mártires (3)

Latin America history can be characterized as a cultural mestizaje between the Iberian, African, and Indigenous cultures resulting from Christian/Catholic evangelization. Such evangelization created a tragic history in which the poor, women, and ethnic minorities were the victims of violence that gave birth to a theology of liberation and martyrdom.

THEO 469 - Studies in Morality & Society (3)

General number for studies in morality and society

THEO 470 - Interreligious Dialogue (3)

A study of the self-understanding of Christianity as it faces the other religions of the world. The uniqueness of Christ, the Christian notion of revelation, particularist and universalist salvation, salvation outside of the Church, and plurality of the Christian tradition concerning salvation.

THEO 479 - Studies in Non-Christian Religious Traditions

General number for Studies in Non-Christian Religious Traditions.

THEO 480 - Christian Iconography (3)

Examines the theological themes found in early and contemporary Christian art.

THEO 488 - Nicaragua: Theology and Culture (0-3)

A service learning course that includes a 2-month summer immersion program in Nicaragua, a semester of preparatory study of Latin American culture and theology, and post-trip reflection on the summer experience. Limited to 4-6 students. Students must apply for the Puleo Scholarship in Dept. of Theological Studies in fall; attend classes at SLU in the spring and in the fall following the summer program.

THEO 489 - Studies in Theology & Religion (3)

General number for Studies in Theology and Religion.

THEO 491 - Senior Seminar (3)

Reading and analysis of classic works in the historical development of the theology in the church and the university, and in modern and contemporary understandings of theology in relation to both, with aim of illuminating the communal and public dimensions of theological inquiry. Required of all majors.

THEO 500 - Old Testament (3)

Growth of the Old Testament; oral tradition and documents. Documentary hypothesis; prophetic movement and the formation of the prophetic books; psalms and wisdom literature (literary forms); text and canon. Offered occasionally.

THEO 502 - Pentateuch (3)

Exegesis of the text of selected portions of the pentateuchal literature; development of the textual tradition; textual and form criticism. Offered occasionally.

THEO 504 - Prophets (3)

Exegesis of the text of the prophetic writings; prophetic form and theology, pre- and post-exilic prophetic theology; messianic theology. Offered occasionally.

THEO 506 - The Psalms (3)

Types, literary composition and outline, liturgical and theological context. Individual psalms studied as representative of each category. Offered occasionally.

THEO 510 - The New Testament (3)

The external and internal history of the New Testament; literary forms, main theological concerns of each New Testament writer. Offered occasionally.

THEO 511 - The Synoptics (3)

In-depth study of Matthew, Mark, Luke. Theological problems involved; form and redaction criticism; role of the kerygma and the Christian community in formation of the Synoptics; theology, especially Christology. Offered occasionally.

THEO 512 - Luke & Acts (3)

Considers Luke's main theological theme and how it relates to the other themes. Certain passages will be studied in detail. Review of secondary literature. Offered occasionally.

THEO 514 - Johannine Literature (3)

Original setting established through structural, thematic, and pericope analysis; how Christian faith and life today are enriched by this literature. Offered occasionally.

THEO 515 - Biblical Interpretation Study (3)

This course seeks to introduce students to the field of biblical hermeneutics: the theory of understanding and interpreting biblical texts. The course will survey the history of hermeneutical theory, emphasizing its richness, diversity, and the sources and norms that serve as its basis. Offered occasionally.

THEO 519 - Special Topics: New Testament (3)

Offered occasionally.

THEO 520 - Intro to Historical Method (3)

Principles of historical criticism, methods in research and writing. Church historiography, and theological issues of faith and history. Offered every Fall semester.

THEO 521 - Survey of Early Christian Hist (3)

A broad study of the figures, movements and theological themes in the development of early Christianity from the close of the New Testament to Gregory the Great. Offered annually.

THEO 522 - Survey of Medieval Chrstn Hist (3)

A broad study of the figures, movements and theological themes in the historical period from late antiquity up to the 15th century. Offered annually.

THEO 523 - Survey of Mod Euro Chrstn Hist (3)

A broad study of the figures, movements and theological themes in the development of Protestant, Orthodox and Catholic Christianity from the time of the Reformation through the Council of Trent to the present, but with European emphasis. Offered annually.

THEO 524 - Survey of Amer Chrstn History (3)

A broad study of the figures, issues and movements in the development of North American Christianity from the arrival of Columbus to the present. Offered annually.

THEO 525 - Survey of History of Religions (3)

A broad study of the figures, movements, and theological themes of the primary religions of South Asia, East Asia, the Middle East, as well as the Abrahamic traditions. Offered annually.

THEO 526 - Comparative Theology (3)

A study of how theological change has taken place historically in the context of inter-religious relations, and of the implications of serious interchange between and among religious traditions for the future of Christian theology. Offered annually.

THEO 536 - Intro to Theological Method (3)

Principles of various theological methods, issues pertinent to defining theology as a field of inquiry, history of different approaches to theology and theological questions. Offered every spring semester.

THEO 540 - Foundational Theology (3)

Methods and presuppositions in doing theology; emphasis on exploring transcendence in human experience, grace, revelation, faith. Offered occasionally.

THEO 542 - God (3)

Existence and nature of God in the Bible, in Christian tradition and contemporary theology. Offered occasionally.

THEO 544 - Christology (3)

Meaning of Jesus Christ in the Bible, in Christian tradition, and contemporary theology. Offered occasionally.

THEO 545 - Theology of the Human Person (3)

This course explores the meaning of being human from a theological perspective. It examines thmes of en nature and grace, sin, free will, human knowledge.

THEO 546 - Mariology (3)

Mary in salvation history and her relationships with fundamental themes of Christian faith. Offered occasionally.

THEO 547 - Church (3)

Foundation, structure, marks, mission, and offices of the Church; historical development; ecumenical questions. Offered occasionally.

THEO 550 - Sacraments (3)

Sacraments in Christian history and theology in general. Offered occasionally.

THEO 552 - Christian Today (3)

Review of Catholic and Protestant theologians on the family. Issues addressed include: gender, parenting, divorce/remarriage, sexuality, social justice, and public policy. Offered occasionally.

THEO 554 - Christian Anthropology (3)

Meaning of sin, grace, and justification in Christian tradition. Offered occasionally.

THEO 559 - Catholicism Today (3)

Offered occasionally.

THEO 560 - Moral Systems (3)

Major contemporary systems and approaches to Moral Theology. Discussion of certain practical problems, e.g. right to life, civil rights, truthfulness, etc. Offered occasionally.

THEO 561 - Morals & the New Testament (3)

An analysis of the teaching of the new Testament on attitudes toward God and other people. Emphasis on the place of faith, hope, love in the moral life. The Beatitudes and other moral exhortations of Christ in the light of the morality of the early Church. Offered occasionally.

THEO 562 - Forming of Christian Conscienc (3)

Sin and guilt as both problem and mystery in relation to Christian conscience, freedom, virtue, sanctity, and sanity. Offered occasionally.

THEO 563 - Social Morality (3)

The Scriptural basis for the social teachings of the Church, the development of this Scripture basis in the Fathers of the Church and in the theologians of later periods, social problems of the modern world in the last two centuries. Offered occasionally.

THEO 564 - Sexual Morality (3)

Nature and principles of Christian sexual morality; special contemporary questions. Offered occasionally.

THEO 565 - Bioethics (3)

The basic theological stances and conflicts related to the fields of medicine and the new biology; specific areas and problems analyzed, e.g., abortion, euthanasia, genetic engineering, etc. Offered occasionally.

THEO 566 - Death, Suffering, & Afterlife (3)

Judaeo-Christian response to the mystery of suffering, the meaning of death, healing as a religious experience. Reference to the bible, contemporary Christian theology, history, and social studies. Offered occasionally.

THEO 568 - History of Moral Theology (3)

A survey of sources, methodologies, and issues in Roman Catholic moral theology from the apostolic church to the present day. Offered occasionally.

THEO 569 - Sp Top: Moral or Pastoral Theo (3)

Offered occasionally.

THEO 573 - Spirituality & Psychology (3)

Implications of psychological and developmental theories, especially those that are humanistic and existential, for an integrated spirituality. Offered occasionally.

THEO 578 - Spirituality & Art (3)

Imagination and symbol in spirituality; and survey of various ways in which faith has been artistically expressed, in relation to sacred text, sacred, space, sacred time and the individual believer. Offered occasionally.

THEO 579 - Special Topics: Spirituality (3)

Offered occasionally.

THEO 580 - Theo & Catechetical Ministry (3)

History and theology of religious education and the role of the catechist in Christian tradition; the theological understanding of religious education and the principal authoritative documents of recent times. Offered every other year.

THEO 581 - Models & Methods for Rel Educ (3)

Examination of theological and educational models in religious education and their influence on catechetical material and methods; applied to all levels; texts and resources reviewed. Offered every other year.

THEO 582 - Admin of Rel Educ Programs (3)

Strategies for developing and maintaining religious education programs in school and parish; recruitment, supervision, evaluation, in-service of teachers; goal-setting, organization, evaluation of programs; communication skills and collaboration; budgeting and record keeping; leadership styles and conflict management. Offered every other year.

THEO 583 - Element of Rel Educ Curriculum (3)

Essential elements of religious education curriculum; introducing children and adults to sacraments; focus on first sacraments and RCIA; liturgy and prayer in catechesis. Offered every other year.

THEO 589 - Spe Topic: Religious Education (3)

Offered occasionally.

THEO 590 - Teaching Theology (0)

This seminar, required of all graduate students who are teaching undergraduate courses, will meet several times a semester. It is designed to initiate graduate students into the art of teaching undergraduate theology. It will focus on the pedagogy of how to help undergraduate students think, read, speak, write and research theologically.

THEO 594 - Internship in Religious Education (3)

The basic strategies for developing and maintaining religious education programs in Catholic school and parish settings will be explored through a combination of : (1) Work with a director of Religious Education (DRE) or coordinator of religious Education (CRE); (2) Group discussion with a Master religious educator focusing on readings from professionals in the field.

THEO 601 - Rsrch Prob in Early Chrstn His (3)

Research methods applied to the early church with particular attention to select primary sources. Offered biannually.

THEO 602 - Rsrch Prob in Medvl Chrstn His (3)

Research methods applied to primary theological sources of Medieval Christianity. Offered biannually.

THEO 603 - Rsrch Prob in Mod Chrstian His (3)

Research methods applied to Modern Christian History with particular attention to select primary sources. Offered biannually.

THEO 604 - Rsrch Prob in Amer Chrstn Hist (3)

Research methods applied to the American Church with particular attention to select primary sources. Offered biannually.

THEO 611 - Early Church Seminar (3)

A study of specific author or school of theology in Christian antiquity. Offered every semester.

THEO 612 - Medieval Seminar (3)

In-depth study of particular authors, schools or texts in the Medieval religious world in connection with the ongoing research of the instructors. Offered every semester.

THEO 614 - Modern Europe Seminar (0-3)

Study of a specific author or school of theology in modern, primarily European, Christian history. Offered every semester.

THEO 615 - American Seminar (3)

Engagement with a research problem in American Christianity following on the professor's own research. Offered every semester.

THEO 621 - Dissertation Prospectus (0-3)

All PhD students must register for Dissertation Prospectus after having taken their comprehensive exams and prior to registration for THEO 699, dissertation research.

THEO 693 - Spec Topics in Historical Theo (3)

Offered occasionally.

Theatre (THR)**THR 100 - Approaching the Arts: Theatre (3)**

Objectives: 1. To examine some public impressions of the role of the arts in American society; 2. To demonstrate to students, through lecture and discussion, some of the key features of a play in performance which critics, fans, and theatre artists have sought in contemporary productions; 3. To introduce some of the students to the standard tasks and procedures brought to bear in play productions; 4. To apply all of these studies to the appreciation of plays by viewing several live productions during the semester. Satisfies the Arts and Science Core Requirement for non-majors.

THR 101 - Intro to Performing Arts (3)

The goal of this course is to introduce students to the world of the performing arts in Western culture. After a set of synthetic historical and theoretical lectures, the course will focus on single works inspired by the same subject, chosen within the main repertoire of each discipline (drama, opera, ballet, concert music, musical theatre). This will allow the students to appreciate how the same ideas can be treated differently according to the artistic medium to which they are adapted.

THR 150 - Introduction to Theatre (3)

An introduction to the process of making theatre. Students will work on producing theatre and discuss aesthetic and practical considerations in theatre production. Satisfies the Arts and Science Core Requirement for non-majors.

THR 205 - Introduction to 3D Design (3)

This course will develop a fundamental understanding of the process of designing in 3 dimensions. Exercises will explore the methodology of conceptualization of objects, containers, and spaces. This course satisfies the Art and Science Core Requirement for non-majors.

THR 206 - Intro to Computer Aided Design (3)

This course introduces the fundamentals of computer aided design, concentrating on 2-D drafting and prototyping. AutoCad 2002 LT will be used. Drafting training or experience recommended but not required.

THR 220 - Survey of Theatre Design (3)

The Survey of Theatre Design will explore how theatre designers conceptualize the world of a play. The class is intended for the student of theatre who desires a general introduction to costume design, scenic design, lighting design, sound design and projection design. Prerequisite: THR 150.

THR 240 - Page To Stage (3)

You will explore how playwrights tell stories about the world. Students will research a figure, crisis, issue or historical event and arrange this material into plays. Objectives: understand what playwrights do; what the basic elements of a play are; experience the creative process of playwrighting. Fulfills core fine arts requirement.

THR 250 - Costume Construction (3)

Objective: To give students an understanding of the importance of effective stage costuming both for the actors performance and the audience's perception of the play. Topics include pattern drafting, draping, and sewing costumes for the stage.

THR 251 - Acting I: Fundamentals (0-3)

Study in the principal theories of realistic acting is balanced with practice in experiencing character creation. Principles of physical and emotional character development are explored. Satisfies the Arts and Science Core Requirement for non-majors.

THR 252 - Stagecraft (0-3)

1. To introduce students to the regular tasks in theatre production; 2. To introduce students to the common architectural features and standard equipment of modern theatres; 3. To guide students in proper and safe procedures in Stage Carpentry and Electrics; 4. To introduce students to commonly used Theatre drafting symbols.

THR 253 - Acting II: Rehearsal & Performance (3)

An intermediate acting course designed to teach the protocol of collaboration in rehearsal and performance. Emphasis will be given to text analysis and rehearsal techniques to assist in believable character development.

THR 254 - Voice & Diction (3)

Objectives: 1. To teach the value of freeing the natural voice; 2. To guide students through activities in which they release vocal sound freely from the trunk of the body; 3. To identify for individual students any prior speaking habits which limit the students ability for sincere and effective passionate expression through speech. Activities include in-class performance and accompanying critique.

THR 256 - Movement for the Theatre (3)

A practicum in stage movement for those with an interest in acting. Studio sessions will incorporate exercises which stress/correct use of the anatomical components of human movement. Emphasis will be given to individual movement awareness, movement variations for characterization and physical spontaneity.

THR 258 - Make-Up for the Stage (3)

This course teaches essential skills in the application of stage makeup for corrective purposes and the use of makeup and prosthetics to enhance characterization for the actor. Activities include in-class projects.

THR 270 - U.S. Diversity in Theatre (3)

Examines cultural diversity in the U.S. through the lens of theatre as a tool to educate and enlighten. Topics may include race, ethnicity, gender, sexuality, religion, prejudice, and/or discrimination as depicted in dramatic literature and stage productions.

THR 305 - Advanced 3D Design (3)

This course is a continuation of the issues and problems explored in Introduction to 3-D design. Further refinement of design methodologies and presentation techniques will be acquired through projects with more complex programs and scopes.

THR 350 - Playscript Analysis (3)

Objectives: 1. To introduce students to play-reading as an act of imagining a theatrical performance; 2. To introduce the students to some fundamental concepts of Dramatic Theory with reference to certain significant plays in the Dramatic canon; 3. To give students an understanding of some aspects of contemporary playwriting aesthetics; 4. To provide students with interpretive/analytical skills which enable them to explain the performance demands implicit in certain playscripts. Activities include critical writing by students at a scholarly level.

THR 351 - Musical Theatre Performance (3)

Objectives: 1. To give students an overview of the history of Musical Theatre Genre; 2. To guide students in performance exercises in Musical Theatre; 3. To instruct students in acting techniques that can be used in performance of vocal music. Activities may include in-class performances in an audition format and/or longer cuttings from Musical Plays.

THR 352 - Advanced Acting: Auditioning (3)

This course is designed to assist in the selection of audition material, increase awareness of hiring practices in the performing arts, and prepare a marketable audition repertoire.

THR 353 - Scenic Art (3)

This course will familiarize the student with essential 2-dimensional scenic art techniques. By the end of the course the student will understand how to break down a scenic art problem to its component parts and develop a process through which a full scale work can be successfully realized.

THR 355 - Theatre Practicum (0)

Special Notes: <i>Theatre Majors/Minors Only</i> Faculty guided experience in University Theatre Productions. This course is repeatable. Pass/Fail only.

THR 356 - Theatre Workshop (1-2)

Directed participation in University theater production of plays in English or Spanish, both as actors and as crew. At least two months of rehearsals before end-of-semester performance. Note: Rehearsals held during the evening.

THR 357 - Advanced Scenic Art (3)

A continuation of the 2-dimensional skills and processes acquired in Scenic Art with more complex 2-dimensional projects, and an introduction to 3-dimensional scenic production and finishing.

THR 360 - Prof. Theatre: Career Prep (3)

An overview of the American Professional Theatre, its professional organizations and operational paradigms. Portfolio and resume preparation.

THR 361 - Theatre Management (3)

Theatre Management is a course designed to introduce theatre students to the practice, realm and study of Theatre Management. Topics include: strategic planning, marketing/public relations, arts law, financial management, development (fund raising), operations/facility management and personnel.

THR 362 - Stage Management (3)

An introduction to the role and function of the stage manager in the theatre production process.

THR 370 - Directing I: Theories & Method (3)

This course intends to provide the beginning directing student the fundamentals of the art. Upon completion students will have a firm grasp on the duties of a director. Students will also have a basic knowledge of staging for different theatres. Prerequisite: THR 350.

THR 450 - Costume Design (3)

Objectives: 1. To help students see collaborative options for uniting the choices an actor makes in creating a given character with choices a costume designer can make in visibly presenting that character to an audience; 2. To instruct students in the process of collaboration between the Costume Designer and the Director, and some standard research practices followed by Costume Designers in the theatre; 3. To guide students through the process of Costume Design from conceptualization to design presentation. Activities will include individual costume design projects.

THR 451 - Theatre History I (3)

Objectives: To demonstrate to students, through lecture and discussion, how characteristics of theatre production and playwriting have been influenced by the philosophy, politics, and technology associated with different eras and diverse cultural environments. Topics include the primitive origins of theatre, indigenous theatre of India, China, and Japan, the theatre of ancient Greece and Rome, early Christian Liturgical presentations, the drama and scenography of the Italian Renaissance, the Italian Commedia, the theatre of 16th and 17th century Spain, the theatre in Elizabethan England, the theatre of 16th and 17th century France, and the Restoration era in England. Activities include a formal research paper.

THR 452 - Theatre History II (3)

Similar in format to THR-A451. Topics include romanticism and democracy, German dramaturgy of the 18th and 19th centuries, American Colonial Theatre, the Industrial Revolution and the emergence of experimental drama in Scandinavia and Russia, the Independent Theatre Movement of early 20th century Europe and America, European theatre between the wars, changes in values after the second world war and the growth of a counter-culture, post-modernism and multi-cultural aesthetics in the theatre. Activities include a formal research paper.

THR 453 - Scenic Design (3)

Scenic Design is the process of converting text to a 3-dimensional environment. This class explores the essential elements in the scenic design process necessary to produce a finished scenic environment.

THR 454 - Lighting Design (3)

This course introduces the essential concepts and practical consideration of lighting design for live events.

THR 457 - Advanced Acting (3)

This course will provide introductory knowledge of the basic acting theories espoused since the late 1800's. Application of that knowledge will be given to scenework and/or monologue preparation.

THR 459 - Adv. Acting: Period Styles (3)

This is an advanced acting course introducing the values and mores of select historical periods and performance styles with the intention of applying that knowledge to characterization.

THR 460 - Professional Internship (1-6)

Faculty approved assignment with a Professional Theatre Company or Video Production Studio.

THR 462 - Adv. Acting: Special Topics (2-3)

This course is structured around various topics which introduce advanced level students to particular performance techniques. Topics might include auditioning, acting for the camera, voice acting, creative dramatics, stage combat, etc.

THR 463 - Adv. Studies in Theatre Design (1-2)

This course is directed study and studio work that builds on the foundation laid down in Scenic Design, Lighting Design, Costume Design, and Drawing for the Designer. Students select works which focus their attention on specific design problems which arise from issues of genre, style, period, and venue.

THR 464 - Contemp African-Amer Theatre (3)

This course is directed towards a better understanding of theatrical literature about people of color Black Americans, Hispanics, Latin Americans, Asian Americans, Native Americans, Women, Gay and Lesbian Americans. Cultural Studies and Performance Studies tools and techniques of post-structural and post-modern literary criticism will be used to analyze plays, productions, video productions, and live performances of various groups listed above. Emphasis will be placed on reading, responding, and comparing the similarities and differences of the texts. A major goal will be to understand and appreciate the cultural differences of the plays in order to witness how important it is to know other cultures and their contributions to theatre.

THR 470 - Directing II (3)

Upon completion, students will begin to develop their own approach to directing for the stage. As they begin to find their own process they will focus on composition, pacing, and text analysis. Students will be able to critically evaluate their work and progress in the field. Prereq: THR 370 Directing I

Women's & Gender Studies (WGST)**WGST 197 - Introduction to Women's and Gender Studies**

Examines issues concerning women in a variety of disciplines, including the humanities, the social sciences, the sciences, and art. Special focus given to enabling students to recognize and critically analyze the notion of gender and patterns of gender roles.

WGST 301 - Women in Art (3)

The role of women in art as symbol/image, artist, or patron from the ancient world to the present. Examples drawn from architecture, painting, sculpture, film and television, in a discussion of images created by women that are both positive and negative.

WGST 323 - Gender & Society (3)

Examination of the impact of large-scale forces on how gender roles are structured and enacted in our society. Particular attention to be paid to the different experiences of men and women in the labor force, politics and the family.

WGST 330 - Intercultural Communication (3)

Introduces the role of culture in the process of human interaction and encourages in-depth analysis of the unique challenges posed by intercultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups.

WGST 332 - Mary and Her Sisters (3)

This course looks at a series of important female figures from the scriptural roots of Christianity, especially the multiple Marys of the New Testament. We will read the primary canonical and apocryphal texts describing these women and examine their depiction in art, literature and music throughout history.

WGST 343 - Marriage and the Family (3)

Examination of theories and data on different types of families, role assignments, and definitions, pertaining to various types of societies through space and time. Modern aspects of family institutions and problems, with an emphasis on the issue of equality of marriage.

WGST 344 - Marriage & Family (3)

Examination of theories and data on different types of families, role assignments, and role definitions, pertaining to various types of societies through space and time. Modern aspects of family institutions and problems, with an emphasis on the issue of equality in marriage.

WGST 351 - The Structure of Poverty (3)

This course examines the structural causes of poverty at the global and local levels from a multidisciplinary perspective. The course focuses on the social, political, and economic structures that produce and perpetuate poverty. The global dimension of the course focuses on developing countries, while the local dimension focuses especially in the St. Louis area.

WGST 363 - Sex, Gender, & Christian Ethic (3)

An introduction to contemporary Christian thinking on sexuality. Students are encouraged to understand the diversity of the Christian tradition, debate the available alternatives, and come to their own well-reasoned positions. Issues covered include premarital sex, gender, contraception, and homosexuality. Prerequisites: Any 200 level Theology course.

WGST 365 - Women's Lives (3)

This course examines women's lives in the nineteenth- and early twentieth-century United States. Looking at a wide range of different kinds of texts, including novels, photographs, essays, speeches, letters, short stories, autobiographies, and slave narratives, we will examine how women from diverse social positions produced, promoted, and challenged representations of womanhood.

WGST 372 - Ren & Mod Political Theories (3)

Examines the works of Machiavelli, Hobbes, Locke, Rousseau, Wollstonecraft, Taylor, and Mill, among others, focusing on different notions of justice, law, freedom, and community. Particular attention is paid to the public and private contexts and gendered political roles associated with modern political thought.

WGST 373 - African Diaspora Writing (3)

An introduction to the fiction and poetry of Black African and African American writers.

WGST 375 - Women in Literature (3)

Reading and analysis of works authored by and about women; studied from a feminist perspective.

WGST 377 - Postmodern Politics: Sex/Race/Class (3)

This course will examine postmodern thought with a focus on poststructuralism, semiotics, and deconstruction. The course will critically interrogate these approaches and examine the politics of the construction of self, communities, cosmologies, understandings of agency and responsibility, and issues of social justice by focusing on class, race, and sex.

WGST 378 - Disability Theory and Politics (3)

This course applies insights from disability studies to Western political thought in order to examine the political nature of disability and the disabling nature of politics. In this course, students are exposed to varying definitions, cultural representations, social justice issues, human rights concerns, and bioethical debates related to disability.

WGST 385 - Feminism in Action (3)

This course addresses feminist activism on a wide range of issues (including domestic violence, rape, education and health care), and in a variety of forms (including writing, theater, public protests and coalition building). It gives students the opportunity to study the scholarship of activism and to participate in feminist action.

WGST 389 - Female Bildungsroman (3)

The Bildungsroman has traditionally traced the intellectual, social, and moral education of a male hero. This course addresses how female artists modify this narrative genre to tell alternate stories about intellectual, social, and sexual development. Through critical examination of the female Bildungsroman, students explore how gender affects selfhood, citizenship, and authorship.

WGST 390 - Feminist Theory-Gender Justice (3)

Feminist Theory: Gender Justice examines the various ways of understanding gender by looking at a variety of theories and philosophical perspectives within feminist thought, especially as it is formed by political philosophy including liberal, radical, Marxist and postmodern feminism. Sub-field in political science is Political Thought.

WGST 395 - Human Sexuality in the Black Community (3)

In addition to providing general knowledge about human sexuality, this course assists students with gaining an insight into their sexuality and relationships. In addition to examining sexual issues at the personal and relational level, the course focuses on increasing general knowledge and understanding of human sexuality.

WGST 420 - Psychology of Women (3)

The study of girls' and women's development, including gender roles, gender role stereotyping, the biology of being female, psychological theories about gender, violence against women, women in families, in relationships, and in the workplace. The course addresses women's diversity by race, ethnicity, culture, age, nationality, sexual orientation, and economic condition.

WGST 430 - Gender & Communication (3)

Explores the ways in which communication in families, schools, media, and society creates and perpetuates gender rules. Discusses how men and women enact gender differences in public and private, and how such experiences affect success, satisfaction, and self-esteem.

WGST 431 - Contemp Women Writrs in France (3)

20th-Century Women's fiction in French, examined in light of French and Quebecois feminist theory. De Beauvoir, Duras, Sarraute, Brossard, Maillet, Cixous, Irigaray, Redonnet, etc. Taught in French.

WGST 433 - Psychology of Oppression (3)

This course uses a family-centered approach to the study of the health care needs of women, infants, children, and adolescents. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to significant health care issues within these populations.

WGST 434 - Nursing Care of Childbearing (3)

This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected women, infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings.

WGST 435 - Stereotyping and Bias in Mass Media (3)

Examines debates over stereotyping and bias in the mass media. Considers the types of materials that have aroused charges of bias, and surveys the historical, economic, political, sexual, and sociological perspectives that help explain stereotyping as a cultural practice.

WGST 438 - Early Women Writers (3)

An examination of the writings of Englishwomen in the period from 1600 to 1700, including autobiographies, tracts, letters, fiction, poetry, and plays.

WGST 448 - Jane Austen & her Predecessors (3)

An exploration of five of Jane Austen's novels as well as fiction by Charlotte Lennox and Fanny Burney. The purpose is to develop an understanding of Austen's work in its social and cultural context.

WGST 449 - 18th & 19th Cent Women Writers (3)

An examination of the woman writer and literary tradition in the 18th and 19th centuries, including such writers as Eliza Haywood, Fanny Burney, Jane Austen, Charlotte Bronte, and Christina Rossetti.

WGST 458 - Studies in 19th Century Lit (3)

Focus on women writers in the Nineteenth Century. Explore the evolution of the women writer's role in the emerging marketplace of mass culture; changing perceptions of gender and sexuality and women writers' responses to the rise of industrial capitalism and political reform.

WGST 461 - Global & Transnational Feminism (3)

This course offers an advanced survey of the field of theory and political activism referred to as transnational feminism. Students are introduced to the history of feminist work in international political and economic forums (e.g. the UN and World Bank), as well as to on-going feminist efforts in the context of current social movements around the globe.

WGST 465 - Wolfram von Eschenbach's Parzival: Gender,

In this course, student will read and critically reflect on Wolfram von Eschenbach's Parzival (ca. 1220). They will read the text in modern German. While this text is fictional, it is grounded in "reality" and reflects upon its times and its discourses on politics, religion, race, gender, and otherness, the focus of this course. This course is taught in German, therefore knowledge of German required. Prerequisites: GR 320 & GR 325, or instructor permission.

WGST 475 - American Political Thought (3)

From 1765 to the present. Eighteenth century consensus, nationalism versus sectionalism, nineteenth century reform movements, pragmatism and progressivism, current liberalism and conservatism.

WGST 477 - Spanish Women Poets (3)

Historical analysis and literary interpretation of a representative selection of modern and contemporary Spanish women poetry. Discussion of the topics and preoccupations present in their work, and analysis of their contribution to reformulating the male canon in general. Authors: Carolina Coronado, Rosalía de Castro, Concha Zardoya, Gloria Fuertes, and Maria Victoria Atencia.

WGST 481 - Philosophy of Feminism (3)

A critical examination of the feminist challenge to traditional conceptions of law, morality and epistemology. The philosophical and methodological assumptions underlying the feminist challenge will be explored.

WGST 485 - Women's Studies: Capstone (3)

The synthesizing course; students do an independent study, research paper or practicum. Every semester.

WGST 490 - Black Women in Society (3)

This course is designed to provide an interdisciplinary approach for the study of African women in the context of a changing society and the impact of the context from social, historical, cultural, political and economic perspectives. Attention will be devoted to the examination of relationships that have emerged between systems and societal conditions.

WGST 496 - Women Leadership Internship (3)

Interns work with women in leadership positions in governmental or non-governmental civic organizations, or collaborate on research projects related to women leaders in the public sector. Students keep journals and write an essay relating their experiences to assigned readings on gender justice and the role of women in public policy.

WGST 501 - Feminist Theory (3)

Begins with the history of feminist scholarship from the pre-modern period and 19th century and proceeds to examine liberal, socialist/Marxist, radical, postmodern, and global feminism. Critical reviews of each theory will include issues of race/ethnicity, class, sexuality, and spirituality. Offered each fall semester.

WGST 502 - Feminist Epistemologies (3)

Examination of how feminist scholarship has reconrtexualized epistemological issues in the philosophy of science, eco-feminism, hermeneutics, mysticism, and phenomenology. Students will write and present papers to demonstrate their integration of feminist theory and feminist epistemological issues within their own major fields of study. Offered each spring semester.

WGST 515 - Gender and American Politics (3)

This course examines the ways in which women shape, and are shaped by, American politics and public policy. We explore the history, approaches, findings and controversy in research about women in American politics and political science from a range of theoretical and methodological approaches. Crosslisted as POLS 515.

WGST 569 - Adv Nrs Prac: Gynecologic Issu (3)

Course will focus on gynecologic health-care issues for advanced nursing practice. Health promotion, disease prevention, and management of common disorders seen in gynecologic and primary-care settings will be examined. By using nursing research and practice standards, students will analyze strategies in the physiologica, psychological, sociological, and spiritual dimentions in caring for women. Trends in health-care ethical issues and the sociopolitical environment of women will be analyzed to optimize care management.

WGST 630 - Feminist Ethics (3)

Extensive examination of such questions as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

WGST 659 - 19th Century English Lit. (3)

Studies in particular issues and developments in British literature of the nineteenth century.

WGST 669 - Irish Gothic (3)

Particular issues and developments in literatures in English of the twentieth century.

WGST 822 - Employment Discrimination (3)

This course will provide an in-depth study of current problems win employment discrimination, including theories of discrimination, order and allocation of the burden of proof and other related issues; emphasis on the use of Title VII of the Civil Rights Act of 1964 and amendments, and on the Equal Pay Act of 1963. Grade will be based on a final exam.

Accounting (ACCT)**ACCT 220 - Financial Accounting (3)**

An introduction to financial reporting of results of operations, cash flow and financial position of corporate entities through general purpose financial statements. Emphasis is placed on the real-world environment of business and the use of financial accounting information for management decision-making. Prerequisite: Sophomore standing.

ACCT 222 - Managerial Accounting (3)

An introduction to the design and use of accounting information within an organization. Emphasis is placed on cost and revenue analysis for planning and control of organizational units and activities. Prerequisite: ACCT-220.

ACCT 311 - Financial Reporting I (3)

This course is the first in a three-course sequence which provides an overview of accounting and external financial reporting. Significant emphasis is given to the analysis and communication of accounting information. As the individual topics are discussed, students will be expected to identify and explain the significance of related accounting concepts and conventions. Particular attention is given to a study of the body of generally accepted accounting principles concerned with the recognition and matching of revenues and expenses to determine accounting net income and the related issues of asset measurement. Prerequisite: ACCT-220 with a grade of C or better.

ACCT 316 - Intl Acc for Global Organizatn (3)

Understanding and analyzing financially international organizations. Focus on international financial reporting, harmonization and International Accounting Standards (IAS). International Business concentration elective. Pre-requisites: Grades of C or better in ACCT 220 and in ACCT 222.

ACCT 320 - Corporate Financial Reporting (3)

The objective of this course is to provide business students with an understanding of the more complex financial reporting issues of SEC registrant corporations. Financial reporting requirements significantly influence management strategy and investment decisions. Thus, managers and investors need to be informed users of financial statements as a prerequisite to making informed decisions. Prerequisite: ACCT-222 with a grade of C or better. Offered occasionally.

ACCT 322 - Cost Management (2-3)

The study of modern techniques for active management of operating costs to achieve organizational efficiency and effectiveness. Specific topics include: C-V-P analysis, J.I.T., identification of cost drivers, life cycle costing and strategic cost management issues. Prerequisite: ACCT-222 with a grade of C or better.

ACCT 411 - Financial Reporting II (3)

The study of the generally accepted accounting principles and original authoritative pronouncements concerning measurement and reporting of an entity's liabilities, equity, and cash flow. Particular emphasis is placed on developing the student's analytical and critical thinking skills. Prerequisite: ACCT-311 with a grade of C or better. FIN-301 highly recommended.

ACCT 412 - Financial Reporting III (3)

A study of advanced accounting topics including: accounting for business combinations (mergers and acquisitions), preparation of consolidated financial statements and specific issues related to intercompany investments; accounting for selected international events (e.g. foreign currency transactions, translation of financial statements of foreign affiliates, the use of forward exchange contracts, etc.); significant coverage of accounting for not-for profit entities; and other selected topics of current interest. Discussion of ethical implications will be included in many of these topics. Prerequisite: ACCT-411 with a grade of C or better.

ACCT 415 - Contemporary Acct Issues (3)

An examination of selected major and emerging issues in the discipline. Both theoretical and practice dimensions are examined through the use of cases and other materials.

ACCT 416 - Intl Financial Rptng Standard (3)

Financial reporting in the United States is now influenced and impacted by International Financial Reporting Standards (IFRS). This course is designed to give students a conceptual understanding and overview of IFRS. Part one encompasses recognition, measurement, disclosure and presentation standards. The second part focuses on financial instruments including investments. Lastly, part three covers reporting standards for derivatives and hedging. Pre-req: ACCT 311

ACCT 425 - Acct Information Systems (3)

Study of the theoretical and practical aspects of designing and utilizing financial information systems. Particular attention is directed to internal financial controls and auditing EDP systems. Prerequisites: ITM-200 and ACCT-311 with a grade of C or better. This course requires extensive use of computer software for assignments and in-class exercises. A personal laptop with Windows Operating System (OS) and wireless capability is highly recommended. Contact the instructor if you use Mac OS or don't have a laptop.

ACCT 430 - Federal Income Tax I (3)

This course introduces the student to federal income taxation. It is designed to provide the student with a framework to understand the structure of the Federal Income Tax system, to integrate income tax planning into business decisions, and to evaluate future changes to the income tax system (such changes are ongoing and inevitable). This course is also intended to provide a base for the student's future study of advanced tax topics. Prerequisite: ACCT-220 and ACCT-311 with grades of C or better.

ACCT 432 - Federal Income Tax II (3)

Understanding the complexities of the Internal Revenue Code in defining, organizing and computing tax liabilities of corporations; economic ramifications of alternative approaches to corporate taxation. Prerequisite: ACCT-430 with a grade of C or better or permission of instructor.

ACCT 440 - Auditing (3)

Theory and application of standards and procedures used by independent certified public accountants in verifying business data in order to render an opinion and report on financial statements of the entity being examined. The duties, responsibilities and ethics of the auditor (CPA), generally accepted accounting principles and auditing standards are discussed. Prerequisites: ACCT-411 and ACCT-425 with grades of C or better (ACCT-425 may be taken concurrently with ACCT-440).

ACCT 480 - Accounting Internship (0-3)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ACCT-311, permission of the department chair and junior or senior standing.

ACCT 498 - Special Study (1-3)

Permission of the department chair.

ACCT 501 - Accounting for Managers (3)

This course will be delivered in two modules. At completion of the first module, students are expected to have a thorough understanding of the information contained in a set of financial statements and how to interpret and use this information. The second module introduces students to the fundamentals of management accounting.

ACCT 600 - Managerial Acct Concepts (3)

Nature and use of accounting in managerial planning and control; cost analysis in developing budgets and standards; administrative control reports; interpretation of financial statements; cost-volume-profit relationships.

ACCT 603 - Contemp Financial Rep (3)

This course applies professional research methods to the identification and application of financial reporting standards to cases involving actual business situations. The objective of the course is to develop students' critical thinking, verbal and written communications and group interaction skills. Pre-requisites: ACCT 501 and ACCT 411.

ACCT 611 - Financial Reporting III (3)

A study of advanced accounting topics including: accounting for business combinations (mergers and acquisitions), preparation of consolidated financial statements and specific issues related to intercompany investments; accounting for selected international events (e.g., foreign currency transactions, translation of financial statements of foreign affiliates, and the use of forward exchange contracts); significant coverage of accounting for not-for-profit entities; and other selected topics of current interest. Discussion of ethical implications will be included in many of these topics.

ACCT 614 - Seminar in Accounting and Social Responsibility

Accounting in society: past, present, and future, with emphasis on areas of increasing social importance. Topics include the historical significance of accounting, socioeconomic accounting, corporate social accounting, social audits, role of the professional accountant in accounting for social performance, cost-benefit analysis, environmental accounting, and accounting for human resources.

ACCT 616 - International Accounting (3)

Multidimensional examination of worldwide accounting principles and practices. Comparative study of the profession in response to various socioeconomic environments. Theories of national practices and progress toward uniformity of accounting auditing, reporting standards. Problems of multinational corporation, inventory methods, currency translations, consolidated statements, price adjustments, transfer prices, taxes, and treaties. Pre-requisite: ACCT 501.

ACCT 619 - Financial Statement Analysis (3)

This course is designed to integrate the conceptual framework of accounting with analytical and critical thinking skills to evaluate how businesses function. This integration will focus on managerial uses of financial reporting information to enhance the value of the firm. The course pedagogy will focus on case analysis and related class discussion. Pre-requisites: ACCT 411 and FIN 600

ACCT 621 - Issues in Strategic Cost Mgt (3)

Covers advanced topics in managerial accounting such as cost analysis for pricing, activity costing, JIT production, measuring quality, executive bonus plans, and problems of competing in a world economy. Pre-requisite: ACCT 600.

ACCT 631 - Tax Planning for Individ. & Entr (3)

(For those students who have not had a previous tax course.) Current tax law in historical and economic setting; major provisions of the 1954 Internal Revenue Code, as amended, its rationale, how it functions. Application of concepts to factual cases. Practice in methodology of tax solutions; multiple economic, political, social ramifications of the law. Pre-requisite: ACCT 501.

ACCT 632 - Fed Income Tax: Flow-Thru Ent (3)

A study of the Federal Income Tax as it applies to entities other than individuals, including partnerships, corporations, decedents, estates, trusts, and retirement plans. Fundamentals of estate and gift taxation are also considered. Pre-requisite: ACCT 430.

ACCT 634 - Fed Income Tax: Corp (3)

The primary focus of this course is business taxation. It is imperative for students to achieve a conceptual grasp of how businesses are taxed. Without careful planning, businesses shoulder heavier tax burdens than necessary. The objective of this course is to gain a solid understanding of the impact of taxes on corporations, partnerships, estates and trusts. Students will also engage in tax planning that will enable them to provide valuable advice for businesses in terms of tax reduction strategies. This course is essential for students wishing to pass the CPA exam.

ACCT 635 - State and Local Taxation (3)

The objective of this course is to provide an overview of the principles of state and local taxation and a more specific sampling of Missouri (and occasionally) Illinois state tax issues. Pre-requisite: ACCT 430.

ACCT 636 - Seminar in Tax Research (3)

Seminar format; the Federal Income Tax structure: economic impact of proposed changes in Federal Income Tax Law; advanced topics. Special emphasis is given to topics of foreign tax credit planning and Subpart F. Pre-requisite: ACCT 430.

ACCT 638 - Wealth Preservation (3)

Methods utilized by estate owner in planning family security and benefits from the estate. Examines impact of Subtitle B of the Internal Revenue Code and sections of the code relating to transfer of property for charitable purposes. Minimizing current and future taxes and preserving estate values is a primary consideration. Pre-requisites: ACCT 430 and ACCT 631.

ACCT 639 - International Taxation (3)

Covers interaction of the U.S. tax system with foreign tax systems. Comparative analysis of alternative tax systems is also covered. Special emphasis is given to topics in foreign tax credit planning and Subpart F. Pre-requisite: ACCT 634.

ACCT 640 - IT Audit (3)

Students will gain understanding of the concepts of information assurance and the organizational risks associated with the information technology environment. The objectives of the course are to provide understanding of computer auditing concepts and practices to facilitate: (1) the assessment of risk related to an organization's business processes and financial information (2) evaluate the effectiveness and functioning of controls, and (3) prepare a meaningful management letter. The course objectives are addressed through: -review of technology and systems facing IT Auditors, -development of an analytical approach that may be applied to understand and audit internal controls and information systems in any computerized business environment, -application of this approach to various types of tasks that are (or could be) performed by an IT auditor. Pre-requisites: ACCT 440. Co-requisites: ITM 410 or ITM 610.

ACCT 645 - Forensic & Investigative Acct (3)

This course will be a study of the various dimensions of forensic accounting. The course is structured as an overview course that will utilize the text and be supplemented by content brought to the course by the instructor. The course is derived from the content specific outline and the body of knowledge used by the AICPA in its examination of candidates for the Certified Financial Forensics specialty credential. The CFF body of knowledge is detailed at www.aicpa.org. This course is not intended to and will not cover the entire body of knowledge for the CFF credential. This course is not intended to be used as a CFF examination review course. Pre-requisites: ACCT 440 or permission of the department chair.

ACCT 650 - E-Business: Strat App/Controls (3)

This course is designed for the individual interested in the area of e-commerce and/or e-business, which is more comprehensive than the merchandising aspects implied by e-commerce alone. Anyone interested in e-commerce and/or e-business will benefit. The growth in electronic commerce has been phenomenal and is projected to continue. In addition to these merchandising applications, the way in which business is conducted is advancing to take advantage of the new opportunities presented by technology. As remarkable as the growth of business to consumer (B2C) applications has been, the growth of business-to-business (B2B) applications has been even more significant. This course will explore issues involved in the design, development, implementation, monitoring and management of electronic commerce solutions and e-business applications.

ACCT 660 - Res in Contemporary Acctg Issu (3)

This course is designed to be an elective course for Master of Accounting students. The objective is to enhance students' research, analysis, understanding, and communication skills. This is a self-directed course with no set class time. The student will identify a research project and contact a full-time accounting professor to oversee their work.

Business Foundations (BIZ)**BIZ 100 - Business Foundations (0-1)**

This course provides students with an overview of the nature of business and shows students how the business curriculum is designed to help prepare them for a business career. In addition, the course will address some common transition to college issues faced by freshmen.

BIZ 400 - Business Capstone (0-1)

Application of knowledge and skills gained through completion of the Business Common Body of Knowledge. Also covers ethics and value-based decision making. Pre-requisite: completion of Business Common Body of Knowledge except MGT 400 which must be taken concurrently; senior standing.

BIZ 600 - Professional Effectiveness (1-3)

BIZ 600, Professional Effectiveness, is designed to introduce students to knowledge and skills related to effectiveness and leadership in professional settings. The course will cover select topics in professional effectiveness and/or leadership with an emphasis on both thinking and doing & improving knowledge of key skill sets in contemporary professional settings and developing these skills through experiential learning and application. The course will facilitate the development of multiple approaches to inspiring, influencing, and guiding others.

Decision Sciences (DSCI)**DSCI 207 - Intro: Business Statistics (3)**

Introduction to descriptive statistics for displaying and summarizing business data; the use of probabilities and random variables in business decision models, probability distribution, statistical inference as a decision-making tool, sampling of business data, simple linear regression and correlation, time series analysis and use of index numbers in economic data. Prerequisite: MATH-120.

DSCI 305 - Intro Mgt. Sci./Operation Mgt (3)

The objectives of this course are to: 1) acquaint the student with the overall operations research/management science process; 2) expose the student to several most widely utilized operations research/management science and production planning models, along with the solution techniques; 3) familiarize the student with the use of computers in facilitating managerial decisions. Prerequisites: MATH-132 and DSCI-207.

DSCI 360 - Sustainable Global Supply Chain Mgt (3)

The goal of this course is to make students aware of how goods and services are being produced and distributed in integrated environments around the globe within and between enterprises. Global supply chain management systems will be studied with the intent to reduce and/or eliminate duplicative processes and to ultimately improve enterprise performance. Topics will include the impact of supply chain management on the financial statements, global outsourcing and security issues in supply chain integration. Prerequisite: Junior standing.

DSCI 370 - Sustainable Global Logistics Mgm (3)

This course acquaints students with the theory and practice of determining the most efficient and effective methods for moving, storing and delivering goods and services globally. A special emphasis is placed on the roles of third-party logistics within supply chain contexts. Prerequisite: DSCI 305

DSCI 502 - Business Statistics (3)

This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the more widely used statistical methods to aid in problem formulation, data analysis and managerial decision-making. At the end of this course students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty.

DSCI 505 - Operations Management (3)

The objective of this course are (1) familiarize students with production planning and control (2) to familiarize students with the use of operations research techniques for analyzing and controlling manufacturing, inventory, and operations management systems; and (3) to train students to use computers for making production and operations management decisions.

DSCI 600 - Forecasting and Demand Mgmt (3)

Advanced topics in statistical modeling, data analysis and decision making. Extensive use of computer packages and real business databases. Topics include model building and research design; variance and experimental design; multiple regression and correlation analysis; time series and forecasting; statistical quality control; non-parametric procedures; model decision analysis.

DSCI 605 - Production & Oper Mgt (3)

Designed to familiarize students with decision-making tools and models that are utilized by operational managers, to present business firm integrated operational practices in the manufacturing and service sectors, and to analyze and examine the business strategic planning process from a cross-functional perspective, utilizing case studies. Topics include: operations and supply-chain strategy, project management, strategic capacity management, job scheduling and control, logistics for facility location decisions, aggregate planning, and deterministic/stochastic inventory decisions. Pre-requisites: DSCI 501 and MBA 502.

DSCI 643 - Quality Improvement Through a Lean Six Sigma

This course is intended to serve as an in-depth examination of quality principles applied specifically to manufacturing, service and supply chain environments. Both managerial and statistical aspects will be covered.

DSCI 644 - Global Supply Chain Mgt Con. (3)

The objective of Supply Chain Management Concepts is to introduce students to an integrated enterprise approach to business flow of goods and services from suppliers to the customers (procurement, operations management, inventory control, logistics and transportation, distribution and customer service). The term INTEGRATED process is emphasized in this course as opposed to SILO approach. As such, every topic in each area is being discussed in the context of integrated flow of goods and services from suppliers to customers and continuous flow of information from the customers to the suppliers. Pre-requisites: DSCI 501 and DSCI 605.

DSCI 645 - Comp Integ Global Sup Chains (3)

The objectives of this course are: (1) To acquaint the student with characteristics of the flow of information and material along supply chains, (2) To expose the student to methods of integrating information technologies along supply chains, (3) To familiarize the student with the technologies used in coordinating intra- and inter-organizational activities, (4) To acquaint the student with the role of second generation WEB in the integration of global supply chains, and (5) To introduce the student to software used for intra- and inter-organizational coordination. Pre-requisite: DSCI 605.

DSCI 646 - Global Logistics Management (3)

The objectives of this course are: (1) to acquaint the student with the use of logistics management theory and techniques for analyzing and controlling global manufacturing and operations management systems; (2) to expose the student to several of the most widely utilized models for supply chain management in the manufacturing and service sectors (financial, health care, public sectors, etc.), along with case studies; and (3) to familiarize the student with the use of computer software in facilitating logistics decisions. Pre-requisite: DSCI 505 and DSCI 605.

DSCI 648 - Strat. Sourcing & Proc. in SCM (3)

This course acquaints students with the use of purchasing and strategic sourcing concepts and techniques to optimize supply chain operations. Total cost of ownership will be the main guideline in making procurement and sourcing decisions.

DSCI 650 - Math Statistics for Bus (3)

Study of advanced statistical methods including multivariate statistics and linear models. Calculus-based study of probability and statistics emphasizing theoretical foundations of inferential models. Topics include probability theory, discrete and continuous random variables, probability functions, univariate and multivariate probability distributions, stochastic process sampling distributions, estimation and hypothesis testing. Pre-requisite: DSCI 500.

DSCI 652 - Transport & Warehousing Mgt (3)

This course focuses on making strategic decisions regarding the selection of transportation modes and optimizing the size/location of warehousing and distribution centers. Students will learn how to utilize software to minimize transportation and warehousing costs. Site visits to transportation facilities will augment lectures.

DSCI 655 - Spec Topics Supply Chain Mgt (3)

Students will learn about contemporary and emerging topics in logistics and supply chain management (SCM). Although specific topics may vary from term to term, but may include risk management, lean/six sigma in SCM, reverse/sustainable SCM, supply chain security and healthcare SCM.

DSCI 680 - Bus App Multi Stat Methods (3)

Systematic treatment of multivariate methods and their application to business decision-making. Topics: general multiple regression, model selection, the multi-normal probability distribution, analysis of variance and covariance, experimental design, multivariate statistical inference, discriminant analysis, canonical correlation and principal components. Applications in marketing, management, industrial relations and economics. Pre-requisite: DSCI 605.

Economics (ECON)**ECON 190 - Principles of Economics (3)**

Analysis of how individuals, firms, and nations make choices given limited resources; determinants of decision making in market economies; the political economy of income, employment, and inflation in the aggregate; the role of government and the Federal reserve. Prerequisite: MATH-120

ECON 301 - Introduction to Econometrics (3)

Introduction to basic econometric techniques as preparation to analyze and interpret empirical regression and to conduct their own applied analyses. The course focuses on application of quantitative and empirical skills by using econometric software to estimate regression models, testing hypotheses and interpreting regression results.

ECON 312 - Intermediate Macroeconomics (3)

Measurement of aggregate economic activity-national income accounting; equilibrium levels for national income, employment, prices and interest rates in aggregate models; policy instruments and goals, fiscal and monetary policies; empirical and analytical treatment of economic growth; inflation and unemployment. Prerequisites: ECON-190 and one calculus course.

ECON 314 - Intermediate Microeconomics (3)

The maximizing behavior of households (consumers) as constrained by income and prices; business firm behavior in price and output decisions and in factor markets; comparisons of the operation of markets under competitive and imperfectly competitive conditions; and welfare implications of marketplace performance. Prerequisites: ECON-190; MATH-132 or higher level Calculus course.

ECON 379 - Economies of Latin America (3)

Explores two major themes from the perspective of Latin America: the integration of national economies into the global economy, and the role of the state in addressing market failure. Includes both theoretical and policy-oriented analyses. Prerequisite: ECON-190.

ECON 408 - Industrl Orgztn-Public Policy (3)

Economic theory, case studies and law are utilized to explore the causes of monopoly power, its effect on rivals and social consequences. Role and effect of anti-trust policy in curbing abuses of monopoly power are also explored. Prerequisite: ECON-314 [prerequisite required for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 410 - Urban-Regional Economics (3)

Urban housing, transportation, employment, growth, government; emphasis on public policies such as those dealing with unemployment, poverty and the fiscal plight of central cities. Pre-requisite: ECON 314 & ECON 312.

ECON 412 - Law and Economics (3)

This course broadly examines the roles of prices and markets, the causes of market failures and the criteria for legal and public-policy intervention. Specific topics include (1) the long-run and short-run economic interests of individual, corporate and public sector clients in a variety of legal contexts, (2) the normative judgments that are implicit in many economic policies and the legal structures implementing such policies; and (3) the uses and limits of economic analysis and economic data in solving a variety of social problems. Prerequisites: ECON 312 & 314 or permission from Chair. (MGT 218 highly recommended) [prerequisite for ECON 312 is: ECON 190] [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 416 - History-Economic Analysis (3)

Origins and development of modern economic thought, from ancient time, through the 19th century. Prerequisites: ECON-312 and ECON-314 or permission of department chair. [prerequisite for ECON 312 is: ECON 190] [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 420 - Money and Banking (3)

Impact of the U. S. Treasury, the Federal Reserve System, commercial banks and other financial institutions on economic variables such as employment, prices and the balance of payments. Prerequisite: ECON-312.

ECON 430 - International Trade (3)

Study of the determinants and pattern of trade between nations and regions; efficiency welfare, and distributive effects of trade; protectionism, and the instruments of trade policy. Prerequisites: ECON-312 and ECON-314 or permission of department chair. [prerequisite for ECON 312 is: ECON 190] [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 431 - Exchange Rates and Global Econ (3)

Examines basic international economic principles and determinants of trade balances and exchange rate movements. The course evaluates the factors that affect real and nominal exchange rate movements in the short, medium and long-run. It is designed to ask and answer important questions of current international macroeconomic issues, particularly with respect to financial, currency, debt and banking crises. Prerequisite: ECON-312.

ECON 440 - Labor Economics (3)

Labor markets, determinants of labor supply, labor demand and wages (both as cost and income); institutions affecting labor, including trade unionism and labor law; work-leisure trade-off; the work ethic as it affects work hours and productivity. Prerequisite: ECON-314. [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 445 - Economics of Int'l Migration (3)

Students will apply the theoretical tools of microeconomics to the analysis of labor markets; apply statistical and econometric techniques in empirical work on wage determination; study papers at the cutting edge of economic research with an eye toward how economists define questions, marshal evidence, and present results; and grapple with issues of policy design. Prerequisite: ECON-314. [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 450 - Sports Economics (3)

Uses tools of microeconomics and statistics to analyze the business of sports including the study of the interactions among leagues, teams, owners/managers, players, and cities. Topics include profit maximization, revenue sharing, competitive balance, collective bargaining, player salaries, cost/benefit to host cities.

ECON 456 - Economic Development (3)

Analyzes elements of economic growth in economies that are both internationally open and relatively poor; accumulation of human and physical capital, technological change, market structure, and international linkages. Prerequisite: ECON-314. [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 460 - Public Finance (3)

Public finance economics examines 2 key functions of government: taxation and expenditures. These government functions are evaluated based on efficiency and equity criterion. Topics including externalities, public goods, Social Security, Medicare and the personal income tax are examined. Prerequisite: ECON-314. [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 470 - Health Economics (3)

Analyze the economics of health and health care markets using the standard tools of microeconomics and empirical analysis. The course considers three main topics: inputs to health and the demand for medical care, structure and consequences of public and private financing of health care, and the supply of health care. Current public policy topics will be highlighted. Prerequisite: ECON 314. [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 477 - Advanced Econometrics (3)

Econometrics is concerned with using empirical data and statistical methods for estimating economic models, testing economic theories and hypotheses, measuring the net marginal effect of one factor on another, and evaluating the effects of government policies. The most common application of econometrics is the forecasting of important economic and financial variables. Prerequisites: DSCI 207, ECON 312, ECON 314. [prerequisite for ECON 312 is: ECON 190] [prerequisites for ECON 314 is: ECON 190 and MATH 132 or higher]

ECON 480 - Economics Internship (0-3)

This course can be used as elective credit but not as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ECON-190, concurrent enrollment in ECON-312 or ECON-314; permission of the department chair and Junior or Senior standing.

ECON 493 - Special Topics (3)

Prerequisite: Varies with topic of course.

ECON 495 - Senior Residency (0)

Prerequisites: ECON-312 and ECON-314 or permission of department chair.

ECON 498 - Special Study (1-3)

Prerequisites: ECON-312, ECON-314, and permission of the department chair.

ECON 501 - Economics for Managers (3)

Focuses on the economic decisions made by managers of firms, and the structures of various market environments within which these decisions are made. Addresses market demand, supply and price movements, production and cost functions, and business competitive strategy in output and input markets.

ECON 574 - Quant Methods in Bus & Econ (3)

Matrix algebra, differentiation, optimization, integration, elementary dynamics, first order differential equations, applications to business and economic analysis.

ECON 600 - Microeconomic Theory (3)

The focus of this course will be application of mathematical methods in economics and finance. Beginning with a review of basic linear algebra and finance, this course will develop the necessary and sufficient conditions for equilibria to exist for unconstrained and constrained optimization problems. Mathematical methods will be applied to study consumer choice, optimal behavior by firms, and optimal allocation of assets.

ECON 605 - Econometrics I (3)

Review of probability and statistics. Classical linear regression models through generalized least squares. Econometric problems resulting from non-traditional assumptions and techniques. Pre-requisite: ECON 501 and OPM 502, or MBA 630 and MBA 633. ECON 600 can be taken concurrently.

ECON 606 - Econometrics II (3)

This course is designed as a time series econometrics course with focus on applications in macroeconomics, international finance, and finance. We will cover univariate and multivariate models of stationary and nonstationary time series in the time domain. The goals of the course are threefold: (1) develop a comprehensive set of tools and techniques for analyzing various forms of univariate and multivariate time series models, and for understanding the current literature in applied time series econometrics; (2) survey some of the current research topics in time series econometrics; (3) show how to use EVIEWS, GAUSS, MATLAB, STATA and SPSS to estimate time series models.

ECON 608 - Indus. Org. & Antitrust Policy (3)

Structure, behavior and performance of U.S. markets. The case for and against concentrating economic power in a few firms; role of mergers and acquisitions; product differentiation; economies of scale and other factors influencing the size and number of sellers in a market; pricing policies, price warring; effects of economic power concentrations on technological change, income distribution and sales expenditures. Utilizes law, economic theory and case studies. Pre-requisite: ECON 600.

ECON 617 - History of Economic Thought (3)

Critical assessment of economic thought from ancient times to the 19th century.

ECON 620 - Monetary Theory (3)

Advanced analysis of monetary economics. Examines the relation between the money supply and output and prices, and the transmission mechanism between changes in the money supply and other variables. Pre-requisite: ECON 600.

ECON 630 - International Trade (3)

Determinants and effects of trade between nations and other economic groups. Efficiency and equity implications of the movement of goods and services and factors of production between economic entities. Tariffs and other impediments to the free exchange of goods and services in international commerce. Role of international capital movements including economic growth and development. Pre-requisites: ECON 500 and 510.

ECON 631 - Int Ecn: Ex Rates & Int'l Adj (3)

Balance of international payments; alternative theories of adjustment to disequilibrium in the balance of payments; the role of public policy in promoting internal equilibrium (full employment and price stability) and external balance (equilibrium in the balance of payments). Pre-requisite: ECON 600.

ECON 635 - Public Finance (3)

Public Finance economics examines two key functions of government: taxation and expenditures. These government functions are evaluated based on efficiency and equity criteria. Topics including externalities, public goods, Social Security, Medicare and the personal income tax are examined.

ECON 650 - Sports Economics (3)

Uses tools of microeconomics and statistics to analyze the business of sports including the study of the interactions among leagues, teams, owners/managers, players, and cities. Topics include profit maximization, revenue sharing, competitive balance, collective bargaining, player salaries, cost/benefit to host cities.

ECON 652 - Advanced Macro Theory I (3)

Comparative static analysis of the determination of income, employment, and the price level in various macroeconomic approaches. Analysis of fiscal, monetary, and income policy as tools for securing full employment and price stability. Pre-requisite: ECON 600.

ECON 655 - Applied Optimization Methods for Financial E

This course surveys quantitative approaches to modeling asset returns and constructing optimal portfolios. Multifactor models provide the foundation for modeling asset returns and generating forecasts of the first and second moments of asset returns. These forecasts subsequently serve as inputs for portfolio optimizers, including mean-variance and active approaches, to generate portfolio weights. Important practical problems relating to portfolio constraints, transaction costs, and rebalancing are examined, as well as tools for rigorously analyzing portfolio performance. Recently popular risk-based and market neutral portfolios are also analyzed. Students develop skills for asset return modeling, portfolio optimization, and performance measurement via extensive hands-on exercises using MATLAB, a powerful program for numerical computation and visualization. The key learning objective is for students to develop the technical and judgmental skills required to construct portfolios that are tailored to investor goals and risk tolerance.

Executive Education (EXEC)**EXEC 100 - Web Globalization Management (11)**

The Executive online Certificate in Web Globalization Management is for professionals involved with any aspect of conducting global business and e-commerce. The online program provides participants with the cutting edge skills to conduct international business in a networked global economy. Participants will learn strategies to leverage the web for tapping global markets, conducting international e-commerce, managing virtual teams, developing network alliances, getting high search engine rankings, attracting and retaining global consumers, achieving culturally consistent global communications, and much more.

Finance (FIN)**FIN 301 - Principles of Finance (3)**

Introduction to financial decision-making in the firm, with focus on choices and decision criteria for sources and use of funds. Emphasis on financial analysis and investment decisions: ratios, relevance of accounting statement data, use of debt and equity, investment theory and practice, and firm's market capitalization. A grade of B- or higher required in FIN-301 prior to enrolling in all other FIN courses. Prerequisites: ACCT-220, DSCI-207& ECON-190 and Co-requisite: ACCT-222.

FIN 314 - Insurance (3)

Survey of the nature of risk, insurance contracts, property and casualty coverages, life and health insurance, insurance carriers and markets, governmental regulations; functions of underwriting, sales, rate-making and financial operation of carriers; risk exposure, loss prevention, combating of risks, and insurance administration. Co-requisites: FIN-333 and FIN-363.

FIN 316 - Real Estate (3)

Study of real estate concepts, practices, institutions; specific attention given to legal aspects, appraisal, market analysis, mortgage financing, realty investment, property development and marketing, government influences and programs, housing and urban problems. Co-requisites: FIN-333 and FIN-363, or permission of the department chair.

FIN 323 - Financial Management (3)

Study of principles of corporate finance and application of those principles to a variety of financial management problems; applications include capital budgeting, working capital management, capital acquisition and other aspects of financial management. Co-requisites: FIN-333 and FIN-363, or permission of the department chair.

FIN 333 - Fixed Income Securities & Mark (3)

The course examines the characteristics of various fixed income instruments, the factors that influence their value and the markets they trade in. Securities studied include, but are not limited to, municipal, treasury, corporate, convertible, and mortgage-backed bonds. The role of financial institutions in the fixed income markets is also covered. Prerequisite: FIN-301 with a grade of B- or higher.

FIN 353 - International Financial Mgt (3)

Study of international finance with emphasis in international management for the firm, international financial institutions and markets, international finance systems, and foreign investments and securities. Co-requisites: FIN-333 and FIN-363, or permission of the department chair.

FIN 363 - Equity Securities & Markets (3)

Principles of investing in equity securities; types of investments; analysis of securities, markets and the mechanics of trading; principles of diversification and portfolio analysis; and security analysis and equity valuation, including economy, industry and company analysis. Prerequisite: FIN-301 with a grade of B- or higher.

FIN 365 - Derivative Securities & Market (3)

The course examines the various types of derivative securities that exist, their uses in investment and risk management, the market in which they are traded, and the arbitrage models used to estimate their market values. Prerequisites: FIN-333 and FIN-363, or permission of department chair; strong math skills highly recommended.

FIN 373 - Commercial Banking (3)

Study of both the banking system and bank management, with particular emphasis on the latter; encompasses management of bank assistance, bank lending, and investment practices and policies, trust services, bank equity and profitability, and international banking. Co-requisites: FIN-333 and FIN-363.

FIN 423 - Financial Management (3)

Study of principles of corporate finance and application of those principles to a variety of financial management problems. Applications include capital budgeting, working capital management, capital acquisition and other aspects of financial management. Prerequisite: FIN-333 and FIN-363; or permission of the department chair.

FIN 425 - International Financial Mgt (3)

Study of international finance with emphasis in international management for the firm, international financial institutions and markets, international finance systems and foreign investments and securities. Corequisites: FIN-333 and FIN-363; or permission of the department chair.

FIN 433 - Financial Analysis/Modeling (3)

Develop a solid understanding of financial analysis using electronic spreadsheets, and the ability to integrate an electronic spreadsheet into the identification, analysis, and solution stages of a financial problem. This course will focus on the electronic spreadsheet skills needed to aid in the solution of financial problems, as well as practical financial applications using Microsoft Excel. Prerequisites: FIN-333, & FIN-363.

FIN 444 - Financial Planning (3)

This course is designed for students who are targeting careers in financial planning and wealth management. We will study the financial planning process: determining a client's financial objectives, considering alternative methods for meeting those objectives, selecting the method best suited for a client's circumstances, implementing and periodically assessing/revising the plan. Particular focus will be on retirement planning and "big picture" issues in investing in equities, bonds and alternative investments. Pre-requisites: FIN 333 and FIN 363.

FIN 453 - Advanced Financial Mgt (3)

In-depth study of finance topics applicable to the firm and attention to financial decision-making affecting the firm's investment, financing, market strategies, and dividend policies; areas of emphasis will be financial objectives of the firm, shareholder value, capital budgeting, risk and uncertainty, cost-of-capital, optimum capital structures and fund flows. Prerequisites: FIN-333, FIN-363, and FIN-423.

FIN 463 - Applied Portfolio Mgt (3)

The objective of this course is to provide students with hands-on experience in evaluating common stocks as investments and in the fiduciary management of investment assets. Students will manage an initial allocation of \$250,000-\$500,000 in SLU endowment funds. Students will be responsible for recommending a portfolio of common stocks, sales of existing portfolio assets, and recommending replacement assets. While the performance of the portfolio will be a primary focus of the course, and will be reviewed on an ongoing basis, it is not presumed that the students will be able to beat the market on a consistent basis. Rather, the goal will be to deliver high quality practical education in an area of considerable interest to students and employers alike. In addition, the course will cover advanced topics in investments beyond those offered in FIN-363. Prerequisites: FIN-363 and permission of instructor; Co-requisite: FIN-333.

FIN 465 - Derivative Securities & Market (3)

The course examines the various types of derivative securities that exist, their uses in investment and risk management, the market in which they are traded, and the arbitrage models used to estimate their market values. Prerequisites: FIN-301 with a grade of B- or higher, FIN-333, and FIN-363; or permission of the department chair; strong math skills highly recommended.

FIN 473 - Financial Markets and Institutions (3)

An examination of the primary and secondary markets that facilitate the flow of capital and of the financial institutions that support the function of those markets. Includes the study of the markets for Treasury, tax-exempt and corporate bonds, mortgage securities, equities and derivatives. The role of investment and commercial banks, insurance companies, pension funds and other financial institutions in the capital markets is also examined.

FIN 480 - Finance Internship (0-3)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: FIN-333, FIN-363, permission of the department chair, and junior or senior standing.

FIN 481 - Financial Analysis Track Internship (3)

The study of topics related to the Financial Analysis track in conjunction with a concurrent internship experience in the same field. The objective of the course is to exploit the connection between theory and practice, and will be reflected in the scholarly work required to earn credit. The prerequisite requirements for the course are: (1) junior standing; (2) completion of FIN 333 and FIN 363 with a grade of at least a C- in each; and (3) successful completion of twelve hours of accounting, with at least six hours at the advanced (300) level.

FIN 482 - Financial Planning Track Internship (3)

The study of topics related to the Financial Planning track in conjunction with a concurrent internship experience in the same field. The objective of the course is to exploit the connection between theory and practice, and will be reflected in the scholarly work required to earn credit. The prerequisite requirements for the course are: (1) junior standing; (2) completion of FIN 333 and FIN 363 with a grade of at least a C- in each; and (3) successful completion of twelve hours of accounting, with at least six hours at the advanced (300) level.

FIN 498 - Special Study (1-3)

Permission of the Department Chair.

FIN 600 - Finance for Managers (3)

The course examines the financial concepts that are relevant to the function of a manager serving in a non-financial capacity. Topics include financial analysis, the time value of money, valuation of securities, and capital budgeting, as well as the study of financial institutions and the capital markets. Prerequisites: ACCT 501 and ECON 501. This course serves as a prerequisite for FIN 609 and FIN 610 only. Credit is not available for students in the MACC or MS-AFE programs.

FIN 609 - Real Estate Finance (3)

Lecture and discussion series focussing on real estate concepts, practices, and institutions. Specific attention is given to legal aspects of real estate ownership, appraisal, market analysis, mortgage financing, analysis of complex real estate projects and the financing and securitization thereof. Competence in financial evaluation techniques to include net present value and internal rate of return is assumed.

FIN 610 - Investment Concepts (3)

This course is a survey of equities, fixed income securities and derivatives, and the markets in which these securities trade. The focus is on understanding these instruments, and how they are used in mutual funds and other managed portfolios, so that students can make intelligent choices about how to save for retirement and other personal financial goals. This course cannot be used for credit towards the Master of Science in Finance degree, or towards the Finance Concentration for the MBA degree. Pre-requisite: FIN 600

FIN 615 - Finance Theory & Application (3)

The course covers the theory of finance and applications to corporate policy and empirical studies. Topics include valuation methods for primary and derivative securities, basic and advanced capital budgeting techniques, portfolio theory, asset pricing, capital acquisition and risk management. Prerequisites: ACCT 501 and ECON 501. Required for all MS-AFE students and for part time MBA students who seek to earn a concentration in finance.

FIN 620 - Securities Analysis (3)

This course explores the world of equities research and related stock selection. Students who successfully complete this course will be able to explain why it is difficult for the equities research analyst to select stocks that outperform relevant benchmarks, over time, and why, nonetheless, a given analyst's performance prospects are enhanced by dispassionate and exhaustive execution of a well-reasoned/value-added approach. Students will prepare a company analysis reflective of company and industry analysis and that also makes use of prospective valuation work in an historical context. Pre-req: FIN 600

FIN 621 - Fixed Inc Securities & Mkts (3)

Study of various fixed income securities and markets, including Treasuries, municipal securities, commercial papers, medium term notes, corporate bonds, mortgage-backed securities and interest rate derivatives. Focus on developing analytical and quantitative skills for valuation of fixed income securities and management of fixed income portfolios. Pre-requisite: FIN 600.

FIN 622 - Financial Institution Mgt (3)

Examination of operations, management, and regulations of modern financial institutions, including depository institutions, investment banks, and insurance companies. Focus on the understanding of risks faced by financial institutions' managers and the methods and markets through which these risks are managed.

FIN 625 - International Finance (3)

Study of international monetary environment and financial planning for corporations with overseas operations. Analysis of the effects of international financial planning on such factors as exchange rate fluctuations, currency restrictions and tax regulations. Examination of financial aspects of multinational business, including foreign investments, trade and transfer of funds. Pre-requisite: FIN 600.

FIN 634 - Fin Planning & Analysis (3)

The course focuses on financial management for corporate value creation and on techniques of financial planning and analysis in an applied setting. Case studies concern the role of financial administration in managing capital costs, capital budgeting, shareholder equity, corporate capital structure, and mergers and acquisitions among other topics. Pre-requisite: FIN 600.

FIN 635 - Advanced Corporate Finance (3)

Examination of sources of financing and corporate control issues. Coverage includes study of the underwriting process and alternate sources of capital; use of financial planning models and methods of short-term financing; motivation for mergers, acquisitions and bankruptcy reorganization. Recent studies from the finance literature provide overview of empirical evidence relating to the issues examined.

FIN 636 - Private Equity and Venture Cap (3)

The Private Equity/Venture Capital (PE/VC) course explores the forms and methods of equity investment in new and growing businesses. Private equity represents conventional investments, typically in established and growing businesses across a wide range of industries. Venture capital involves high-risk, high-potential-return investments, typically in technology based firms. Topics include the equity investment process, investment vehicles including conventional equity investment and venture capital, the creation of private placement memos, the evaluation of equity investment opportunities, and the structuring of investment groups and deal structure and negotiation.

FIN 638 - Derivative Sec & Mkts (3)

This course shows how financial managers can use capital markets technology to create value. It explores how derivatives can be used to manage financial risks and position firms to exploit strategic opportunities, reduce financing costs, and structure incentives. Students learn the mechanics of options, forwards, futures, and swaps, and then study uses of these instruments through a series of case studies. Pre-requisite: FIN 616.

International Business (IB)**IB 200 - Intro to International Bus (3)**

A broadly based introduction to the field of international business. Consists of an inter-disciplinary survey of the fundamentals of (1) international trade; (2) environmental factors; (3) international institutions and agencies; and (4) company organization, managerial functions and operations around the world. Prerequisite: ECON-190 or equivalent.

IB 302 - Latin American Business (3)

The focus of the course is on the cultural, historical, economic, social, political, and business environments in Latin America and on the activities of multinational corporations therein. Prerequisite: IB-200.

IB 304 - Asian Business (3)

Focusing on a group of selected Asian economies, this course has three objectives: (1) to acquaint the students with the region's basic business environments; (2) to examine the styles and practices of Asian management; (3) to provide insight to the implications of Asian business environment and management practice on strategic planning by non-Asian firms. Students will attain a practical knowledge of the complexity of the business environments of the region and be able to incorporate the analytical skills and strategic thinking into the reality of the Asian markets. Prerequisite: IB-200.

IB 310 - Geopolitics of World Business (3)

This course is designed to prepare students to understand how geography and politics intersect with and influence international business and multinational firms. Upon successful completion of the course, students should possess an awareness of important geopolitical facts and should be able to demonstrate the analytical and strategic thinking skills that reflect an understanding of how these facts interact with and affect international business competition. In particular, the course will examine how geographic location, natural resource endowments, historical relationships, and national and institutional political factors influence global companies. Prerequisite: IB-200.

IB 312 - Intern'l Business Strategies (3)

This course is designed to develop a broad understanding of strategic challenges in the international business environment. The major objective of the course is to engender a global mindset and a better understanding of the problems and challenges that organizations face in the international context. The challenge is to make sense of the shifting dynamics and multifaceted phenomena that confronts global business. The course weaves together conceptual and practical considerations to create a balanced and exciting learning experience. It is designed to enhance your capacity to function more effectively in the international business environment. Prerequisite: IB-200.

IB 314 - International e-Business (3)

Except for counted exceptions, as a business approach that relies on the Internet, where national boundaries are inexistent, e-Commerce is to be considered "Global", per se. In the last years of the past century and during the first decade of the 2000s, after the Dot-com bubble burst, the Internet has revolutionized the way in which we conduct business, internationally. Furthermore, by rising from 16 million users (0.4% of the world population) in 1995, to 2.75 billion (38.8% of it) in 2013, according to Internet World Stats, the Internet is not just part of "how we trade" but actually represents "how we live". Businesses, entrepreneurs, marketers and, in general, managers not considering this fact, or not adapting to the broad range of cultural, demographic, technological and political issues worldwide, will not be able to succeed in their global e-commerce strategies. To help International Business Administration students prepare for these challenges and opportunities, this course introduces them to a wide range of e-Business issues and practices, particularly Global Market opportunity analysis, Business Models, and all the Strategic and Technological major aspects of e-Commerce. Pre-requisites are: IB 200 and ITM 200/201

IB 315 - Middle Eastern Business (3)

The focus of the course is the business environment of the Middle East and North Africa (MENA). National and corporate cultures, customs and laws, geopolitical environment, economic systems, natural resources and security of supply, and other major business-related elements will be covered. This coverage is complemented by a description of the changing order in the MENA region and what it means for multinational firms.

IB 316 - Cultural Differences in IB (3)

Ample evidence abounds that cultures of the world are getting more and more in contact as the business world becomes increasingly global. Given this globally interdependent economy, it is imperative that students understand the value of culture when conducting business across boundaries. This course examines the concept of "culture" as it applies in an international business context. Among those topics discussed are communicating and negotiating across cultures, the impact of culture on global alliances and strategy, and multicultural teams in international organizations. Classroom discussions are based on text readings as well as specific country-based cases. Pre-req's: IB 200

IB 412 - Intern'l Business Strategies (3)

This course is designed to develop a broad understanding of strategic challenges in the international business environment. The major objective of the course is to engender a global mindset and a better understanding of the problems and challenges that organizations face in the international context. The challenge is to make sense of the shifting dynamics and multifaceted phenomena that confronts global business. The course weaves together conceptual and practical considerations to create a balanced and exciting learning experience. It is designed to enhance your capacity to function more effectively in the international business environment.

IB 480 - International Bus. Internship (0-6)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: IB-200, permission of the department chair and Junior or Senior standing.

IB 493 - Special Topics (3)

Topics of course will vary. Prerequisite: IB-200.

IB 496 - Global Immersion in International Business (3)

Locations will vary; only one may be used to fulfill IB concentration requirements. This two-week course provides business students a first-hand, practical exposure to business competition in another country or region. The course combines case study, traditional classroom lecture, guest lectures from academia and commerce, and field trips. Cultural excursions and presentations are integrated into the course instruction providing the students with a comprehensive view of business activity abroad. Pre-trip coursework and a final project are required. Prerequisite: IB-200.

IB 498 - Special Study (1-3)

Permission of the department chair.

IB 501 - Managerial Economics and Data Analysis (2)

This is an introductory course in economics designed to introduce participants to the most basic economic concepts and the application of these concepts to various situations. The course does not presume a background in economics and is, therefore, self-contained. The first half of the course is spent studying the tools of competitive analysis. The second half allows application of the tools to formulate and implement competitive strategy.

IB 505 - Fin & Man Acct Methods (2)

An overview of the language of business, this course examines the concepts, current standards and problems related to financial accounting reporting by U.S. enterprises. Serving as an accounting introduction for EMIB students without accounting experience and as review for those with prior experience, this course provides the foundation for subsequent examination of accounting issues of multinational enterprises.

IB 511 - Financial Mgt Skills (2)

This course provides basic financial tools necessary to understand foreign operations, including financial statement analysis, impact of foreign exchange rates and evaluation of performance in overseas markets.

IB 514 - Int'l Bus Environment (2)

This course seeks to develop an understanding of the international business environment and the issues that have to be addressed by business corporations when they operate across countries. It will discuss the role of various international organizations including the WTO, IMT, World Bank, APEC and ASEAN in shaping global competition.

IB 515 - Management Skills (2)

Different cultures require different approaches. This course examines the management principles required to administer operations in international markets. Topics include motivation methods, organizational structures and leadership styles.

IB 521 - Marketing Skills (2)

Marketing must be approached differently in many parts of the world due to cultural and business norms. This course reviews basic marketing approaches and how they must be modified in differing country environments. Topics include applicability of market research, customer preference, pricing and promotion.

IB 525 - International Economics (2)

This course investigates the effects of international trade and investment policy on firms, industries and the economy with emphasis on various regions throughout the world. The course will discuss tariffs, non-tariff barriers, trading blocs, international investment and industrial policies in various countries' economies.

IB 531 - Int'l Business Strategies (2-3)

This course focuses on the implementation of the traditional management functions (staffing, organizing, directing, and controlling) within an international or global organization. Emphasis will be placed on the impact of international environments (differing legal restrictions, political forces, economic situations, roles of labor, cultural philosophies, etc.) on management practices. A major underlying theme throughout the course will be the financial and efficiency costs of adjusting to local requirements versus global rationalization.

IB 533 - Asian Bus in Global Mkts (3)

Analysis of Asian global business issues including strategies, foreign investments, human resource management, and marketing. The class will be supplemented with case studies on particular companies and countries. Asian businesses will be compared to multinational corporations in the United States, Europe, and Latin America.

IB 535 - Intern'l Marketing Strategies (2)

This course analyzes the unique problems of marketing consumer or individual products on a global basis, integrating both business and cultural issues in different markets. Topics include different customer behavior for different products, distribution systems, and promotion techniques. Use of the web as a global marketing tool is also explored.

IB 541 - Int'l Financial Strategies (2)

This course undertakes an analysis of strategies used in international financial management. Topics include international cash management, foreign exchange risk management, working capital, foreign direct investment and financing alternatives for multinational firms.

IB 543 - Int'l Negotiations (2-3)

Basic negotiation techniques are discussed, with emphasis on effectively negotiating within the context of different cultures. Western and Eastern negotiation styles will be compared and contrasted. Other course subjects include high versus low context language, relationship versus transaction-based negotiation, time orientation, etc.

IB 545 - International Accounting (2)

A multidimensional examination of the accounting problems of multinational enterprises is completed during this course. International firms are faced with two unique accounting problems in addition to the problems associated with strictly domestic operations. Among the problem areas covered are: differences in accounting standards, currencies, price-levels, performance valuations, reporting practices and taxation.

IB 551 - Asia Pacific Business Strategy (2)

This course provides an applied study of business and economic environments of East Asia using country cases as examples. Countries of focus include Japan, China, Korea, Taiwan and Indonesia.

IB 555 - European Business Strategy (2)

This course provides an applied study of business and economic environments of Western Europe using country cases as examples. Countries of focus include members of the European Economic Community.

IB 561 - Latin America Business Strategy (2)

This course provides an applied study of business and economic environments of Latin America using country cases as examples. Countries of focus include Argentina, Brazil, Chile, Colombia, Mexico and Venezuela.

IB 562 - Int'l Mktg Research/Analysis (2)

This course will cover state-of-the-art computer modeling techniques and their application in real-world business situations. Besides the tools and techniques, the class will also focus on issues that effect data procurement and analysis.

IB 565 - Pol & Cult Envir of Europe (2)

This course undertakes a survey of the political and social development of post World War II Western Europe. Topics include politico-historical case studies, the rise and future of the European Community and European international relations.

IB 566 - Pol & Cult Envir Lat Amer (2)

This course provides a survey of the political and social development of twentieth century Latin America. The focus is on the heterogeneity of the political experience. Countries of study include Argentina, Brazil, Chile, Colombia, Mexico and Venezuela.

IB 567 - Pol/Cult Envir Asia-Pacific (2)

This course focuses on the political and social development of post World War II East Asia. Countries of study include Japan, China, Korea, Taiwan and Indonesia.

IB 568 - Managing Cultural Diff (2)

Discussing different cultures, this course ties the extent to which culture affects perceptions, decisions and behavior with how to approach management of cultural differences to achieve organizational effectiveness. Major topics include approaches to managing a culturally diverse workforce or team, ethics versus custom, culture and gender and non-Western style work days and weeks. Additionally, the course addresses expatriates, culture shock, repatriation and preparing for overseas travel and assignments.

IB 569 - Int'l Organizations (2)

The course completes a survey of the history, organization and contemporary mission of international political and economic bodies. Organizations covered include the IMF and the World Bank, GATT, OECD, UN, European Community, OAS, ASEAN and others.

IB 596 - Study Abroad (3)

The objective of this course is to allow students to apply the key concepts of global environments to a regional economy. The course combines case discussions with guest lectures by local business executives and scholars, and company visits. Students are expected to have a practical knowledge of the complexity of the business environments of the region.

IB 600 - Global Business Environ (3)

This course seeks to examine international business issues faced by corporations operating across several countries and different external environments. The focus is, therefore, on the regional and global business environment of international firms, integrating trading, investing, cultural and business practices.

IB 622 - International E-Business (3)

International E-business is undeniably changing the way companies conduct and compete in the global market place. It has experienced a phenomenal growth in terms of transactions and profits, particularly in advanced economies and emerging markets. Yet, international e-business environment is complex. Businesses need to address a broad range of cultural, legal, demographic, technological, and political issues to successfully formulate and execute their e-business strategies. To help you prepare for these types of challenges and opportunities and learn the tools to gain a competitive advantage, this course will introduce you to a wide-range of global ecommerce issues and practices, particularly e-business strategy, international online market entry, building an international e-commerce presence, web site localization and cultural customization, e-commerce infrastructure including mobile and social media platforms, international e-business security and payments systems, global social media marketing, and global search engine marketing.

IB 642 - Global Environment Strategy (3)

This course focuses on strategic planning, implementation, and evaluation of management decision making within an international organization. Strategy is multidisciplinary by design and as such will draw on the student's experience and understanding of the functions of business and the forces that impact the business success. It combines a range of viewpoints and analytical techniques. The course will address the challenges involved in understanding the shifting dynamics and multifaceted phenomena that confronts global business.

IB 644 - Global Business Negotiations (3)

This course is designed to familiarize and help students seek practical insights and skills in conducting international business negotiations (IBN). Students will be exposed to the negotiation process and will have opportunities to apply knowledge by participating in simulations. The course will cover various IBN contexts including national differences; characteristics and process; formulation and development of systematic approaches to planning and conducting IBN; and integration of contextual and environmental aspects of IBN through discussions and applications.

IB 680 - Theory in International Bus (3)

A doctoral seminar course in which the participating students review and analyze some of the leading economic, strategic and behavioral theories of the determinants of foreign direct investment and the multinational enterprise that has emerged over the past forty years. Special emphasis is given to the interface between the competitive advantages of the firms and comparative advantages of countries in shaping different kinds and forms of foreign production in various sectors and nations.

IB 682 - Sem in Global & Regional Bus (3)

A doctoral seminar regarding the history and role of specific geographic regions in the global economy, current theory related to international business, multinational companies, and government policies that affect international business.

Information Technology Mgmt (ITM)**ITM 200 - Intro to Information Technology Management (0-**

This course introduces students to the development, implementation and use of information systems in organizations. It is intended to prepare students for living and working in an information-rich, networked world and to introduce students to the profession of ITM. A variety of computer software is utilized to fulfill the objectives. Major topics include: e-commerce and the Internet; the creation, storage and usage of data, information and knowledge; systems development; the application of information systems in organizations and functional areas; and the use of computer resources for problem-solving. As more and more businesses globally adopt enterprise systems, it becomes increasingly important for students to understand how real-world business processes are managed and executed.

ITM 201 - Introduction to Enterprise Systems and Informat

The material covered in this course is identical to that covered in ITM 200. The only difference between the two is the type of SAP software used. In this course, the students will use the full size commercial SAP as opposed to a more limited simulation version of SAP software being used in ITM 200.

ITM 250 - Spreadsheet & Database Productivity (3)

The purpose of this course is to help students build skills and knowledge related to the use of electronic spreadsheet software. The focus is on the use of these tools to improve decision making and efficiency in organizations. Students will learn how to properly apply techniques such as scenario analysis, goal seeking analysis, logical functions and lookup tables. In addition, students will learn how to build simple databases, and retrieve data from more complex databases. Students will also learn how to extract data from databases to enable analysis in a spreadsheet.

ITM 250 - Spreadsheet & Database Product (3)

The purpose of this course is to help students build skills and knowledge related to the use of electronic spreadsheet software. The focus is on the use of these tools to improve decision making and efficiency in organizations. Students will learn how to properly apply techniques such as scenario analysis, goal seeking analysis, logical functions and lookup tables. In addition, students will learn how to build simple databases, and retrieve data from more complex databases. Students will also learn how to extract data from databases to enable analysis in a spreadsheet. Prerequisite: ITM-200. A personal laptop with Windows Operating System (OS) and wireless capability is highly recommended. Contact the instructor if you use MAC OS or do not have a laptop.

ITM 310 - Program Development Techniques (3)

This course is aimed at providing the student with an understanding of how to approach programming for business from a structured and object-oriented viewpoint. This is accomplished through use of a programming language such as Java. Further, it serves as a foundation course for more advanced topics that follow including object-oriented systems. Prerequisite: ITM 200 (formerly MIS 200)

ITM 320 - Object-Oriented Programming (3)

Object-oriented programming focuses on the organization of software as a collection of discrete objects that incorporate both data structures and the operations performed on those structures. This course teaches the basics of object-oriented programming as it applies to business, including class, inheritance, and encapsulation, through the use of a language such as Java. Prerequisite: ITM 310 (formerly MIS 310)

ITM 330 - Database Mgt Systems (3)

This course introduces students to the principles of relational database design and implementation and to the practical realities of database administration including the need for security, recover and resource sharing. Students learn and practice the fundamentals of the Structured Query Language (SQL), entity-relationship diagrams, dependencies and normalization, multi-user systems and XML. Projects require the student to design and develop a database application by utilizing design tools and major DBMS package such as Oracle. Prerequisite: ITM 200 (formerly MIS 200)

ITM 345 - Web Site Design & Development (3)

This course will teach students how to design web sites with creative interfaces, graphic images, functional site organization and logical navigation with a concentration on the design of web pages. It will also present the basics and concepts of developing a web site. The basics include a working knowledge of HTML and Internet protocols. Students will learn to use a website editor such as Dreamweaver MX. Web site design concepts introduced include effective use of color, images, animation, and layout. Students will learn to create a basic homepage and publish it on a web server along with advanced navigation and presentation techniques in the development of a design portfolio. Upon course completion, students will be prepared to design, implement, and manage a basic web site. Prerequisite: ITM 200 (formerly MIS 200)

ITM 350 - Information Security Mgmt (3)

This course will examine the field of information security to prepare students for their future roles as business decision makers. It will present both the managerial and technical aspects of the discipline and address knowledge areas of the CISSP (Certified Information Systems Security Professional) certification throughout. Information security will be addressed within a real world context and include many examples of issues faced in today's businesses. Prerequisite: ITM 200 (formerly MIS 200)

ITM 360 - Global Information Management (3)

This course addresses issues in global information management. It will focus on central issues facing IT managers and general managers working with IT on a multinational basis. The context of issues regarding regions/nations, firms, and individuals will be addressed in terms of policies, technical infrastructure, application and business processes, and IT operations. Students will work with cases to apply these concepts in context. Students will also interact with students from other countries for developing knowledge regarding global information technology issues using groupware technology. Prerequisites: ITM 200 (formerly MIS 200) and IB-200.

ITM 370 - Business Analytics (3)

Students in this course will learn how to apply information technology tools to analyze data for the purposes of business decision making. Students will learn a methodology for analyzing and modeling business decisions, as well as sourcing, collecting and analyzing data. Data quality and ethical use issues will also be discussed. Prerequisite: ITM 200 or 201 and DSCI 207.

ITM 380 - Project Management (3)

Students in this course will learn that projects are the vehicles to introduce change into complex organizational systems and that managing that process requires business, technical and people skills. A growing number of industries are increasingly using project management as a way to manage organizational goals. Projects may involve disciplines such as information systems, accounting, operations management, marketing and international business. The general course objective focuses on developing problem analysis/solution development skills related to project definition planning, scheduling, organizing, managing, and closing projects (a.k.a., the project management life cycle). Topics covered align with selected knowledge areas prescribed by the Project Management Institute to set the foundation for students that might like to pursue further study and certification in this field. Prerequisites: ITM-200 and junior standing.

ITM 410 - Systems Analysis & Design (3)

This course provides a general understanding of the systems development life cycle as well as other techniques including prototyping. Students will develop the analytical skills required to thoroughly understand a problem and formulate the optimal solution. Projects will require the student to use process modeling techniques to assist in the analysis and design process. Prerequisite: ITM 200

ITM 435 - Data Comm & Network (3)

This course looks at the types of information used in the business environment and the implications in terms of communications along with the trend toward digital integration of historically stand alone analog and digital technologies. It examines the process of converting voice, data, image, and video information into integrated electromagnetic signals for transmission via various media. Coverage includes communication techniques, transmission efficiency methods, wide area networks (WANs), local area networks (LANs), high-speed trends in networking, and communications architectures and subsequent internetworking issues. Prerequisite: ITM 200 (formerly MIS 200)

ITM 450 - Web-Based App & Archit (3)

Capstone ITM course to be taken in the final year of study. This course reviews current and emerging multi-tier development platforms. Students integrate knowledge gained from prior coursework, performing application development on platforms typified by J2EE, .NET or open source technologies (PHP, Apache, etc). Coursework concentrates on web-based, object-oriented architectures, and explores in detail the relationship between the database, business logic and user interface tiers. Prerequisite: ITM 320, ITM 330 (formerly MIS); Corequisite: ITM 410, ITM 435

ITM 460 - Bus Process Implement ERP/SAP (3)

The course objective is to introduce the student to business processes and their interdependent nature across the enterprise. The course includes both a conceptual overview of business processes and hands-on exercises that allow the student to configure a hypothetical company from the ground up using SAP R/3. The hypothetical company does not have a production facility; rather, it buys completed products and sells them to its customers. It provides students with a conceptual understanding of how businesses are comprised of a federation of interdependent functional areas. It further provides students with a basic SAP configuration experience as they apply SAP to a hypothetical company thereby providing a solid understanding of the value of process integration in the Enterprise. Particular emphasis is placed on the integration points between the modules and cross-functional business processes that are critical to the success of a company. Pre-req's: ITM 200, ACCT 200 or permission of instructor. Laptop computer with internet access required.

ITM 480 - ITM Internship (0-3)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ITM 200 (formerly MIS 200) and permission of the department chair, and junior or senior standing.

ITM 490 - Enterprise Systems Practicum (3)

This course serves as an introduction to ERP and also provides a solid foundation for common business processes in many disciplines and how they are supported by modern information systems. The class examines various elements of an organization's business process and teaches students to examine and analyze business processes. The student's study is reinforced by the use of SAP ERP software to support both strategic decisions and day-to-day operations of a business. Prerequisites : ITM 200 or 201 and Junior standing.

ITM 498 - Special Study (1-3)

Permission of Dept. Chair

ITM 600 - Managing Info Technology (3)

This course describes the role of IT in organizational strategy. Topics covered include cloud base technologies, Internet applications and emerging technologies. This course emphasizes the concepts underlying enterprise systems and identifies challenges in managing security and risks in IT infrastructure.

ITM 605 - Project Management (3)

This course provides an overview of the roles, responsibilities, and management methods of the project manager from project concept to closeout and the structure of project management within an organization. Content may include project selection, quality, scope, time, cost, human resources, communications, risk, procurement and integration management. Topics selected are based on the educational requirements for the Certified Associate in Project Management curriculum (CAPM) as prescribed by the Project Management Institute and complement the information technology management curriculum. This course uses techniques such as simulation, team projects, case studies and interactive discussions to facilitate application of the concepts.

ITM 610 - Systems Analysis & Design (3)

Systems analysis and design provides a general understanding of the systems development life cycle as well as other techniques including prototyping. Students will develop the analytical skills required to thoroughly understand a problem and formulate the optimal solution. Data modeling techniques such as data flow diagrams (DFDs) and IDEF will be used. Projects will require the student to use a product such as Oracle's Designer 2000 to assist in the analysis and design process. Prerequisite: ITM 600 (formerly MIS 600)

ITM 625 - Electronic Commerce Systems (3)

This course covers the basic approach to the principles of design and implementation for electronic commerce systems. Also covered are issues in project management, underlying technologies that enable electronic commerce at the firm and market levels, and issues of security. The intent of the course is to aid individuals preparing for positions that include membership on and management of electronic commerce development teams. Prerequisite: ITM 600 (formerly MIS 600)

ITM 630 - Database Management Systems (3)

Course provides an overall understanding of database techniques, beginning with a study of the characteristics of relational database management systems and continuing with structured query language (SQL), entity-relationship diagrams, dependencies and normalization, and multi-user systems. Evolving approaches to database management, such as object-oriented database, will also be examined. Projects will require the student to develop a database design from the analysis stages to the final implementation by utilizing various design tools and a DBMS package such as Oracle. Prerequisite: ITM 600 (formerly MIS 600)

ITM 635 - Telecommunications (3)

This course looks at the types of information used in the business environment and the implications in terms of communications along with the trend toward digital integration of historically stand alone analog and digital technologies. It examines the process of converting voice, data, image, and video information into integrated electromagnetic signals for transmission via various media. Coverage includes communications techniques, transmission efficiency methods, wide area networks (WANs), local area networks (LANs), high-speed trends in networking, and communications architectures and subsequent internetworking issues. Prerequisite: ITM 600 (Formerly MIS 600)

ITM 640 - Applied Business Analytics (3)

ITM 640 This course provides necessary skills for business managers to apply Business Analytics tools for data analysis and business decision making. This course focuses on developing skills and knowledge in creating analytics solutions such as Business Intelligence Dashboards. Using hands on tutorials and case studies, students will learn and demonstrate application of analytics skills in multiple business domains. Pre-requisite: Six credit hours of 600-level graduate business courses.

ITM 645 - Business Strategy and Enterprise Systems (3)

This course serves as an introduction to ERP and also provides a solid foundation for the common business processes used in today's organizations. In this course, students will learn about common business processes and gain proficiency in the use of the SAP® enterprise system to execute those processes. Students will also learn how to manage a company that involves trading goods as well as a manufacturing enterprise. Students will have to create strategies to be successful in a competitive environment.

MBA Administration (MBA)**MBA 501 - Accounting for Managers (3)**

Managers must consider both financial and non-financial information in order to make rational decisions. The purpose of this course is to introduce and integrate the use of external financial statements in this decision making process. The approach taken to understanding financial statements is a "user" rather than a "preparer" perspective. Fundamentals of Accounting and Financial Management are integrated throughout to enable the student to understand how various types of decisions they may make will effect the financial statements of the firm. Short cases are used that integrate other disciplines such as Marketing, Strategy, etc. in order to make the learning experience as realistic and relevant as possible.

MBA 601 - Emerging Bus Issues I (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 602 - Emerging Bus Issues II (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 603 - Emerging Bus Issues III (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 604 - Ethics & Values-Based Dec Mak (1)

Designed around the ethical imperative that recognizes that organizational decision-making must, at critical junctures, be disciplined by values. Student exercises in values-based decision-making, consisting of the when, where, and how of the issues at hand, lead to an understanding of the relationship between professional ethics and personal values. Identification of existing norms that influence ethical judgments are considered in the context of adequacy, applicability and appropriateness.

MBA 607 - Career Management (1)

Emphasizes career success through the seven steps of career management: self-assessment, career exploration, goal setting, designing strategy, implementing strategy, evaluating and negotiating, and working. Addresses the impact of organizational culture on career success and derailment along with the importance of lifelong networking and negotiating skills.

MBA 610 - Integ Consulting Module (3)

Emphasizes cross-functional learning and team-based, experiential learning. Designed around the elements of a strategic plan, and specific issues identified by a "real world" client-company. A team teaching format, involving a "live case" approach in which senior-level managers from a company will present an existing strategic problem to be addressed by student teams.

MBA 615 - Global Business Ethics (3)

The course will consist of two elements. The first is based on a study of the conceptual and theoretic foundations of business ethics. Readings will be drawn from moral philosophy, business history, global culture, economics, religion and other disciplines. The second component, and effort to simulate ethical decision-making, is centered on case study and discussion. An important organizing theme for course study revolves around the tension between the standardization of global business practices and the diversity of cultural, religious, and national mores that exist.

MBA 620 - Prof Effectiveness Series I (1)

This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 621 - Information Technology (1)

This course focuses on the management of information technology in organizations. Foundational concepts regarding information technologies will be covered. These foundational concepts include: (1) enterprise software; (2) information technology supported business process design; (3) managing information systems in the service management context and as a value creating asset; (4) data management, database management systems and data warehousing; (5) business intelligence and decision making models; (6) e-commerce and (7) emerging technologies.

MBA 622 - Operations Management (2)

The objectives of this course are: (1) to familiarize the student with decision-making tools and models that operational managers use; (2) to present business firms' integrated operational practices in manufacturing and service sectors; and (3) to analyze and examine business strategic process planning from a cross-functional perspective using short case studies. Topics will include: facility capacity and location decisions, scheduling and control problems, aggregate planning, inventory systems, and project management and control.

MBA 624 - Managerial Econ & Applied Stat (2)

The course will focus on developing the tools of economic reasoning and statistical analysis necessary to make sound managerial decisions. Towards that goal, economic and statistical analysis as they pertain to markets, firms, and competition among firms will be developed. The use of applied empirical models for economic and statistical analysis and managerial decisions will be explored.

MBA 625 - Essentials of Mktg Strategy (2)

This course is an introduction to the fundamentals of contemporary marketing management, with a particular focus on the strategic foundations of marketing. The overall goal of the course is for students to understand the role of marketing and brand development in driving sales and profitability for firms. Product differentiation, segmentation, positioning, target audience development and their inter-relationships will be emphasized. Additionally, students will gain competency in developing effective brand architectures.

MBA 626 - Legal and Ethical Environment (2)

This course examines the legal and ethical issues that business managers confront. The course provides an overview of the relationship of the business organization to the legal system, including various modes of dispute resolution. In addition, the course addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with, state and federal laws and regulation. Case studies are employed in the course to challenge students to consider how legal and ethical judgments are implemented in practical and effective ways.

MBA 627 - Leadership and Strategic Mgmt (2)

Businesses have undergone enormous changes in recent years, requiring leaders and teams to learn rapidly and adapt quickly, focusing on horizontal and vertical leadership, team building and performance, and team leadership. This course introduces students to strategic management and leadership concepts, models and theories developed to optimize organizational effectiveness in challenging work environments. The course presents opportunities for students to explore issues central to an enterprise's long- and short-term competitive position.

MBA 628 - Integrated Decision Making (2)

The primary goal of this course is to coalesce previous course material in such a way that students will view business as an integrated whole rather than a set of isolated decisions. Another important goal of the course is to help students develop the analytical thinking skills necessary to make effective decisions in complex, uncertain environments. The format of the course is a series of team-taught weekly cases and simulations. Students will be asked to prepare and present the results of their analysis on a weekly basis.

MBA 629 - Accounting and Financial Mgmt (4)

This course introduces the fundamentals of finance, financial accounting and management accounting. The use of accounting information in decision-making is one major theme in this course. Issues involving cash flows make up a particularly significant focus area of this course. Another objective of the course is to develop an understanding of the financial environment in which managers and individuals operate. A section of the course is designed to provide a systematic understanding of the role of management accounting systems and strategic cost management. Throughout the course, the development of an ethical perspective is stressed.

MBA 630 - Applied Statistics (2)

Data analysis is an everyday reality of the business world. This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the widely used statistical methods to aid in problem formulation, data analysis and managerial decision-making. At the end of this course, students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty. This course also serves as a prerequisite for other analytical coursework in the MBA curriculum.

MBA 631 - Legal Aspects of Business (1)

Overview of the U.S. legal system and specific areas of law such as contracts, torts (including product liability), agency, selection of business entity, corporate governance, and intellectual property.

MBA 632 - Financial Accounting (1)

Financial Accounting presents accounting as an information system that produces summary financial statements, primarily for users external to a business or other enterprise. Students study the forms of business organization and the common transactions entered into by businesses. The emphasis is on understanding and applying basic accounting principles and other concepts that guide the reporting of the effect of transactions and other economic events on the financial condition and operating results of a business. How to analyze and interpret historical financial statements, as well, as the limitations of using these in making forward-looking business decisions is included. The primary content emphasis will be the basic accounting cycle and the four major financial statements: income statement, balance sheet, retained earnings and cash flow. We will also learn about financial statement analysis.

MBA 633 - Managerial Economics (2)

This course will introduce you to the core ideas and economic tools that are used for analysis of markets and of firms that produce and sell goods and services in these markets. Using simple economic models designed to simulate markets, this course will explore tools and analytical techniques that can be used to study real markets. The first section of the course will focus on competitive markets and the short and long run decision made by firms that operate within competitive markets. The latter part of the course will focus on strategic interaction between firms in markets in which firms exercise some degree of monopoly power.

MBA 634 - Nexus I (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters, and a business etiquette lunch. Managerial Communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 636 - Financial Management (3)

In-depth studies of principles of corporate finance to develop the theoretical knowledge and practical judgement necessary for financial decision-making. The specific topics covered include, but are not limited to: the time value of money, valuation of financial assets, capital budgeting, market efficiency, risk and uncertainty, portfolio theory, the CAPM and APT models, capital structure, dividend policy, and option pricing theory.

MBA 637 - Ethical Environment of Business (1)

Special emphasis in this course is given to the analysis of ethical issues that business managers confront. A complementary objective is to focus on the implementation of ethical judgments and to formulate appropriate strategies for addressing barriers to such implementation. Throughout the course, however, the connection between reflection and action will be our chief concern. Existing norms for business practice will be studied and examined as they represent important guidelines for decision-making, but students will also be challenged to consider their adequacy, applicability, and appropriateness in various contexts. The course will consist of two broad elements. One component takes up the conceptual and theoretical foundations of business ethics. Readings, tools and perspectives will be drawn from various sources: moral philosophy, business history, economics, religion, and other disciplines. The focus in this section is on ethical analysis and moral reasoning. The second component, representing a serious effort to simulate actual ethical decision making and implementation of those decisions, is based on case study and discussion. Cases cover various functional emphases as well as highlighting the multiple roles and responsibilities that fall to business men and women. The cases portray in a realistic fashion how different but interrelated ethics issues unfold and how these dilemmas frequently resist simple classification or easy resolution.

MBA 638 - Managerial Accounting (1)

This course introduces students to the fundamentals of management accounting. The emphasis is on the use of accounting information to satisfy specific management objectives. After taking this course, students will understand the three broad objectives of a management accounting information system: to provide information for costing out services, products, and other objects of interest to management; to provide information for planning, controlling, evaluation and continuous improvement; and to provide information for decision making.

MBA 640 - Prof Effectiveness Series II (2)

This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 641 - Global Business Integration I (2)

All business, whether domestic or multinational, are directly or indirectly affected by global business environments - imports, exports, foreign direct investment, foreign currency, outsourcing, and service agreements. This course offers a broad examination of how these factors impact the operation of international business from the view points of political, economic, financial, cultural, legal, and business practices.

MBA 643 - The Organization: Governance and Compliance

This course explores the governance and compliance aspects of management and their impact on an organization's operating environment. The course will consider the statutory and regulatory sources of governance and compliance as well as how shareholders, directors and management teams shape and respond to: governance structures and practices; and recognize and monitor numerous

MBA 644 - Nexus II (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters and a business etiquette lunch. Managerial Communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business Connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 650 - Prof. Effectiveness Series III (1-2)

This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 651 - Study Abroad (3)

The objective of this course is to allow students to apply the key concepts of global environments to a regional economy. The course combines case discussions with guest lectures by local business executives and scholars, and company visits. Students are expected to have a practical knowledge of the complexity of the business environments of the region.

MBA 652 - Global Business Integration II (1)

This course focuses on analyzing various national markets in key regions in terms of competitive strengths and weaknesses in different industries by integrating the various functional aspects managing international business operations and the key concepts and tools learnt in global environments and study abroad courses.

MBA 653 - Integrated Consulting Module (3)

Emphasizes cross-functional learning and team-based, experiential learning. Designed around the elements of a strategic plan, and specific issues identified by a "real world" client-company. A team teaching format, involving a "live case" approach in which senior-level managers from a company will present an existing strategic problem to be addressed by student teams.

MBA 654 - Nexus III (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company, exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters and a business etiquette lunch. Managerial communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business Connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

Management (MGT)**MGT 218 - Legal Environment Bus (3)**

Introduction to the U.S. legal system and to specific areas of the law such as torts, contracts, the law of agency and of business organizations. The course also covers American public law affecting businesses, including securities regulations, antitrust law, consumer protection, employment and environment law. Global and ethical issues are considered throughout.

MGT 300 - Mgt Theory & Practice (3)

Studies management using both classical as well as modern theories of organization; the functions of management, external and/or environmental aspects bearing on managerial responsibility; development of practical management policy as guides to managerial decision-making, and human aspects of management including motivation, workplace equity, and demographic diversity. Prerequisite: Sophomore standing.

MGT 307 - Intro to Sports Management (3)

This introductory course emphasizes basic management principles as they relate to the business of sports. Students are introduced to every aspect of sport business, which includes: ethics, management, marketing, law, media, economics, finance, events, facility management, governance, global industry, and other related areas. There is an emphasis on developing and improving communication skills while interacting with senior executives from the industry. An overview is provided with regard to career opportunities in this field. Pre-req's: MGT 300 and Junior standing

MGT 310 - Mgt of Human Resources (3)

Overview of contemporary HR problems and practices as related to the management of individual firms; major topics include: employee selection, training and development, personnel appraisal, organizational morale and discipline, compensation administration, employee benefits and services, organizational communication. Prerequisite: MGT-300.

MGT 312 - Organization Behavior (3)

A study of interpersonal relations between individuals and groups in an organizational setting. The social environment of the work situation, along with the need of understanding and working with this environment, is emphasized. Problems arising from such relations are analyzed and evaluated. Prerequisite: MGT-300.

MGT 319 - Social Entrepreneurship (3)

This course is designed to introduce basic concepts and techniques of entrepreneurship applied to promote social good in all three sectors of the economy (for-profit, non-profit and government) to sophomores and juniors. The goal is to help students be better prepared for upper-level entrepreneurship and service leadership courses that build on social entrepreneurship knowledge. The course will cover the fundamentals of entrepreneurship with a particular focus on entrepreneurship in the pursuit of the greater good through charitable efforts, self-sustaining improvement efforts, and institutional efforts with a clear social benefit as part of the organization's mission. Prerequisites: MGT300 (Introduction to Management) Equivalent to MGT 320

MGT 320 - Managing Ideas in Entrep Firms (3)

This course is intended as a general introduction to the models and applications of entrepreneurship, innovation and creativity. The course will introduce the three major forms of entrepreneurship - independent (as in self-employment), corporate entrepreneurship and social venturing. In addition, the course will educate students about the three key elements of modern entrepreneurship: the recognition and creation of opportunities, the development of strategies to realize those opportunities, and the packaging of those opportunities for maximum impact in intended markets. Prerequisite: MGT-300. Equivalent to MGT 319.

MGT 321 - Manag Resources in Entrep Firm (3)

Managing Resources in Entrepreneurial Firms (MREF) is intended as the fundamental preparation for entrepreneurship majors in the analysis and management of key resources used to create and sustain firms-financial, human, operational, and legal. Topics will include the life-cycle of the entrepreneurial firm, entrepreneurial leadership, and the human resource function in the small or engaging firm, the analysis of financial and accounting information for daily cash management and the evaluation of business performance, sources of funds for emerging and small businesses, strategies for managing assets, operations, and intellectual property, as well as strategies for growing and harvesting firms. Prerequisites: MGT-320.

MGT 330 - Negotiations and Conflict Resolution (3)

This course focuses on processes for conducting negotiations and resolving conflicts. The course will introduce different theoretical perspectives and help students understand their own attitudes and aptitudes regarding negotiations and conflict resolution. In addition, students will have the opportunity to put this knowledge into practice, and reflect upon the outcomes.

MGT 400 - Strategic Mgt and Policy (0-3)

Capstone course to the business program; analysis of cases drawn from companies at different stages in the cycle of economic activities. Students develop approaches to corporate management functions and policy formulation at the top management level and an understanding of the strategic management process; application of the concepts of management, human relations, accounting, marketing, production, economics, and financial analysis to real case situations. Prerequisites: Completion of the business core and senior standing. BIZ 400 AND MGT 400 MUST BE TAKEN CONCURRENTLY.

MGT 405 - Fundamentals of Leadership (3)

The purpose of this course is to provide students an opportunity to apply theories of leadership to everyday practice, to understand the history of the study of leadership, to explore the relationship between personal awareness and reflection on growth in their leadership development, and to provide feedback from others on perceptions of student's leadership effectiveness. Prerequisite: MGT-300.

MGT 408 - Org Failure, Chg & Transformat (3)

This course should create an awareness of the reasons why organizations experience crises and what might be done to identify problems, to avoid potential failure and to transform the organization to enable it to succeed in the future. The symptoms and, more particularly, the causes of failure will be examined in depth, as well as the techniques that may be used to identify the onset of difficulties as early as possible. Successful turnaround strategies will more likely be achieved if problems are recognized early. Prerequisite: MGT-300.

MGT 411 - Talent Management (3)

Addresses human resource planning, recruitment policies and practices at all organizational levels, pre-employment selections, interviewing and testing techniques and tools, appraisals and development of employee resources, internal personnel administration and equal employment opportunity affirmative action programs. Prerequisite: MGT-310

MGT 413 - Compensation (3)

Addresses the purpose of compensation administration for the attraction of competent employees, retention of these employees, provision of incentives for effective employment and the rewarding of employees according to merit and accomplishment. The course presents the principles and concepts essential to establishing and maintaining adequate and equitable compensation for employees. Prerequisite: MGT-310.

MGT 414 - Training & Development (3)

Objectives include knowledge of human resource development including its history and future with examples of training and education, which foster human resource development. Responsibilities of human resource development managers, including budgeting and strategic planning, are highlighted. Trends in human resource development in other countries will be compared. Prerequisite: MGT-310.

MGT 415 - Current Problems in Mgt (3)

In-depth analysis and exposure to current problems and challenges facing today's manager. Subject matter will vary from semester to semester. Prerequisite: MGT-300.

MGT 418 - Employ Law: Concepts/App (3)

A detailed analysis of the application of law in the employment relationship. Overall, issues will be grouped into three functional areas: recruitment and selection, management, and termination. Specific topic areas will include: the employment relationship in union and non-union settings, discrimination in employment, and health and safety issues. Prerequisites: MGT-218 and MGT-310.

MGT 421 - Business Plan Development (3)

Involves new business planning and analysis applied to developing and presenting financial and operational plans for new businesses. Topics include competitive analysis, strategic and managerial analyses, securing start-up financing, and professional presentation methods. The class also provides interaction with entrepreneurs and local entrepreneurship professionals. A one-hour lab required with the course focuses on entrepreneurial financial analyses and computer applications in new business development and operation. Prerequisites: MGT-320 and MGT-321.

MGT 422 - Intro to Family Business (3)

Explores family business topics such as growth and expansion, professionalization, succession and family dynamics, conflicts, and relationships relative to the business. Also provides an overview of families who own businesses and profiles of those businesses relative to the stages of business activity. Prerequisite: MGT-320.

MGT 424 - Legal Issues Sport & Entertain (3)

This course aims to give the student an in-depth understanding of amateur and professional athletics, and the sports and entertainment industry in general, in relation to the American system of jurisprudence, statutory law, administrative law, constitutional law, and common law. It is intended to familiarize the student with legal concepts and analysis, which will be integral to the student's ability to recognize, approach and resolve sport and entertainment-related legal issues. Answers to legal questions will be pursued through critical thinking and reasoning, especially on matters of policy, legal and political philosophy, with an ultimate goal of gaining valuable insight on issues the student will be called to deal with in his/her ensuing academic and professional life. Pre-requisite: MGT 218.

MGT 425 - Intercollegiate Athletics Mgmt (3)

The course will offer extensive and management legal theory background and important rules' interpretation, as well as the application on a variety of issues arising in intercollegiate athletics. The student will learn to recognize, approach, and resolve NCAA and Conference rules' related issues. The course will promote the student's ability to deal with problems in intercollegiate athletics and encourage critical thinking and reasoning. As an upper level sport business course member, the student will be called to assume a critical stance on the issues under study, and will have to support theoretically, conceptually, and practically. Course Prerequisites: MGT 218 (or PLS 100), MGT 300.

MGT 428 - Legal Environ Bus II (3)

Advanced course for students (1) desiring to expand their knowledge of the legal and ethical environment of business and of issues in business law or (2) preparing to take the CPA examination. Topics covered include negotiable instruments, secured transactions, debtor-creditor relationships, property law, trusts and wills, business associations and other special topics such as accountants' liability and international legal problems. Prerequisite: MGT-218.

MGT 430 - Integrated Sports Bus Planning (3)

The Integrated Sports Business Capstone ties together what you have learned in all previous sports business courses and in your general business studies (Marketing, Finance, etc.). It allows students to apply that knowledge to a "real world" sports business project for a client (team, sponsor, etc.). Because of the non-traditional, project-oriented nature of the course, a heavy emphasis will be placed on team-based, experiential learning. Pre-req's: MGT 307 and two of the sports business courses

MGT 438 - Cyberlaw (3)

This course will focus on the legal and ethical environment relevant to the Internet and E-Commerce. Recent developments, court decisions, federal and state statutes, administrative rulings and the legal literature will be explained and analyzed. Pre-requisite: MGT 218.

MGT 480 - Management Internship (0-3)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: MGT-300, permission of the department chair and Junior or Senior standing.

MGT 498 - Special Study (1-3)

Permission of the department chair.

MGT 600 - Management (3)

Course is an attempt to teach a set of skills grounded in behavioral science theory and research that are essential for a successful career in management. It will integrate the management principles of planning, organizing, leading and controlling with the skills necessary to accomplish these principles with people.

MGT 602 - Legal Environ of Bus (1)

Directed at complex decision-making, requiring recognition and integration of legal considerations in managing the socially responsible organization. Provides an overview of the relationship of the business organization to the legal system, including various modes of dispute resolution. Addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with, state and federal laws and regulation.

MGT 603 - Legal, Ethical, Prof Env Bus (3)

This course is directed at complex decision-making, requiring recognition and integration of legal, ethical and professional considerations in managing the socially responsible organization. It provides an overview of the relationship of the business organization to the legal system, including various modes of dispute resolution. In addition, the course addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with, state and federal laws and regulations.

MGT 605 - Strategic Management (3)

MGT 605

MGT 606 - Strategy & Practice (3)

Emphasizes strategic evaluation and the synergies required for effective managerial decision-making through the formulation, implementation, and assessment of cross-functional decisions that enable the achievement of organizational objectives. Utilizes cross-functional and team-based, experiential learning, and is designed around the elements of a strategic plan and specific issues identified by a "real world" client organization. Discussion and analysis of the strategic concept culminate with the presentation of an existing strategic problem to be addressed by student teams.

MGT 608 - Fail Fwd: Lead/Art of Failure (3)

This course should create an awareness of the reasons why organizations experience crises and what might be done to identify problems, to avoid potential failure and to transform the organization to enable it to succeed in the future. The symptoms and, more particularly, the causes of failure will be examined in depth, as well as the techniques that may be used to identify the onset of difficulties as early as possible. Successful turnaround strategies will more likely be achieved if problems are

MGT 610 - Mgt of Human Resources (3)

Current topics and problems of human resources and personnel practices. Objectives consist of investigation and discussion of selected topics in recruiting, utilization, conservation, and development of human resources within the context of the individual firm and the labor market.

MGT 613 - Value Based Organizational Design (3)

The study of organizations is integrated units and subunits that must effectively define and interact with key stakeholder groups in their internal and external environments. Topics will include organizational effectiveness, environmental scanning and management, design and structure, organizational change, communication systems, conflict and politics, stakeholder management, and organizational culture. Prerequisite: MGT 600.

MGT 614 - Executive Decision Making (3)

Oriented toward giving the student insight into the decision-making process in management. The nature of managerial decision-making, the environment for decision-making and the philosophy and selected techniques for decision-making offered modern managers by the management sciences will be considered.

MGT 615 - Current Issues in Mgt (3)

Comprehensive in-depth analysis of current management problems and issues. Focus of the course will be contemporary topics facing the executive in today's organization and society. Issues will vary, but may include such topics as corporate social responsibility and governance, ethical challenges, corporate culture and organizational politics, and selected workplace issues.

MGT 620 - New Venture Initiation (3)

The problems of starting a new service or manufacturing business. Entrepreneurship, characteristics of new ventures, raising capital and preparing business proposals.

MGT 621 - Adv Bus Plan - New Ventures (3)

Provides in-depth involvement in the development and presentation of a professional business plan. Topics include competitive analysis, strategic and managerial analysis, securing start-up financing, and professional presentation methods. Selected guest lecturers will include entrepreneurs and entrepreneurship experts from the region.

MGT 622 - Family Business (3)

Focuses on the unique challenges facing family business: succession planning, managing change and development, managing role demands and conflicts at the family/firm interface. Students learn fundamental issues facing family firms through readings, lectures by experts, and presentations by members of local family businesses. Prerequisites: MGT 600 and MGT 620 or MGT 623.

MGT 623 - Corporate Entrepreneurship (3)

This course focuses on the corporate venturing process, which leverages the processes of internal entrepreneurship, working with universities and licensing new technology to promote the continued growth and learning of the organization. Topics include the strategic analysis of growth and innovation opportunities of the firm, reviewing the forms of corporate venturing (new markets, new product, commercialization, M&A, restructuring, etc.), and developing the skills of structuring and managing business innovations in complex existing systems in a manner which is exploratory, integrative, fast-paced, and resource-conscious. Prerequisite: MGT 600.

MGT 624 - Special Topics in Entrep (3)

Designed to bring emerging and varying entrepreneurial business issues and practices before graduate business students so that they may begin to better recognize, create, and capitalize on evolving business opportunities. Guest speakers and readings are supplemented with cases and projects involving "real and live" entrepreneurial topics for examination of various issues in innovative business planning, corporate ventures, business growth, venture capital, emerging technologies; and other areas of entrepreneurial concern. Course study is intended to emphasize crossfunctional analysis of rapidly changing business environments to enable identification of entrepreneurial opportunities and the creation and successful management of innovative operations. Prerequisites: MGT 600 and MGT 620 or MGT 623.

MGT 628 - Legal & Ethical Environment (3)

Directed at managerial decision-making, requiring recognition and integration of legal and ethical considerations in managing complex organizations. Introduces students to ethical issues and analytical frameworks as a foundation for an understanding of the legal system and its operations to establish laws and resolves disputes. Looks at the business and organizational impact of state and federal laws and regulations.

MGT 635 - Management of Change (3)

Discover and discuss change in relation to the complexities of organizational life. In attempting to fulfill this goal, the class takes both theoretical and practical approaches as it seeks to meet both the academic and applied aims of most business and management courses.

MGT 641 - Employee Performance & Turnover Management

In this course students will learn advanced conceptual frameworks and practical approaches to managing employee job performance and voluntary turnover. This is a readings-based course with an emphasis on real-world management problem-solving, which assumes some basic human resource management knowledge.

Marketing (MKT)**MKT 300 - Intro to Marketing Mgt. (3)**

Introduction to the concept of marketing and its application to domestic and foreign markets, and to consumer, producer, institutional, and service markets; analysis of marketing mix, including product, price, promotion/advertising, and distribution policies; and an overview of career opportunities in the marketing field. Prerequisites: ECON-190 and Junior standing.

MKT 330 - Mkt Channels & Distribution (3)

Institutional structures and distribution processes viewed as a subsystem of marketing strategy; channel structure, promotion, pricing, product assortment considerations, and physical logistics to achieve channel policies; and social, governmental, economic and competitive aspects affecting channels. Prerequisite: MKT-300.

MKT 340 - Integrated Mktg Communications (3)

Advertising efforts, public relations efforts, and coordinating and integrating promotional strategy efforts; situation analysis; determination of objectives and budgets; media strategies; sales promotion and public relations. Prerequisite: MKT-300.

MKT 350 - Sports Marketing (3)

The content of this course focus on three aspects of sports marketing: (1) the use of sports as a marketing tool for other products; (2) the marketing of sports properties; and (3) the emerging issues relevant for both marketing through and the marketing of sports. The first component addresses the various domains of the sports marketing environment and traditional sponsorship. The second focuses on the marketing of professional and amateur sports, the marketing of participation-oriented sports, and the marketing of a broad array of sports-related products such as sporting goods and apparel. The third addresses the impact of relationship marketing, technology, and controversial issues within the sports marketing industry. Pre-req's: MKT 300

MKT 360 - Marketing Research (3)

Problem-solving in marketing through assimilation and interpretation of information; secondary sources and techniques of surveying and experimentation examined; and statistical tools applied to research design and interpretation. Prerequisites: DSCI-207 and MKT-300.

MKT 430 - Retail Management (3)

Retailing operations within the marketing systems; the management, organization and control of retail establishments; and retail buying practices, pricing, control of inventories, personnel publicity, advertising, and store location. Prerequisite: MKT-300.

MKT 440 - Consumer Behavior (3)

Concepts and theories explaining the cognitive, behavioral, and experiential aspects of individual and group purchasing of goods and services; analysis of a broad range of purchase and consumption situations; development of appropriate target market strategies. Prerequisite: MKT-300.

MKT 444 - Personal Selling (3)

The course content revolves around the personal selling process. Role playing and sales presentations are used to improve oral communication skills, enhance self-confidence, and hone selling skills. Persuasive writing skills are also practiced. Prerequisite: MKT-300.

MKT 445 - Sales Management (3)

Environment of sales management; forecasting sales; budgeting; structuring a sales force; selecting, training, compensating salespeople; motivating and evaluating salespeople; and the personal selling process. Prerequisite: MKT-300.

MKT 455 - International Marketing (3-4)

Environmental systems approach, examining socio-cultural aspects and the economic and political infrastructure of foreign markets; analysis of multiple modes of market entry, market segmentation, and marketing strategy development, appropriate to various sizes and types of companies in the U.S. and abroad. Prerequisite: MKT-300.

MKT 460 - Brand Management (3)

This course will focus on understanding, building, measuring, and managing the essence of brand power: brand equity. Starting with an overview of brands and branding decisions, we will highlight the content and context of brand management, before proceeding to strategies for building brand equity, measuring brand equity using financial/marketing/customer measures, and managing brand equity over time and across geographical boundaries. Prerequisite: MKT-300; MKT 360 and MKT 465 Highly Recommended

MKT 465 - Marketing Analytics (3)

A quantitative approach to effective marketing decision making; includes decision models relating to segmentation, positioning, new product design models as well as advertising and promotion; also covers pricing models and the implications of marketing decisions to costs, revenue, and profits.

MKT 480 - Marketing Internship (0-3)

This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: MKT-300, permission of the department chair and junior or senior standing.

MKT 490 - Marketing Strategy (3)

Capstone marketing course, to be taken in the final semester of study, using case approach; emphasis on strategic and executional issues connected with marketing policy; examines managing marketing mix decisions with special attention given to communication (personal and mass), price practices, channels of distribution, and product policy. Prerequisite: Senior standing.

MKT 498 - Special Study (0-3)

Permission of the department chair.

MKT 600 - Marketing Management (3)

An induction to the fundamentals of marketing management. Marketing problem solving and decision making to formulate programs. Emphasis on marketing management process includes: situation assessment, strategy formulation, planning and implementation.

MKT 610 - Sales Management (3)

An examination of the strategic principles that guide the hiring, development, and evaluation of a sales force. Includes the analysis of sales operations, time and territory management, and quantitative techniques for forecasting sales and evaluating sales productivity. Utilizes case studies, lecture, and quantitative analysis. Prerequisite: MKT 600.

MKT 612 - Marketing & Elect Commerce (3)

The Internet including the World Wide Web and on-line services, comprise the on-line world of cyberspace -- the so-called information highway. This communications channel provides a massive electronic pipeline between businesses and consumers. Equally important, it opens up exciting new possibilities that challenge traditional ways of interacting, communicating, and doing business. The World Wide Web is increasingly being recognized as an important emerging commercial medium that presents a fundamentally different environment for marketing activities. This "hands on" course will focus on the marketing issues surrounding commercialization of the "Web," and other emerging electronic media. It will examine strategic and operational issues facing firms who wish to compete in this dynamic new medium. The course format will consist of a combination of lecture/discussion, case study, expert guest speakers, and student presentations of Web Marketing Reports.

MKT 615 - New Product Management (3)

Development and marketing of new products/services. Examines skills in interpreting marketing research, idea generation, physical product design, image building, product mix selection, test marketing, monitoring and refining the product and mix during transition from test market to national launch. Steps in opportunity identification, design, testing and launching are stressed. Pre-requisites: MBA 502 and MKT 600.

MKT 620 - Consumer Anls/Buyer Beh (3)

Theoretical foundations of consumer behavior with specific attention to aspects of cognition, affect (emotion) and behavior. Practical applications of theory as a basis for marketing action in domestic and global marketings.

MKT 625 - International Marketing (3)

Survey of theoretical frameworks and analytical models used to explain and develop international marketing strategies for small, medium and global companies operating in developed and emerging markets. Effects of globalization and trends toward anti-globalization. Pre-requisite: MKT 600.

MKT 626 - Green Marketing (3)

Identification of local, national and global environmental concerns, issues of social justice, and trends towards sustainable development in international business. Examination of marketing responses, initiatives, and opportunities. Development of appropriate and effective green marketing strategies. Pre-requisite: MKT 600.

MKT 630 - Advertising Mgt (3)

Stimulation of primary demand and selective demand, building successful advertising campaigns, budget management, effectiveness of advertising as a form of communication and selling, client-agency relations, social aspects, emphasis on national advertisers of consumer and industrial goods.

MKT 646 - Strategic Marketing (3)

A study of how firms gain competitive advantage by creating customer value in a dynamic market environment. Topics include: the strategic process, competitive analysis, becoming a cost leader, making quality a strategic weapon, customer value analysis and global positioning. Students will undertake a group project to analyze a firm's competitive market strategy and value positioning, and will recommend alternative approaches.

MKT 650 - Sports Marketing (3)

This course provides students the opportunity to study the nature and scope of marketing sports properties (e.g., teams, events, associations) as well as marketing traditional products or services with sports as a promotional tool. In essence, we study both the marketing of sports, as well as the marketing of products through sports. The course places a heavy emphasis on the case study method, student group work, and guest speakers from the sports industry.

MKT 683 - Sem in Int'l/Global Mktg Theor (3)

A seminar of readings and discussion based on the academic literature of the field. Survey of current theory and knowledge about components of global marketing strategies. Training in the techniques of research about markets, companies, and consumers.

MKT 684 - Seminar in Consumer Behavior (3)

Doctoral seminar focusing on the substantive and methodological issues concerning psychological and socio-cultural aspects of consumer research. Selected topics include information processing, attitude formation, perception, decision making, persuasion, motivation, emotion and effect, consumption signs and symbols, post-modern perspectives on consumer research.

Operations Management (OPM)**OPM 207 - Intro: Business Statistics (3)**

Introduction to descriptive statistics for displaying and summarizing business data; the use of probabilities and random variables in business decision models, probability distribution, statistical inference as a decision-making tool, sampling of business data, simple linear regression and correlation, time series analysis and use of index numbers in economic data. Prerequisite: MATH-120.

OPM 305 - Intro Mgt. Sci./Operation Mgt (2-3)

The objectives of this course are to: 1) acquaint the student with the overall operations research/management science process; 2) expose the student to several most widely utilized operations research/management science and production planning models, along with the solution techniques; 3) familiarize the student with the use of computers in facilitating managerial decisions. Prerequisites: MATH-132 and OPM-207.

OPM 360 - Sustainable Gbl Sply Chain Mgt (3)

The goal of this course is to make students aware of how goods and services are being produced and distributed in integrated environments around the globe within and between enterprises. Global supply chain management systems will be studied with the intent to reduce and/or eliminate duplicative processes and to ultimately improve enterprise performance. Topics will include the impact of supply chain management on the financial statements, global outsourcing and security issues in supply chain integration. Prerequisite: Junior standing.

OPM 370 - Sustainable Gbl Logistics Mgm (3)

This course acquaints students with the theory and practice of determining the most efficient and effective methods for moving, storing and delivering goods and services globally. A special emphasis is placed on the roles of third-party logistics within supply chain contexts. Prerequisite: OPM 305

OPM 502 - Applied Business Statistics (3)

This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the more widely used statistical methods to aid in problem formulation, data analysis and managerial decision-making. At the end of this course students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty.

OPM 505 - Operations Management (3)

The objective of this course are (1) familiarize students with production planning and control (2) to familiarize students with the use of operations research techniques for analyzing and controlling manufacturing, inventory, and operations management systems; and (3) to train students to use computers for making production and operations management decisions.

OPM 600 - Forecasting and Demand Mgmt (3)

Advanced topics in statistical modeling, data analysis and decision making. Extensive use of computer packages and real business databases. Topics include model building and research design; variance and experimental design; multiple regression and correlation analysis; time series and forecasting; statistical quality control; non-parametric procedures; model decision analysis.

OPM 605 - Business Process and Operations Management

Designed to familiarize students with decision-making tools and models that are utilized by operational managers, to present business firm integrated operational practices in the manufacturing and service sectors, and to analyze and examine the business strategic planning process from a cross-functional perspective, utilizing case studies. Topics include: operations and supply-chain strategy, project management, strategic capacity management, job scheduling and control, logistics for facility location decisions, aggregate planning, and deterministic/stochastic inventory decisions. Pre-requisites: OPM 502 and OPM 505.

OPM 643 - Quality Improvement/Lean Sigma (3)

This course is intended to serve as an in-depth examination of quality principles applied specifically to manufacturing, service and supply chain environments. Both managerial and statistical aspects will be covered.

OPM 644 - Global Supply Chain Mgt Con. (3)

The objective of Supply Chain Management Concepts is to introduce students to an integrated enterprise approach to business flow of goods and services from suppliers to the customers (procurement, operations management, inventory control, logistics and transportation, distribution and customer service). The term INTEGRATED process is emphasized in this course as opposed to SILO approach. As such, every topic in each area is being discussed in the context of integrated flow of goods and services from suppliers to customers and continuous flow of information from the customers to the suppliers. Pre-requisites: OPM 501 and OPM 605.

OPM 646 - Global Logistics Management (3)

The objectives of this course are: (1) to acquaint the student with the use of logistics management theory and techniques for analyzing and controlling global manufacturing and operations management systems; (2) to expose the student to several of the most widely utilized models for supply chain management in the manufacturing and service sectors (financial, health care, public sectors, etc.), along with case studies; and (3) to familiarize the student with the use of computer software in facilitating logistics decisions. Pre-requisite: OPM 505 and OPM 605.

OPM 648 - Strat. Sourcing & Proc. in SCM (3)

This course acquaints students with the use of purchasing and strategic sourcing concepts and techniques to optimize supply chain operations. Total cost of ownership will be the main guideline in making procurement and sourcing decisions.

OPM 650 - Math Statistics for Bus (3)

Study of advanced statistical methods including multivariate statistics and linear models. Calculus-based study of probability and statistics emphasizing theoretical foundations of inferential models. Topics include probability theory, discrete and continuous random variables, probability functions, univariate and multivariate probability distributions, stochastic process sampling distributions, estimation and hypothesis testing. Pre-requisite: OPM 500.

OPM 652 - Transportation & Warehousing Management (3)

This course provides students with the fundamental concepts of managing both transportation systems and warehousing. Topics covered include modes of transportation, issues regarding transportation management, strategic warehouse decisions, warehouse network planning, and equipment used in warehouses and warehouse design. Several case studies will be introduced. Current and emerging technological issues regarding management of both transportation systems and warehousing will be described.

Sports Business (SPBZ)**SPBZ 480 - Internship in Sports Business (0-3)**

The objective of the Sports Business internship is to expose the student to the sports industry or sports-related work through hands-on responsibilities in the area. This may be accomplished through an internship within a sports organization itself, or an organization which leverages sports as part of their business model. Pre-req: Junior standing, permission from Mgmt Dept. Chair, and MGT 307

Education-Administration (EDA)**EDA 301 - School Law for Teachers (1)**

A study of cases, statutes, regulations, and practices dealing with teacher and student rights and responsibilities, academic freedom and classroom management. Every semester.

EDA 510 - Foundations of Educational Adm (2-3)

Required as a prerequisite to all other educational administration courses. An introduction to the field of educational administration for the Master's level student and those new to educational administration. Topics include school organization, interpersonal communications, decision making, change and innovation. (Offered every Fall semester)

EDA 515 - Spec Dimensionsof Ed Admin (3)

Roles of the principal and the institution will be explored with special emphasis given to unique aspects of schools. (Offered occasionally)

EDA 520 - School-Community Relations (2-3)

A study of the nature, scope, principles and practices of public relations including organization and administration. (Offered every Spring semester).

EDA 525 - History of Higher Education (3)

Historical trends and theoretical foundations that gave rise to modern American colleges and universities. (Offered every Fall semester.)

EDA 530 - School Law (2-3)

An introduction to legal sources and documents related to schools. Selected case studies will be used to examine legal issues related to school students, teachers and administrators.

EDA 540 - Law and Higher Education (3)

Exploration and analysis of selected problems involving legal restrictions and/or protections for colleges and universities. (Offered every Spring semester.)

EDA 550 - Sem: Legal Issues in Higher Ed (2-3)

In-depth analysis of selected topics involving the law of higher education. (Offered occasionally.)

EDA 560 - Student Personnel Admin (3)

Survey of patterns, problems and trends in student personnel. (Offered every Fall semester.)

EDA 563 - The Principalship (3)

An overview of elementary, middle, and senior high school administration with an emphasis on the philosophy, organization, curricula, and developmental needs of students and staff. Course will focus on solution of critical problems, change, innovation, and interpersonal communication. (Offered every Fall semester.)

EDA 564 - The Student in Higher Ed (3)

Exploration and analysis of attitudes and characteristics of the college student population in context of the institutional climate. (Offered occasionally.)

EDA 570 - Internship: Higher Ed Admin (3)

Supervised experience in appropriate administrative offices. Permission of Instructor required. (Offered every Fall and Spring semester.)

EDA 571 - Int: Student Personnel Admin (3)

Supervised experience in appropriate student personnel administrative offices. Permission of Instructor required. (Offered every Fall and Spring semester.)

EDA 572 - Intern: College Teaching (3)

Supervised experience in teaching a college course. Permission of instructor required. (Offered every Fall and Spring semester.)

EDA 575 - Current Issues in Higher Ed (3)

Survey of recent significant developments, trends, and analysis of differing points of view concerning policies and practices of American colleges and universities. (Offered every Fall semester.)

EDA 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

EDA 600 - Org and Admin of High Ed (3)

Designed to improve the student's ability to conceptualize the total field of administration through studies of administrative theory, behavior, processes, organization, and current research. (Offered every Fall semester.)

EDA 602 - Case Studies: Org and Admin (3)

Exploration and analysis of selected problems in organization and administration of American colleges and universities. (Offered occasionally.)

EDA 610 - Theory of Administration (2-3)

An Introduction to the theory, research, and practice of educational administration designed for advanced degree student. Topics will include bureaucracy, authority, motivation, job satisfaction, organizational climate, leadership, and communication. Offered every Fall semester.

EDA 611 - Sem: School Dist Admin (2-3)

Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state and local relations in education; reality in school administration. Offered every Fall semester.

EDA 614 - Politics of Education (2-3)

An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school society. Offered every Spring semester.

EDA 620 - Ethics of Ed Leadership (3)

Course centers on identifying, analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. (Offered annually.)

EDA 625 - Sem: School Admin-Relationship (2)

A study of the interrelationships existing between public and non-public schools and the implications of such relationships for school administration. (Offered occasionally.)

EDA 630 - Advanced School Law (2-3)

Prerequisite: EDAI-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)

EDA 639 - Sem: Current Prob in Ed Admin (2-3)

Designed for advanced degree students who will select a problem in educational administration for intensive study under the direction of the professor. (Offered occasionally.)

EDA 640 - Sem. Human Resources Admin (2-3)

An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation, and supervision. (Offered every spring semester.)

EDA 641 - Professional Negotiations (2-3)

An introduction to the collective bargaining process in education and throughout the public sector. Topics will include public/private sector differences, the history and development of unions, public sector management, and the legal environment. (Offered every Spring semester.)

EDA 647 - Plan & Maintain School Fac (2-3)

Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees; bonding, staffing and equipping buildings. (Offered annually.)

EDA 648 - Adv Sch Finance and Facilities (3)

Prerequisites: EDAI-647 and EDAI-650 or their equivalents. An advanced course in the principles of school finance and school facility management. Emphasis will be placed on budget development, the design and construction of physical facilities, bond issues, lease-purchase agreements, and cost control. Focus on problems and issues of taxation and local, state, and federal funding. (Offered every Spring semester.)

EDA 650 - School Finance (2-3)

Principles of taxation, developing school finance formulas, and role of federal, state, and local governments in financing education. (Offered every Fall semester.)

EDA 658 - Financial Admin in Higher Ed (3)

General introduction to the multiple aspects of financial administration in higher education including administrative organization budgeting and financial reporting, fund accounting, purchasing, management of endowment funds, loan funds. (Offered every Spring semester.)

EDA 659 - Seminar: Finance of Higher Ed (3)

In-depth study of selected problems in acquisition and management of financial resources for colleges and universities. (Offered occasionally.)

EDA 660 - Higher Ed Curriculum (2-3)

A study of the design and implementation of media programs in schools and school systems. Attention to facilities design and the selection of materials and personnel. (Offered occasionally.)

EDA 665 - Technology in Ed Admin (2-3)

Course is designed to provide the school administrator with an understanding of the role of technology in a school district. Emphasis will be placed on the planning, design, selection, and use of technology by instructional and administrative personnel. (Offered occasionally.)

EDA 669 - School Business (2-3)

Role of the business manager; fiscal planning models; needs assessment; budget planning and administration; accounting; auditing; personnel functions of the business office; property management. (Offered every Fall semester.)

EDA 697 - Research Topics in Ed Admin (1-3)

Study of research methods and design applicable to research in Educational Administration. (Offered every Spring semester.)

EDA 698 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

Education - Foundations (EDF)**EDF 201 - Foundations of Early Childhood Education (3)**

A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (pre-K & K).

EDF 202 - Foundations of Elementary Education (3)

A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (1 & 6).

EDF 203 - Foundations of Middle School Education (3)

A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (5 - 9).

EDF 204 - Foundations of Secondary Education (3)

A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (9 - 12).

EDF 304 - School as a Social System (2)

A systematic analysis of how social issues have impacted on schools forcing continual change, especially the urban school. Each part of the educational system will be analyzed: the organization, its environments, inputs/output and feedback. Field experiences are required and every effort is made to coordinate clinical experiences with the pre-teaching course. Every semester.

EDF 391 - School & Community (3)

This course is designed to acquaint pre-service teachers with the theories, practices, skills, and knowledge of school and community partnerships. This course explores the question "what role does the family and community play in the educational development of children?" There is a focus in this course to develop understandings of diverse contexts when working with communities, families, children. In this course students will study themselves, the schools, communities, families, and children in the contexts of future teaching situations.

EDF 398 - Independent Study (1-3)

Independent Study.

EDF 423 - Psychology or Teach/Learn (3)

A study of the principles of psychology as they relate to education: an examination of a teaching model; an investigation of theory and practice in decision making for teaching in areas such as socialization, learning, motivation, intelligence, individual differences, etc. Every semester.

EDF 424 - Growth Development and Learning (3)

This course encompasses stages of growth, development, and learning throughout the human lifespan and the principles of psychology that relate to these stages. The student will study lifespan issues related to physical, cognitive, language, emotional, and behavioral aspects of the learner, examining basic research and theories most applicable to human growth.

EDF 470 - Human Growth & Development (3)

The course provides a broad survey of human development. It includes an examination of the major developmental topics within the periods of infancy, childhood, adolescence, and adulthood: it follows a chronological course of physical, cognitive, social and personality development throughout the various age periods; and it interrelates these major areas of development to the whole person. Every semester.

EDF 471 - Development of the Young Child (3)

An examination of the basic theories, principles and research relating to growth and development from a physical, intellectual, social and emotional perspective. Covers development from prenatal period through age five. Review of characteristics of major conditions (including developmental disabilities and giftedness) impacting on development. Field experience with infant/toddlers.

EDF 480 - Institute Ed. Psychology (1-3)

The course is periodically offered on various topics and issues in areas of educational psychology. As needed.

EDF 498 - Independent Study (1-3)

Independent Study

EDF 500 - Theory of Education (2)

An exploration of the nature of education as an academic discipline. (Offered annually.)

EDF 520 - The Learning Process (2-3)

Study of the relationship of learning theory to classroom practice. (Offered occasionally.)

EDF 521 - Ind Differences in Abilities (2)

Origin and extent of individual differences with their implication in improvement of instruction. (Offered occasionally.)

EDF 523 - Motivation in Learning (2)

Application of theories of motivation to classroom practice. (Offered occasionally.)

EDF 527 - Personality Devop & Adjustment (3)

Practices which appear to be detrimental to the individual's social and emotional growth. Characteristics of mental health and factors that facilitate growth and development. Personality development and its influence on the behavior of student and teacher, or counselor. (Offered occasionally.)

EDF 530 - Adv Educational Psychology (3)

Prerequisites: EDF-423, PSY-101, or equivalent course. An in-depth investigation of the principles of psychology as they relate to education. Learning theory and learning process, growth and development, mental hygiene, group process, and measurement and evaluation theory and analysis will be examined, along with related research. (Offered every other semester.)

EDF 560 - Foundations of Urban Educ (3)

A survey of the social and cultural factors involved in the educational opportunities provided in large urban areas. Special attention to the issues and problems that arise. (Offered occasionally.)

EDF 561 - Foundations of Catholic Educ (2-3)

Church documents will be used to review the philosophical, historical and educational perspectives of the Catholic position in schools. (Offered occasionally.)

EDF 570 - Adv. Growth & Development (3)

EDF1-470, Psy 101, or equivalent course. A balanced and systematic multidisciplinary look at all stages of human growth and development through the life span. In family and school contexts the perspective includes contributions from education, biology, developmental psychology, sociology, and cultural anthropology. Research, including its many discoveries and controversies, is examined at all stages. In addition, critical topics into which research is increasingly gaining insight are explored. (Offered annually.)

EDF 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

EDF 605 - Multicult. Issues/Pub Service (3)

Examination of the theory and practice of multiculturalism in public-service settings. Discussion of educational, social, legal, and ethical issues in multiculturalism. The impact of cultural membership on personal and professional functioning. Develops cultural competence in professionals who work with culturally diverse populations. (Offered twice each year.)

EDF 610 - Studies in Educ Philosophy (3)

Introduction to some of the major educational thinkers in the English speaking world during the twentieth century. Readings will include works of Dewey, Whitehead, Adler and Bloom. (Offered annually.)

EDF 611 - SEM: Philosophy of Education (3)

An investigation of the educational significance of philosophic systems and basic philosophic concepts. (Offered occasionally.)

EDF 620 - Reading in Educational Classics (3)

A study of selected writings now considered classics in the field of education. (Offered occasionally.)

EDF 630 - Studies: Catholic Education (3)

An intensive study of selected problems and issues related to Catholic educational programs. (Offered occasionally.)

EDF 631 - SEM: Catholic Education (3)

An investigation of selected educational topics related to Catholic educational programs. Permission of Instructor only.

EDF 640 - History Euro Ed Thru 16th Cent (3)

Lectures and discussions about the educational ideas and events of Europe through the Sixteenth Century as related to the times in which they occurred. (Offered occasionally.)

EDF 641 - History Euro Ed Sinc 16th Cent (3)

Lectures and discussions about the educational ideas and events of Europe since the Sixteenth Century as related to the times in which they occurred. (Offered occasionally.)

EDF 642 - SEM: History of European Educ (3)

An investigation of selected European educational developments as related to the history of the period. Permission of Instructor only. (Offered every other year.)

EDF 645 - History of Amer Educ to 1865 (3)

Lecture and discussion about educational ideas and events in the American colonies, the United States and its territories as they relate to the history of the period. (Offered occasionally.)

EDF 646 - History Amer Educ Since 1865 (3)

Lecture and discussion about the educational ideas and events in the United States since 1865 as they related to the history of the period. (Offered annually.)

EDF 650 - SEM: Education Psychology (3)

Special topics chosen by the Instructor. (Offered occasionally.)

EDF 660 - Education in American Culture (3)

A critical study of the many problems and issues in American education from various frames of reference. (Offered occasionally.)

EDF 665 - SEM: History of American Educ (3)

An investigation of selected educational developments as related to the history of the period. (Offered annually.)

EDF 685 - SEM: Comparative Education (3)

Investigation of relationships between education and society or education of different societies. (Offered occasionally.)

EDF 687 - SEM: Current Educational Prob. (3)

Study and critical comment on significant research recently published. Selection of problems from sources such as educational journals, superintendents' reports, yearbooks. (Offered occasionally.)

EDF 693 - Educational Assessment: Principles and Practic

This course addresses the principles and practical applications of educational assessment for learners of all ages and ability levels. It examines the relationship between assessment and instructional decision-making and includes a study of formal and informal assessments. It provides an overview of legal, ethical, cultural and sociopolitical issues in assessment.

EDF 698 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

Education-Higher (EDH)**EDH 102 - The First-Year Seminar -Madrid (0-1)**

Welcome to Saint Louis University..and to Madrid. A practical approach to the transitions that first-term students make at the Madrid campus. The course offers useful suggestions and mechanisms to respond to the pressures of meeting new people, living in a new culture (both that of the university and that of Spain), and making touch and maybe not so obvious choices. The four meetings connect students to University resources and introduce them to what to expect and not expect during their first few weeks on campus and in the most exciting city in Europe.

EDH 525 - History of American Higher Education (2-3)

Historical trends and theoretical foundations that gave rise to modern American colleges and universities. Offered every Fall semester.

EDH 535 - Student Development Theory (3)

This course will introduce you to the exploration and analysis of attitudes and characteristics of the college student population in context of higher educational institutions in the United States. Theoretical concepts and empirical findings will be examined that help to describe the college student in relation to changing demographics, culture, and development. The intent of the course is to familiarize you with today's higher education setting and strategies for enhancing these environments to maximize student learning and development. Throughout the course, attention will be paid to the impact of learning and development. Throughout the course, attention will be paid to the impact of the campus environment on diverse student populations and a variety of student groups.

EDH 540 - Law and Higher Education (3)

Exploration and analysis of selected problems involving legal restrictions and/or protections for colleges and universities.

EDH 547 - Legal and Ethical Issues (3)

This course is intended to provide students pursuing a degree in Student Personnel Administration in Higher Education with a background in legal and ethical issues confronted by practicing professionals. A lecture, discussion and problem solving format is used in studying the course material. The course includes a discussion of selected law cases and ethical principles and their interrelation with the American College Personnel Association Statement of Ethical Principles and Standards.

EDH 560 - Student Personnel Administration (3)

Survey of patterns, problems and trends in student personnel.

EDH 564 - Student in Higher Education (3)

Exploration and analysis of attitudes and characteristics of the college student population in context of the institutional climate.

EDH 565 - Intervention Skills (3)

This course is designed to promote an understanding of strong interpersonal communication skills among student personnel administrators. The course will focus on developing skills necessary for facilitating career and educational decision-making, conflict management, and promoting the development of interpersonal relationships and healthy lifestyle habits. This course also focuses on goal-setting and creating strategies for behavior change, and developing an understanding of the kinds of issues that often affect college students.

EDH 570 - Internship: Higher Ed Admin (0-3)

Supervised experience in appropriate administrative offices. Permission of Instructor required. Offered every Fall and Spring Semester.

EDH 571 - Intern: Student Personnel Admin (0-3)

Supervised experience in appropriate student personnel administrative offices. Permission of instructor required.

EDH 572 - Internship: College Teaching (0-3)

Supervised experience in teaching a college course. Permission of instructor required.

EDH 575 - Current Issues: Higher Education (3)

Survey of recent significant developments, trends, and analysis of differing points of view concerning policies and practices of American colleges and universities.

EDH 600 - Professional Writing (3)

Provides the doctoral student with an introduction to the principles and practices of professional writing. Semester projects may include writing professional journal articles, developing a book prospectus, and developing a proposal to present a paper at a professional conference.

EDH 605 - Disability in Higher Ed & Soc (3)

This theory-to-practice course provides graduate students with a multi-dimensional understanding of disability, particularly as it intersects with higher education and student development. Focus will be on the social construct of disability and creating an inclusive educational environment.

EDH 607 - Evidence Based Decision Making (3)

This course will introduce graduate students to the basics of educational research. It will provide an overview of basic statistical techniques which are used in educational research; the fundamentals of qualitative and quantitative educational research methodologies; designing educational research proposals; and how to read and evaluate published articles which report educational research.

EDH 615 - Organization and Administration of Higher Education

Designed to improve the student's ability to conceptualize the total field of administration through studies of administrative theory, behavior, processes, organization, and current research.

EDH 658 - Financial Admin in Higher Education (3)

General introduction to the multiple aspects of financial administration in higher education including administrative organization budgeting and financial reporting, fund accounting, purchasing, management of endowment funds, loan funds.

EDH 660 - Higher Education Curriculum (3)

Survey of practices and problems in the development of curricula in American colleges and universities.

EDH 670 - College Teaching (3)

Critical analysis of practices, expectations, strategies, and responsibilities of the college teacher based on an analysis of the teaching-learning situation.

EDH 697 - Sem: Res Topics in Higher Ed (1-3)

Discussion of theories of research and the process of hypothesis development. Offered every Spring semester.

Educ-Instruction & Teacher Ed (EDI)**EDI 200 - Children's Literature and Media (3)**

This course surveys a wide variety of literature and media created for children in order to develop understanding and appreciation. Students will become familiar with: various genres and their characteristics; ways children's literature and media is used to develop literacy; notable authors and illustrators; ways to critically analyze literature and media from diverse perspectives. Students will keep a literature log, share books with children, investigate websites, discuss literature and media, and write papers. Prerequisites: None.

EDI 202 - Pre-Teaching Lab, Secondary (2)

An examination of the educational process through structured field assignments and observations with a special emphasis on secondary education. Students explore techniques and principles of working with adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of elementary education. Includes Field Experience. Every semester.

EDI 203 - Pre-Teaching Lab, Special Ed (2)

An examination of the educational process through structured field assignments and observations with a special emphasis on special education. Students explore principles and techniques of working with students in special classes by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of elementary/special education. Includes Field Experience. Every semester.

EDI 204 - Pre-Teaching Lab, Early Childhood (2)

An examination of the educational process through structured field assignments and observations with a special emphasis on pre-school education. Students explore principles and techniques of working with pre-adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of early childhood education and to provide a background for student teaching. Includes field experience. Every semester.

EDI 205 - Pre Teaching Lab, Middle (2)

An examination of the educational process through structured field assignments and observations with a special emphasis on middle school education and junior high. Students explore principles and techniques of working with pre-adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of middle school education. Include field experience. Every semester.

EDI 290 - Intcul Sem/Prac w/Intl std (1-3)

Prerequisite: Upper level sophomore status. Theoretical and practical introduction to intercultural awareness. Discussion of reading and issues in weekly seminars. Consideration of cultural conditioning values, and assumptions of participants and of international students in student-led conversation groups and extracurricular activities. Meets new core curricular requirements. Meets new core curricular requirement in cultural diversity: Pre-requisite: Upper-level sophomore status.

EDI 297 - Portfolio Development II (0)

This course covers the principles and practices of portfolio development as they pertain to students in Block II course and is specifically designed to address components of students Program Portfolio. Course products at this level include selection of three artifacts and composition of 3 medication statements representing three of the ten standards addressed by the portfolio.

EDI 300 - Foundations of Literacy and Language Arts (3)

Develops an understanding of integrated literacy/language arts processes. Guidance and practice in planning in and organizing for instruction in reading, writing, listening, speaking, viewing, and visually representing in early childhood through eighth grade inclusive classrooms. Reading and language arts theory, content, and methods. Prerequisite: Foundations of Education

EDI 301 - Elem Meth Teach Mathematics (2-3)

Instructional techniques and learning materials, including manipulatives and multisensory materials suitable for elementary school mathematics. Major emphasis on the NCTM Standards and their application to elementary and early childhood mathematics. Includes Practicum experience. Spring semester.

EDI 302 - Elem Meth Creative Arts&Moveme (2)

This course will focus on art, music and physical education curriculum for early childhood and elementary classrooms. Students will develop techniques for instruction in each area as well as an awareness of developmental expectations for children. Integration of the arts into other content areas will be included. May include Practicum experience. Fall semester

EDI 303 - Emergent Literacy (3)

Instructional techniques, classroom materials and strategies appropriate for use with the beginning reader, K-5. This course will emphasize the value of immersing children in language through the use of a balanced literacy program and daily reading to children with children and by children. Pre-requisite EDFI-452.

EDI 306 - Elem Method Teach Science (2)

This course focuses on an introduction to the methods used in teaching elementary social studies. The class combines theory with practical experiences. In addition, students will develop skills for integrating technology and developing curriculum. Includes Practicum experience. Fall semester.

EDI 307 - Elem Methods Teaching Science (2)

This course focuses on an introduction to the methods used in teaching elementary science. The class combines theory with practical experiences. In addition students will develop skills for integrating technology and developing curriculum. Includes Practicum experience. Fall semester

EDI 309 - Elem Meth Teaching Lang. Arts (2)

Focus on the elements in language arts program. Includes development of children's language and thinking skills, written communication and grammar, listening and speaking skills, spelling and handwriting. Emphasis is on the process of developing effective communication skills and integrating content areas. Includes Practicum experience. Spring semester

EDI 310 - Sec. Meth/Pract Teach Eng (3)

A study of and sequence of English in the high school curriculum with emphasis on the selection and organization of materials and methods of instruction and evaluation. Includes practicum experience. Fall semester.

EDI 311 - Sec Meth/Pract Teach Sci (3)

Methods and materials for teaching science to students in secondary schools. Includes practicum experience. Fall semester.

EDI 312 - Sec Meth/Pract Teach Math (3)

Methods and materials for teaching mathematics to students in secondary schools. Emphasis on the NCTM Standards. Includes practicum experience. Fall semester.

EDI 314 - Sec Meth/Pract Teach SS (3)

Methods and materials for teaching social studies to secondary students. Includes practicum experience. Fall semester.

EDI 315 - Sec Meth/Pract Teach Forg. Lan (3)

Techniques of teaching a foreign language to secondary school students. Analysis of learning and teaching approaches. Includes practicum experience. Fall semester.

EDI 317 - Sec Meth Teach Art (3)

Course focuses on methods of teaching arts at the secondary level: general techniques and approaches methods and learning materials, analysis of learning and teaching problems. Includes practicum experience. Fall semester.

EDI 320 - Reading/Writing Content Fld (3)

Teaching reading and writing in the content fields in Middle and Secondary schools. Developmental reading for average and above average students as well as remedial techniques for poor readers will be explored. Improving reading rate, motivation, critical reading, reading in special content areas, writing across the curriculum. Includes practicum. Fall semester.

EDI 321 - Elem Meth Teach Children Lit (2)

A survey of award winning children's literature past and present. Creative methods of teaching and motivating children to read good literature. May include practicum experience. Spring semester.

EDI 324 - Early Childhood Mathematics (3)

Methods and materials for the young child learning in mathematics. The major emphasis is on the use of manipulative and multisensory materials. NCTM Standards are explored. Includes practicum experience. Spring semester.

EDI 327 - Lang Arts/Lit Young Child (3)

Survey and analysis of the techniques of presenting literature to young children. Emphasis on selection of literature appropriate for integration into the curriculum. Emphasis on various responses to literature through all language modalities. Includes field work.

EDI 351 - Middle Method/Pract Lang Arts (3)

Methods and materials for teaching language arts to students in grades 5-9. Includes practicum. Fall semester.

EDI 352 - Middle Meth/Pract Math (3)

Methods and materials for teaching mathematics to students in grades 5-9. Emphasis on the NCTM standards. Includes practicum. Fall semester.

EDI 353 - Middle Meth/Pract Science (3)

Methods and materials for teaching science to students in grades 5-9. Emphasis on NSTA standards. Includes practicum. Fall semester.

EDI 354 - Middle Meth/Pract Soc. Std (3)

Methods and material for teaching social studies to students in grades 5-9. Includes practicum. Fall semester.

EDI 390 - Obs and Student Teaching (1-3)

Restricted to students requiring additional certification areas. Offered occasionally.

EDI 394 - Professional Ethics (3)

This course begins with an examination of the concept of professional ethics and its relationship to general ethics. It studies the notions of morality and justice as well as the relationship between morality, values, and religion. Particular emphasis will be placed on the dynamic nature of moral and professional ethical developments, their similarities and the differences between ethics in a variety of service-oriented professions, and the impact of one's values on the ethical treatment of individuals. Ethical issues in education, governments, clinical settings, healthcare, law and business will be investigated through a case study approach and an individual code of professional ethics will be generated.

EDI 397 - Portfolio Development III (0)

This course covers the principles and practices of portfolio development as they pertain to students prior to student teaching, and is specifically designed to address components of students' Program Portfolio. Course products at this level include selection of 8 artifacts and composition of 8 medication statements representing 8 of the ten standards addressed by the portfolio. A student must receive a grade of "S" prior to student teaching. Prerequisite EDII-297.

EDI 398 - Independent Study (0-3)

Independent Study. Every semester.

EDI 399 - Technology Applic for Prof. (3)

This course will focus on the development of technology skills to enhance professional growth and productivity including communicating, collaborating, conducting research and solving problems.

EDI 400 - Literacy Assessment and Instruction for Diverse

Examines characteristics and uses of formal and informal literacy assessment tools for children in grades 1 & 6; strategies for incorporating results into literacy instruction; state content and performance standards for literacy; and strategies for providing in-depth intervention, remediation, and acceleration. Students in this course will develop a diagnostic case study that links assessment, instruction, and reflective practices. Includes 1.5 hours of fieldwork per week. Prerequisites: EDI 200 & EDI 300

EDI 410 - Literacy and Language Arts in an Integrated Curr

Strategies for helping children develop comprehension in content areas including use of various text organizers and graphics; use of multiple sources of information and technology; and integration of content areas with a focus on expository text. Includes 1.5 hours of fieldwork per week. Prerequisites: EDI 200 & EDI 200

EDI 421 - Methods of Technology Integration (2-3)

This course emphasizes the authentic use of technology by students in the PK - 12 learning environment. Topics include technology concepts and operations, designing learning environments, teaching and learning with technology, assessment and evaluation, professional practice and social, ethical, legal and human issues. This course meets the compute requirements for teacher certification.

EDI 425 - School Curr. & Inst Pre K-6 (3)

Emphasis on curriculum content and development of skills for integration of curriculum areas. Alternative instructional techniques for diverse learners will be included. Practicum in elementary setting required. Fall semester

EDI 426 - Middle Sch. Curr. & Instr. (3)

This course focuses on instructional strategies, technology and curriculum relevant to the middle schools. Practicum in a middle school setting is required. Fall semester.

EDI 427 - Secondary Sch Cuur. & Inst (3)

This course focuses on instructional strategies, technology and curriculum relevant to the secondary schools. Practicum in a secondary school setting is required. Fall semester.

EDI 429 - Mathematics for Diverse Learners (3)

Materials and methods suitable for teaching children experiencing difficulty in learning mathematics. Includes practicum experience. Fall semester.

EDI 430 - Methods in Remd. Read (3)

Basic principles of reading applied to remedial reading instruction with an emphasis on classroom adaptation: diagnosis and correction of classroom reading problems. Includes an introduction to techniques of remedial reading used by teachers. A one hour practicum is included. Spring semester.

EDI 433 - Methods in Advanced Read (3)

The psychology of reading: recent trends and developments in reading research. Reading in the content areas. Incorporation of whole language novel units. One hour practicum included. Comprehension, evaluation and critical reading. Fall semester.

EDI 444 - Assesment in E.C. (3-4)

Emphasis on use of developmental screening and diagnostic measures and translation of the results into appropriate practice. Focus on informed and formal measures and the incorporation of observation into the assessment process for children with and without disabilities. Includes family involvement, ethical considerations and development of individual plans. Incorporates field experience.

EDI 445 - Perceptual Motor Development (2)

Students examine the range of variations in perceptual motor abilities among children, develop diagnostic and assessment skills: design instructional materials which can be used in working with children who have motor skill differences. Every third semester.

EDI 448 - Integrated EC Curriculum I (3)

Basic methods for curriculum development for young children (Birth - Grade 3) with emphasis on developmentally appropriate practice. Includes learning strategies, selection of materials, development of daily programs, and organization of environment. Focus on integration of language/literacy, mathematics, art, music, drama and movement. Includes field work. Pre requisite EDII-452.

EDI 449 - Integrated EC Curriculum II (3)

Advanced methods for curriculum development for young children (birth - grade 3) with emphasis on developmentally appropriate practice. Focus on planning, implementation and evaluation of integrated curriculum with special emphasis on language/literacy, science, social studies, safety, nutrition and health. incorporated application of research. Includes field work. Prerequisite EDII-448.

EDI 451 - Counseling in EC (3)

Focus on approaches to working with young children and their families in the school, home and community. Exploration of theories and methods which enhance positive relations with children and families. Emphasis on a family systems approach. Prerequisite EDII-452.

EDI 452 - Principles of EC Education (3)

Exploration of theories and strategies for teaching the young child. Includes an examination of theories and application of theories in the learning environment. EMphasis on diversity and meeting the needs of all children. Includes field work. Sprng semester.

EDI 454 - Field Experience: EC Practicum (5)

Classroom experience under guidance of master teacher in an early childhood setting (birth - grade 3). Incorporated application of theories in the learning environment. Opportunities for development and implementation of appropriate activities with individuals and groups. Field experience focuses on children at various developmental levels including children with disabilities.

EDI 455 - Practicum: Elementary Ed (4)

Classroom experience under the guidance of a master teacher in an elementary setting (Grades 1-6). Opportunities for development and implementation of appropriate activities with individuals, small and large groups.

EDI 456 - Practicum: Middle School (4)

Classroom experience under the guidance of a master teacher in a middle school setting (grades 5 -9). Opportunities for development and implementation of appropriate activities with individuals, small and large groups.

EDI 457 - Practicum: Secondary Ed. (4)

Classroom experience under the guidance of a master teacher in a secondary setting (grades 9 - 12). Opportunities for development and implementation of appropriate activities with individuals, small and large groups.

EDI 461 - Health for Ed. Majors PreK-Sec (2)

The focus is on the teacher's role in fostering student health during the school years. Establishing collaborative relationships with individuals in the community in a variety of agencies is explored as a way to enhance the services and scope of comprehensive school health programs ranging from pre-school through high school.

EDI 462 - Cultural Div. in the Classroom (3)

This course will permit students to examine multi-cultural education, how it is defined, how it is taught in schools, its conceptual base, and reasons for its development. A special focus will be given to over-arching issues common to development, race, culture, language, gender, age, social class and disability. Every semester.

EDI 470 - Organisation/Mgmnt Ctr EC (3)

Orientation to personnel goals of early childhood, patterns for coordination of professional and para-professional, volunteer, and parent efforts, policy formation: facilitating communication, management approaches. Offered occasionally.

EDI 472 - School, Home & Comm Res EC (3)

Survey existing community resources, investigate parenting styles, and examines various areas of home/school cooperation. Spring semester.

EDI 472 - Families as Educational Partners (3)

Survey existing community resources, investigate parenting styles, and examines various areas of home/school cooperation. Spring semester.

EDI 476 - Middle Sch Phil,Org,Mgmt (2)

A study of the many dimensions of middle schools including philisophical, curicular, instructional organizational and supportive. Offered occasionally.

EDI 479 - Seminar: EC Topics (3)

Exploration of current topics in early childhood. As needed.

EDI 480 - Educational Institute (1-3)

Focuses on various issues in the area of curriculum, supervision, and instruction. Offered occasionally.

EDI 481 - Obs & Student Teach EC (10)

Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 482 - Obs & Student Teach Elem Sch (10)

Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 483 - Obs & Student Teach/Middle Sch (10)

Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 484 - Obs & Student Teach Sec (10)

Involves ten weeks of full time student teaching under th direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 488 - Senior Inquiry (0-3)

Senior inquiry. Offered every semester.

EDI 492 - Pro Dev EC,Elem,SpEd, ECSE (3)

This course is designed to focus on issues related to student teaching and professional development. The seminar will include opportunities for problem solving and for developing a professional portfolio. Focus is also on meeting requirements as a beginning teacher. This course is to be taken concurrently with student teaching.

EDI 494 - Prof Dev Sem Middle,Sec,SpEd (3)

This course focuses on the inclusion of all students in the general early childhood and elementary classrooms. Emphasis will be on the development of interventions, strategies, differentiation of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students and students with disabilities. Includes field work. Prerequisite EDII431.

EDI 495 - Senior Residency (0)

Educaiton Instruction. Every semester.

EDI 497 - Portfolio Development IV (1)

This course covers the principles and practices of portfolio development as they pertain to student teaching and is specifically designed to assist students in completing their Program Portfolios. Course products at this level include selection of 12-15 artifacts and composition of ten mediation statements representing the ten standards addressed by the portfolio. A student must receive a grade of "S" for certification and graduation. Prerequisite EDII297 & EDII397.

EDI 524 - Sem: Innov in Elem Math Meth (3)

A seminar in mathematics education including the following topics: New techniques of teaching elementary elementary mathematics content and methodology, supervising elementary teachers, the use of appropriate manipulatives in elementary mathematics and a focus on NCTM's agenda for action. Meets certification requirements for middle school principals. Offered occasionally.

EDI 539 - Psychology of Reading (3)

Concepts of the nature of the reading process with understanding of the theoretical bases. Pathology and psychology for cognition, lateralization, motivation, thinking, personality, home background, school environment with implications for supervisors, reading specialists, teachers and administrators. Meets Missouri Certification requirements for middle school principals. (offered occasionally).

EDI 543 - Basic Human Anatomy for Teache (3)

Workshop designed as a hands on examination of basic human anatomy for junior high and high school teachers. A combination of demonstrations, lectures by physicians, and laboratory experiences. Review of teh anatomy and functions of the central nervous, senses reproductive, cardiovascular, respiratory, gastrointestinal, and musculoskeletal systems. (offered every summer sessions).

EDI 544 - Human Physiology for Teacher (2)

A workshop directed to secondary school science teachers, intended as a content based overview of the basic human physiology through exploration of the various body systems ad physiological funcitons. Students are exposed to methods of teaching human physiology. Hands on laboratory sessions are included. (offered occasionally).

EDI 560 - Models of Teaching (3)

Students examine current theories of teaching, practical models for classroom behavior and interaction patterns designed to enhance learning. The wide range of options the teacher may adopt and adapt to his/her unique situation is emphasized. (offered occasionally).

EDI 562 - Than Chging Roles Class Teach (3)

An exploration of the role demads upon the teacher in a variety of organizational schemes, examination of related research, student initiated research in local settings. (offered occasionally).

EDI 570 - Math for Except Child (3)

Procedures and techniques for diagnosing children's strengths and weaknesses and prescribing appropriate material will be examined and studied. Teachers will also have the opportunity to examine selected formal and informal tests and construct math materials appropriate for their students. (offered occasionally).

EDI 583 - Tech Teach Read in Content Are (3)

Specialized reading techniques for special subject matter areas. Developing higher level thinking skills of evaluation and judgement for mature readers for middle, junior and senior high school levels. Special attention to strategies for improving adult reading. Meets certification requirements for middle school principals. (offered occassionally).

EDI 595 - Special Study for Exams (0)

Special Study for exams.

EDI 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDI 604 - Seminar Childre's Lit (3)

A comparative review of the rationales of the various approaches to teaching literature to children, review of the most current materials and instructional strategies. (offered occasionally).

EDI 623 - Seminar in Instruction (3)

An exploration of a particular area as designated in the current semester scheduel of classes. (offered occasionally).

EDI 625 - Practicum C&I (1-3)

Open only to doctoral students. A series of planned and supervised field experiences in instructional leadership. (Prior permission of guiding professor).

EDI 631 - The Supv Process in Elem Sc (3)

An overview of the research and current practices/models of school supervision and instructional management at the elementary school level. (offered occasionally).

EDI 632 - Supv Process Sec School (3)

An overview of the research and current practices/models of school supervision and instructional management at the secondary school level. (offered annually).

EDI 641 - Elem School Curriculum (3)

A survey of current curriculum patterns, problems and proposals. Students work with both traditional and innovative programs, exploring the rationale and research in support of selected curriculum segments. (offered annually).

EDI 642 - Secondary School Curriculum (3)

A survey of current curriculum patterns, problems and proposals. Students work with both traditional and innovative programs, exploring the rationale and research in support of selected curriculum segments. (offered annually).

EDI 643 - Middle School C&I (3)

Theories and practice relating to design and evaluation of curriculum will be presented with special attention to curriculum development in a Catholic School. (offered annually).

EDI 644 - Curriculum Dev in Parochial Sc (3)

A survey of current middle school research, philosophy, internal and external influences, and instructional practices. Students work with both traditional and innovative programs with the purpose of exploring the rationale and research in support of selected curriculum and instruction (offered annually).

EDI 645 - Curriculum Development (3)

Practice in using the processes of curriculum development through examination of existing programs., developing new segments of curriculum, making curriculum guide revisions or structuring the process of revision. (offered occasionally).

EDI 646 - Curriculum Theory (3)

A seminar exploring existing approaches to curriculum theory, its historical development and current issues. (offered annually).

EDI 648 - Seminar in Curriculum (2-3)

An exploration of a particular area of curriculum as designated in the current semester Schedule of classes. Offered occasionally.

EDI 695 - Special Study for Exams (0)

Special Study for exams.

EDI 696 - Project Guidance (0-4)

Project Guidance.

EDI 697 - Research Topics (1-3)

Research Topics

EDI 698 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDI 699 - Dissertation Research (0-12)

Dissertation Research.

Educational Leadership (EDL)**EDL 301 - School Law for Teachers (1)**

A study of cases, statutes, regulations, and practices dealing with teacher and student rights and responsibilities, academic freedom and classroom management. Every semester.

EDL 304 - Internship in Orientation Leadership (0-1)

This course is an experiential education internship with the SLU 101 Summer Orientation program for selected SLU 101 Leaders. It is open to all disciplines and provides students with theoretical and skill-based knowledge to apply in leadership positions including student development theory, group management, role modeling, and other related issues.

EDL 305 - Internship in Peer Instruction (0-1)

This course serves as an internship for students selected as peer instructors for the University 101 (EDH101) program. This internship is designed to provide students with knowledge to apply to the classroom setting, including student development theory, classroom management and teaching techniques, paraprofessional role modeling, and other related issues.

EDL 510 - Foundations of Ed Admin (2-3)

Required as a prerequisite to all other educational administration courses. An introduction to the field of educational administration for the Masters level student and those students new to educational administration. Topics include school organization, interpersonal communications, decision making, change and innovation. (Offered every Fall semester)

EDL 515 - Special Dimensions of Ed Admin (1-3)

Roles of the principal and the institution will be explored with special emphasis given to the unique aspects of parochial schools. (Offered occasionally).

EDL 520 - School-Community Relations (2-3)

A study of the nature, scope, principles, and practices of public relations including organization and administration.

EDL 530 - School Law (1-3)

An introduction to legal sources and documents related to schools. Selected case studies will be used to examine legal issues related to school students, teachers and administrators.

EDL 545 - Managing the Building Level Curriculum (3)

This course is designed to strengthen students' knowledge and skills as instructional leaders by identifying and researching current and emerging curricular issues. Students will learn to coordinate and synthesize curriculum development utilizing appropriate instruction designs, manage delivery and resources as they relate to curriculum, and utilize assessment results. Students will conduct and report results of a building level audit of curriculum supports and implementation.

EDL 560 - Program Evaluation (2-3)

This course will introduce you to the theories, patterns, issues, and trends in student personnel administration in higher education. It will familiarize you with functions and responsibilities of the college student personnel work, including assessment and budgetary processes, and provide you with the opportunity to analyze and discuss various problems, concepts and issues in the field. This course is intended to help you learn about the student personnel administration of institutions of higher education in the United States so that you may be more effective managers and leaders in those institutions.

EDL 563 - The Principalship (3)

An overview of elementary, middle, and senior high school administration with an emphasis on the philosophy, organization, curricula and developmental needs of students and staff. Course will focus on solution of critical problems, change, innovation and interpersonal communication. (Offered every Fall).

EDL 573 - Prof Staff Dev and Evaluation (2-3)

This course considers the importance and difficulty of motivating educators to seek life long personal improvement as reflective professional practitioners. Strategies of adult motivation and techniques of adult behavioral change are studied. Current systems of staff evaluation are analyzed and specific evaluation techniques and methods are practiced.

EDL 581 - Intern: Ed Admin - Elementary (2-6)

Students work in elementary schools under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester).

EDL 583 - Internship: Building Principle (0-6)

Students work under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester)

EDL 584 - Intern: Ed Admin-Superintenden (2-6)

Candidates for the doctorate and specialist degrees in school administration are required to intern with a practicing school administrator for one semester. Advance permission required. Work includes all administrative areas encompassed in the responsibility of the school superintendent. (Offered every semester)

EDL 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

EDL 606 - Research Design and Analysis for Educational (

Students will use the SPSS software program to explore quantitative research designs which are appropriate in educational leadership and higher education environments. This will include experimental, quasi-experimental and archival study designs. The students will use SPSS to build and analyze data bases. Student will learn how to use the SPSS program to perform preliminary analysis on data bases including using descriptive statistics, creating charts and graphs to describe data and checking scale reliability. Students will also learn how to select and conduct the appropriate statistical test to analyze data using the SPSS program. Specific tests to be covered include: correlation, multiple regression, t-tests for means, one-way analysis of variance ANOVA, two way between group ANOVA, analysis of covariance ANCOVA and the non-parametric Chi Square tests. No specific knowledge of statistics is needed beyond EDR 410/510 Introduction to Inferential Statistics or an equivalent introductory statistics course.

EDL 610 - Theory of Administration (3)

An introduction to the theory, research, and practice of educational administration designed for advanced degree student. Topics will include bureaucracy, authority, motivation, job satisfaction, organizational climate, leadership, and communication. (Offered every Fall semester)

EDL 611 - School District Administration (3)

Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state, and local relations in education; reality in school administration. (Offered every Fall semester)

EDL 614 - The Politics of Education (2-3)

An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school in society.

EDL 620 - Ethics of Ed Leadership (3)

Course centers on identifying, analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. (Offered annually.)

EDL 630 - Advance School Law (2-3)

Prerequisite: EDAL-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)

EDL 640 - Sem: Human Resources Admin (2-3)

An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation, and supervision. (Offered every spring semester.)

EDL 645 - Managing the District Level Curriculum (3)

The course examines the concepts of curriculum leadership and applies these concepts to the process of curriculum management and improvement. It is designed to strengthen students knowledge and skills as district instructional leaders by investigating current and emerging curricular issues. Students will audit a districts curriculum as it relates to written curriculum, implementation, practices, policies, personnel, finance, and facilities. This systematic review will provide a district wide curriculum understanding. The course requires active, thoughtful, and analytical thinking on the part of the student in order to synthesize and integrate the material into a working knowledge base.

EDL 647 - School Facilities (2-3)

Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees; bonding, staffing and equipping buildings. (Offered annually.)

EDL 650 - School Finance (1-3)

Principles of taxation, developing school finance formulas, and role of federal, state, and local governments in financing education. (Offered every Fall semester.)

EDL 669 - School Business Administration (2-3)

Role of the business manager; fiscal planning models; needs assessment; budget planning and administration; accounting; auditing; personnel functions of the business office; property management. (Offered every Fall semester.)

EDL 670 - College Teaching (3)

Critical analysis of practices, expectations, strategies, and responsibilities of the college teacher based on an analysis of the teaching-learning situation. (Offered every Spring semester.)

EDL 677 - Sem: Academic Administration (1-3)

In-depth study of several selected problems in the area of academic administration of colleges and universities. (Offered occasionally.)

EDL 697 - Research Topics in Higher Ed (3)

Discussion of theories of research and the process of hypothesis development. (Offered every Spring semester.)

EDL 698 - Graduate Reading Course (1-3)

Prior permission of major professor required.

Educ-Measurment Eval & Res (EDR)**EDR 396 - Quant. & Qualt. Meth in Res (3)**

This course will begin with an introduction to the philosophical base, a survey of different modes of inquiry. Using this philosophical base, a survey of different modes of inquiry both quantitative and qualitative will be studies using several examples from the disciplines within the College. Emphasis in the course will be placed on the students actively reading and critiquing research from a variety of disciplines as well as in developing a proposal for research study while working in interdisciplinary teams.

EDR 496 - Action Research for Educ (1)

This course introduces students to action research techniques and their application to schools. Students come to the course with a basic understanding of research methods. The course then builds on this basic understanding to focus on approaches to action research to use in schools. Students will be required to conduct an action research project. Their involvement in the action research studies and the course readings will provide the background for class discussions.

EDR 510 - Intro to Inferential Stats: Ed (3)

This course is a survey of basic statistical methods including descriptive statistics, z-tests and t-tests of means and proportions, chi-square analyses, correlation and regression analyses, and analysis of variance. The statistical package for the social sciences (SPSS) will also be used. (Offered every Fall semester)

EDR 540 - Qual Research in Education (3)

Students will learn the qualitative research paradigm, data collection and analysis techniques and report writing. Offered every fall and spring semester.

EDR 550 - Evaluation of Ed. Programs (3)

Prerequisite: EDR540 or the equivalent. Course introduces students to program evaluation techniques and their application to schools. Builds on a basic understanding of research and evaluation processes to focus on alternative approaches to program evaluation and practical guidelines. Students will be required to conduct mini-evaluations; their involvement in these evaluations and the course reading will provide the background for seminar discussions. offered every fall semester.

EDR 560 - GnrI Rsch Methods for Educ (3)

This course provides a survey of the techniques, methods and tools of research in education. Included is general discussion of the research process followed by examination of several different study designs such as observational, experimental, descriptive and sample survey. The course also provides an overview of different methods of sampling, data collection and analysis frequently used in research literature. (Offered every Spring semester)

EDR 595 - Special Study for Exams (0)

Special Study for Exams

EDR 598 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDR 599 - Thesis Research (0-6)

Research

EDR 600 - Professional Writing (3)

General theory of research: some emphasis on educational applications and quantitative approaches. Offered annually.

EDR 601 - Doctoral Residency (0-3)

Prior permission of guiding professor.

EDR 607 - Evidence Based Decision Making (3)

This course will introduce graduate students to the basics of educational research. It will provide an overview of basic statistical techniques which are used in educational research; the fundamentals of qualitative and quantitative educational research methodologies; designing educational research proposals; and how to read and evaluate published articles which report educational research.

EDR 610 - Intermed Applied Stats for Ed (3)

This course provides background in many applied statistical techniques. A focus of the course is to develop students' understanding of multiple techniques so that they may judge the legitimacy of statistical results in articles and choose appropriate statistical methods. Topics include effect size, ANOVA, ANCOVA, MANOVA, regression and correlation, test construction, and multiple nonparametric tests. SPSS will be utilized throughout the course. This course can be used as a final statistics course or as a bridge for those students who want to pursue more advanced courses. Prerequisite: EDR 510. (Offered every Spring semester)

EDR 640 - Advanced Qual Research for Ed (3)

The primary purpose of this course is to provide students with the skills needed to conduct publishable qualitative research in education. Multiple qualitative methods will be used. An additional goal is to provide students with the tools or results that will be useful to them in their future work. Prerequisite: EDR 540. (Offered every Spring semester)

EDR 665 - Seminar: Reading Research (3)

Research techniques and findings are extensively reviewed. Offered occasionally.

EDR 671 - Sem: Current Res in Ed Psych (3)

A detailed review of research in the field of educational psychology. Offered occasionally.

EDR 695 - Special Study for Exams (0)

Special study for exams.

EDR 697 - Research Topics in Higher Education (3)

REsearch

EDR 698 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDR 699 - Dissertation Research (0-12)

Reserach

Education - Special (EDSP)**EDSP 376 - Supv Pract Mentally Hand (2-3)**

Individual small group, and or classroom teaching experience. Enrollment limited to juniors and seniors. Seminar included. Every semester, Prerequisite EDSI-432.

EDSP 377 - Supv Pract in LD (2-3)

Individual, small group and or classroom teaching experience. Enrollment limited to juniors and seniors. Seminar included. Every semester. Prerequisite EDSI-433.

EDSP 378 - Supv Pract in BD (2-3)

Individual, small group and or classroom teaching experience. Enrollment limited to juniors and seniors. Every semester. Prerequisite EDSI-434.

EDSP 398 - Independent Study (1-3)

Independent Study. Every semester.

EDSP 401 - Law and the Handicapped (1)

Discussion of local, state and federal laws pertaining to the disabled. Every semester.

EDSP 424 - Classroom Organization and Management (EC)

In this course students will examine classroom organization and behavior management in EC, ECSE, Elementary and Special Education settings. Causes of problems, prevention techniques and models for management will be explored. Family, community and advocacy issues will be addressed. This course is to be taken prior to the professional semester.

EDSP 425 - Classroom Organization and Management (MI)

In this course students will examine classroom organization and behavior management in middle, secondary and special education settings. Causes of problems, prevention techniques and models for management will be explored. Family, community and advocacy issues will be addressed. This course is to be taken prior to the professional semester.

EDSP 426 - Beh Mgmt Lab: EC/EL/SpEd/ECSE (1)

This is a problems based course designed to provide the early childhood, elementary and special education student teacher with opportunities to discuss, apply, and develop strategies for handling classroom management/behavior issues that arise during the student teaching semester. This course is an extension of EDSI-424.

EDSP 427 - Beh Mngmt Lab Mid, Sec. SpEd (1)

This is a problems based course designed to provide the middle, secondary, and special education student teacher with opportunities to discuss, apply and develop strategies for handling classroom management/behavior issues that arise during the student teaching semester. This course is an extension of EDSI-425.

EDSP 431 - Ed & Psych of the Exp Ind (3)

Survey of the historical development of Special Education: introduction to current issues. Psychological, medical, and sociological aspects related to development of the exceptional individual in classroom learning environments. Alternative instructional strategies, special education resources, family programs, multi-cultural issues introduced. Every semester.

EDSP 432 - Princ & Methodology in MH (2)

An introduction to educational and psychological characteristics (cognitive, emotional and social) of students with mental handicaps and the implications which these characteristics have for practice. Problems of definition, screening, diagnosis, classification systems, classroom management and multi-cultural issues. Every semester.

EDSP 433 - Princ & Methodology in LD (2)

An introduction to dimensions of learning disabilities: identification, characteristics, development, habilitation. Historical and current thinking relevant to the various concepts and practices in the identification and treatment of learning disabilities is discussed. Teaching technique, instructional material modifications, classroom management. Introduction to multi-cultural issues. Every third semester.

EDSP 434 - Princip & Methodology in BD (2)

Introduction to the field of behavior disorders. Emphasis on identification, assessment, characteristics and intervention. Overview of theoretical approaches to behavior disorders. Introduction to multi-cultural issues. Every third semester.

EDSP 435 - Sup Pract in MH: Pract. Teach (6-10)

Involves full time student teaching in a classroom for students with mental handicaps under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-432 and admissions to Teacher Certification Program.

EDSP 436 - Supv Pract in LD (6-10)

Practice Teaching. Involves full time student teaching in a classroom for students with learning disabilities under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-433 and admission to teacher certification program.

EDSP 437 - Supv Pract in BD (6-10)

Practice teaching. Involves full time student teaching in a classroom for students with behavior disorders under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-453 and admission to teacher certification program.

EDSP 438 - Student Teaching in Early Childhood Inclusive

Involves full time student teaching in a class for young children with special needs under the direction of an experienced teacher and a university supervisor. Enrollment as needed. Prerequisite EDSI-453 and admission to teacher education program.

EDSP 439 - Institute in Sp. Ed. (1-3)

Offered periodically on various topics and issues in the areas of mentally handicapping conditions, learning disabilities, and behavior disorders. On demand.

EDSP 440 - Speech & Lang Dev Exp Ch (2-4)

A study of language and speech acquisition development, structure and function in non-disabled and exceptional children, preschool through adolescence. Spring semester.

EDSP 441 - Diag & Prescp Procedures (1-3)

Introduction to principles and practices in evaluation procedures in education and special education (preschool through adolescence). Introduction to securing case histories and test administration and interpretation in basic developmental and skill areas. Offered according to certification area. Fall semester.

EDSP 443 - Princip & Methodology in MH (4)

Course includes both introductory principles related to the educational and psychological characteristics (cognitive, emotional and social) of students with mental handicaps and the implications that these characteristics have for practice. Course also involves information useful for selecting and developing intervention programs, discussion of problems of definition, screening, diagnosis, classification systems, classroom management and multicultural issues and the study of instructional approaches emphasizing specific methods and material including cognitive, social/adaptive, perceptual/motor, mathematical and language development. Overview of research in the field is also addressed. Every third semester. Prerequisite EDSI-432.

EDSP 444 - Adv Princ & Methodology LD (2)

Study of instructional approaches for educating students with learning disabilities, emphasizing specific methods and materials for teaching academics, elementary through secondary levels. Methodology for development of perceptual, cognitive and social skills: development of written and mathematical language skills, introduction to basic research in the field. Review of multi-cultural issues. Every third semester. Prerequisite EDSI-433.

EDSP 445 - Adv Princ & methodology BD (2)

This course focuses on the intervention strategies appropriate for students with behavior disorders. Classroom organization, teaching techniques, informal assessment, instructional modification, multi-cultural issues and design of individual programs is emphasized. Overview of research in the field. Every third semester. Prerequisite EDSI-434.

EDSP 446 - Adv Diag & Presp Proc (2)

Advanced study of principles, practices and diagnostic procedures in early childhood special education. Methods of securing case histories, observation techniques, test administration, interpretation of assessment results, linking assessment to instruction and working with parents. Fall semester. Prerequisite EDSI-441.

EDSP 447 - Teach Meth for Inc Class EC/EL (3)

Course focuses on the inclusion of all students in the general early childhood and elementary classrooms. Emphasis will be on the development of intervention strategies, differentiations of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students with disabilities. Included field work. Prerequisite EDSI-431.

EDSP 448 - Teach Meth Incl Clall Mid&Sec (3)

Course focuses on the inclusion of all students in the general middle and secondary classrooms. Emphasis will be on the development of intervention strategies, differentiation of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students and students with disabilities. Includes field work. Prerequisite EDSI431.

EDSP 451 - Counseling in Sp Ed (2)

Prerequisite: Completion of Advanced Special Education Methods Course. Presents approaches to working with exceptional individuals and their parents in the school, home, and community. Exploration of theories and methods which enhance positive relations with students and parents. Investigation of transitional programs and vocational options for students with disabilities. Fall semester.

EDSP 453 - Currcul. Method & Matl ECSpEd (3)

An investigation of designs for early childhood special education environments. Focus on intervention approaches including parental involvement. Survey of existing programs and an introduction to basic research in the field. Every third semester. Pre requisite EDSI-448.

EDSP 454 - Supervised Practicum in Early Childhood Spe

Individual, small group and/or classroom teaching experience under the supervision of a master teacher and a University supervisor. Seminar included. Prerequisite EDSP 452.

EDSP 456 - Special Ed. Process (2)

Focus on the process involved in special education assessments, diagnosis, placement and intervention. Analysis of federal, state and local requirements. Emphasis on development of IEP/IFSP's. Strategies for parent involvement are included. Prerequisite EDSI431.

EDSP 460 - Medical Implications in SpEd (3)

Prerequisite: Completion of Advanced Special Education Methods Course. Course designed to provide theoretical and practical information about physical and health related problems related to the exceptional child. Emphasis on developmental, medical and genetic characteristics related to the field of special education. Every third semester.

EDSP 462 - Intro to Mild/Mod Dis Sec Meth (3)

This course is an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of secondary age individuals with mild-moderate disabilities and the implications that these characteristics have for practice. Problems of definitions, screening, diagnosis, classification systems, transition, futures planning, classroom management, and multicultural issues are addressed. Information useful for selecting and developing intervention programs for secondary age students with mild disabilities are addressed. Included is an overview of research in the field with emphasis on the study of instructional approaches emphasizing specific methods and materials.

EDSP 464 - Seminar in ECSpEd (3)

A seminar to examine issues related to early childhood special education. Topics include theoretical perspectives, family issues, infant programming, environmental and personal strategies for self management, transdisciplinary practices, collaborative consultation and current trends. Prerequisite EDSI453.

EDSP 465 - Education of the Gifted (3)

Study of the dimensions of gifted-identification, characteristics, development and societal role. Emphasis will be placed on the problems of curriculum, teaching, administration, and guidance. Literature in areas of creativity, critical thinking and motivation will be reviewed as it applies to the development of gifted children. As needed.

EDSP 470 - Career Dev for Excep Child (2)

Exploration of the concepts, need and organization of career development for the exceptional individual. Investigation of service-delivery models. Fall semester.

EDSP 472 - OB/ST Mild/Moderate (10)

Full day, full-time teaching experience. Candidates will demonstrate the knowledge and skills acquired in the core, methods, and specialization course of the mild-moderate disabilities program. Candidates will experience an elementary and a middle-school/high school placement that includes students identified with other health impairments. Candidates placed with or under the supervision of a certified master teacher.

EDSP 488 - Senior Inquiry in Special Ed (3)

Offered every semester.

EDSP 494 - Professional Development Seminar (Mid, Sec,

This course is designed to focus on issues related to student teaching and professional development. The seminar will include opportunities for problem solving and for developing a professional portfolio as well as opportunities to discuss, apply, and develop strategies for handling classroom management / behavior issues that arise during student teaching. The course is to be taken concurrently with student teaching.

EDSP 498 - Independent Study (1-3)

Independent Study

EDSP 526 - Practicum in Special Ed. (1-3)

Graduate students synthesize the educational experiences obtained at the university through an extended, in-depth field experience under daily supervision. Offered annually.

EDSP 530 - Teaching the Gifted (3)

A review of the research, literature, materials, methods, and philosophies underlying education of gifted children and youth. Offered occasionally.

EDSP 531 - Adv Std in Psych/Educ Ex Child (3)

Course focuses on the field of disability studies. Content includes psychological, medical, and sociological aspects of disabilities as related to cognitive, affective and psychomotor development of the exceptional individual. Alternative instructional strategies/teaching methods are included. Special education resources and family issues are introduced. Research to practice is emphasized. Offered every semester.

EDSP 545 - ADV Counseling in SpEd (3)

Approach to guidance for the exceptional individual in school and in the community. Exploration of various theories, methods, and practices which maximize the potential of the exceptional person. Offered occasionally.

EDSP 553 - Fundamentals in Neurology (3)

An examination of neurological structures and theoretical explanations fundamental to behavior. Offered annually.

EDSP 554 - Individual Intelligence Testin (3)

Covers theoretical and applied aspects of intellectual assessment of children and adolescents and provides supervision in the administration, scoring and interpretation of individual intelligence tests (Stanford-Binder, WPP-SI, WISC-R, WAIS-R). Course fulfills Mission certification requirements for School Psychological Examiner and Remedial Reading Teachers. Offered occasionally.

EDSP 555 - Adv Assess Proc in SpEd (3)

Advanced concepts and methods in individual and group assessments. Focus on analysis and integration of test data, setting instructional objectives. Sections offered according to certification area. Offered occasionally.

EDSP 560 - Seminar: Special Educaiton (3)

Prerequisite: Completion of Advanced Special Education Methods Course. Introduction to graduate study in special education. The philosophy of science, research methodology and professional issues relating to the body of knowledge and practice in special education are discussed. Required of all special education graduate students. Offered annually.

EDSP 561 - Seminar: Metal Retardation (3)

Prerequisite EDSI443 or equivalent. A graduate level study of the etiology, developmental characteristics, diagnosis, educational programs, family implications, social aspects of mental retardation. Offered occasionally.

EDSP 562 - Seminar: Learning Disabilities (3)

Prerequisite: EDSI444 or equivalent. An interdisciplinary approach to the etiology, diagnosis and remediation strategies of learning disabilities with reference to both categorical and non-categorical orientation in special education. Offered occasionally.

EDSP 563 - Seminar: Behavioral Disorders (3)

Prerequisite EDSI445 or equivalent. A survey of the prominent educational theories presenting explanations for the development of behavioral disorders; study of the major systems of instructional practice with application to the general field of special education. Offered occasionally.

EDSP 564 - Seminar: ECSpEd (3)

Prerequisite: EDSI452. A graduate seminar to examine issues related to early childhood special education. Topics include theoretical perspectives, legislative issues, family involvement and infant programming. Study includes research and how it relates to practice in ECSE. Offered occasionally.

EDSP 594 - Special Education Internship (3)

Prerequisite: Advanced graduate standing and consent of instructor. Integration of academic studies with administrative practice, clinical diagnosis procedures, community programs, consultant services, educational programming, research, social trends or other experiences specific to career goals. Emphasizes the relationship between scientific inquiry and professional practice. Offered occasionally.

EDSP 595 - Special Study for Exams (0)

Speical Study for exams.

EDSP 598 - Graduate Reading Course (3)

Prior permission of guiding professor required.

EDSP 611 - Special Educ Administration (3)

Designed to prepare the administrator for management of programs in special education. The focus is on budget, legislation, organization, management, local, state and federal programs pertaining to special education discussed, as well as the preparation of grant proposals. Evaluation of programs and personnel. Offered occasionally.

EDSP 615 - Adv. Professional Dev (3)

Preparation of students for advanced responsibilities in career roles as special educators. Application of academic learning to professional situations. Offered occasionally.

EDSP 650 - Advanced Sem SpEd (3)

An in depth examination of critical issues in special education. Course will be sectioned according to area of specialization. Offered occasionally.

Education (EDUC)**EDUC 485 - Education Portolio (1)**

This seminar addresses the practices of portfolio development as they pertain to candidates prior to and during student teaching. The portfolio is built around the MO Step standards. This includes a composition for each MO Step standard and artifacts. Grade obtained must be C+ or higher for teacher certification and graduation.

Public Policy Studies (PPS)**PPS 200 - Government and Politics of City and Suburb (3)**

Political, social, and economic aspects of the contemporary American city and its suburbs; public policies aimed at solving major urban problems. Offered occasionally.

PPS 220 - Introduction to State and Local Government (3)

Government organization, operation, politics and policies of states and their subdivisions are covered. Offered Spring.

PPS 300 - Current Urban Political and Governmental Problem

Identification and analysis of current problems, political, and governmental, affecting the citizens of American cities, their suburbs, and metropolitan regions. These problems are analyzed within their appropriate social and economic contexts, and the range of programmatic interventions, whether public or private, is examined. Offered occasionally.

PPS 393 - Special Topics (1-4)

Special topics in Public Policy and Urban Affairs.

PPS 397 - Metropolitan Environment (3)

An interdisciplinary course presenting the political, social, economic, educational and religious dimensions of metropolitan areas. Socio-demographic trends and methods for analyzing neighborhoods will be discussed. The political and governmental system with an emphasis on its state and local manifestations will be presented. These topics will be explored against the background of cultural diversity which exists in society.

PPS 400 - Politics and Ecology (3)

Current environmental issues and their impact upon metropolitan areas. Legal, political, social and economic perspectives on selected problems such as energy and natural resource use, air and water pollution, and land use and economic growth. Offered alternative Spring semesters.

PPS 408 - Urban Issues:Poverty and Unemployment (3)

Analysis of the economic dimensions of poverty and income distribution. Welfare reform policies and employment and training policies are examined. Offered alternate Fall semesters.

PPS 410 - Introduction to Urban Economics (3)

Analysis of the factors determining the economic growth of urban areas. Economic considerations relevant to selected urban problems such as poverty, unemployment, housing, and transportation. Offered occasionally.

PPS 411 - Urban Employment and Training Policy (3)

Manpower utilization in an urban area, Government and industry approaches to improving labor force utilization, employment training and development. Offered occasionally.

PPS 415 - Introduction to Public Finance and Budgeting (3)

Revenue and expenditure patterns of American governments. Various methods of public budgeting. Public securities and debt financing of state and local governments. Offered occasionally.

PPS 420 - Urban Ecology: Communities and Neighborhood

Explores methods and theories which contribute to understanding urban neighborhoods and communities and addresses the question how people do community. Offered occasionally.

PPS 421 - Conflict Management Strategies (3)

The literature on conflict and conflict theory: issues which have led to conflict, conflict roles, conflict reduction and resolution. Explores collaborative alternatives. Offered Occasionally.

PPS 425 - Urban Classics (3)

In-depth consideration of major authors and publications about various aspects of urban life, which literature has also contributed to the growth of urban affairs as a discipline. Offered alternate Fall semester.

PPS 426 - The Census and Neighborhood Analysis (3)

Examination of analytic approaches to communities and neighborhoods utilizing census and other socio-demographic data. Offered Spring semester.

PPS 432 - Administrative Law (3)

Course introduces students to the legal behavior of administrative agencies in the American political system. Covered are administrative law doctrines, principles, and case law. Specific focus is on such topics as rule-making, adjudication, administrative discretion, judicial review, tort liability, and administrative searches and seizures. Offered occasionally.

PPS 460 - Law, Courts & Urban Change (3)

Analysis of law courts and the legal process as instruments of urban social, economic and physical change. Offered occasionally.

PPS 462 - Probation, Parole and Community Corrections (3)

An examination of the policies designed to limit the reliance on the institutionalization of offenders. Offered occasionally.

PPS 465 - Urban Criminal Justice Policy (3)

Various actors in the criminal justice system and analysis of their decision-making processes. Offered occasionally.

PPS 490 - Field Service (3-6)

By permission of chair only.

PPS 501 - Research Methods (3)

Graduate introduction to the process and methods of research with emphasis on evaluation designs and techniques. Examples drawn from urban affairs, urban planning and real estate development, and public administration. Offered every semester.

PPS 503 - Issues in American Public Admi (3)

Examines role of public administration in U.S. Historic evolution of public administration. Current issues in field: privatization, quotas, affirmative action, whistle-blowing, etc. Offered every Fall semester.

PPS 505 - Special Topics:Urban/Adm Theor (3)

Theories of public responsibility, management in the public sector, and other selected conceptual/theoretical frameworks for analyzing urban/metropolitan issues can be explored. Offered occasionally.

PPS 506 - Qualitative Res & Eval Methods (3)

Descriptive research methods including participant observation, oral history, and photography and their application to program evaluation and policy analysis. Offered every Spring semester.

PPS 508 - Legal Research (2-3)

An introduction to the tools for conducting legal research and finding legislative intent. Offered occasionally.

PPS 512 - Intro to Public Sector Budgeti (3)

Public budgeting at all levels of government; economic and political aspects of budgeting. Features in-class budget simulation. Offered every Fall semester.

PPS 515 - Economics of the Public Sector (3)

Introduction to economics of the public sector. Specific issues regarding welfare economics, expenditure programs, and taxation. Offered every Spring semester.

PPS 517 - Intro to Statistics (3)

This course provides an introduction to statistical analysis and application to issues in public policy including quantitative program evaluation. It is designed with a specific goal to assist students in learning the methods by which statistical analysis and evaluation are done. Students will be expected to work with real world practical data through class simulations and exercises with the goal of helping students to not only be better consumers of empirical research but to develop basic knowledge of carrying out empirical research. The course emphasizes practical aspects of applying research methods, appropriately interpreting the results of empirical analysis, and gaining a meaningful understanding of how empirical analysis can be misused or erroneously executed (either intentionally or unintentionally). To carry this out, students will read and critique empirical papers that apply empirical methods to matters related to public policy and will consider the designs of program evaluation. As such, the course will address descriptive statistics, statistical inference, and the nature of random variables, sampling distributions, point and interval estimation of parameters (mean, standard deviation, etc.) probability distributions, hypothesis testing, analysis of variance, correlation analysis and bi-variate and multivariate regression. Although these are traditional topics for an introductory statistics course, the emphasis in this course will be on appropriately applying these techniques and extracting meaningful information from unstructured data. Use of computer tools for carrying out statistical analysis (STATA, SPSS, Excel, etc) will also be a major emphasis of the class.

PPS 518 - Public Personnel Administration (3)

Focus is on such topics as development of public service employment the rise of public employee unions, recruitment, training, performance appraisals, productivity, motivation, pay and benefits, and the legal aspects of public personnel administration. Sample issues: comparable worth, affirmative action, health care, discriminatory employment practices, and sexual harassment. Offered occasionally.

PPS 520 - Crime, Justice and Public Pol. (3)

Socio-political parameters of crime and society's policy response to it. Offered every other year.

PPS 536 - Science, Tech, & Public Policy (3)

Focus is on the impact of science and technology (particularly information technology) on public organizations, public policy, and society. The course is designed for those who work with or want to understand the dynamics such technology introduces into organizations. Offered every Spring semester.

PPS 540 - Organizational Theory & Behavi (3)

General focus is on theories and schools that provide insights into organizational life. Emphasis is given to public bureaucracies. Topics include motivational theory, management behavior. Policy evaluation and the like. Offered every Fall semester.

PPS 541 - Administrative Law (3)

Seminar discussions focus on the search for procedural due process in public administration. Specific attention is devoted to administrative law doctrines and principles pertaining to rule-making, agency hearings, administrative discretion, damage actions, reviewability, scope of review, and administrative searches and seizures. Administrative law cases are thoroughly discussed. Offered every Spring semester.

PPS 542 - Quantitative/Qualitative Model (3)

Course explores a combination of quantitative and qualitative methods. Introduces the data and methods in participant observation and ethnography. Exposes students to modeling in transportation, regional economic development, and planning analysis.

PPS 545 - The Policy Process (3)

Course deals with various inputs into the American policy-making process through legislative, executive and judicial branches of the government. Particular attention is focused on the impact of legislative law, administrative rule and judicial order on our political system. Offered every year.

PPS 546 - Organizational Psychology (3)

Examination of organizational theory with special emphasis on systems theory. Topics include history, subsystems, growth, role theory and organizational models. Organizational behavior topics include motivation, leadership and change. Offered every Fall semester.

PPS 547 - Organization Analysis (3)

Introduction to and critical review of major sociological perspectives of organizations. Special emphasis is given to recent theoretical advances that emphasize the political and socially constructed character of organizations. Offered occasionally.

PPS 550 - History of Cities & Planning (3)

Analysis of the origins, growth and decline of selected cities of Europe (e.g. Athens, Rome, Paris, London) and America (e.g. Boston, Savannah, St. Louis, Chicago) during major historical periods (e.g. Medieval, Renaissance, Industrial Revolution, Post-Industrial). The influence of design trends and planning on the built environment will be analyzed where appropriate. Offered every year.

PPS 570 - Health Policy (3)

A course in health policy for advanced graduate students. The purposes of the course are to orient the students to the policy process, to increase the student's understanding of the nature of health policy making and health politics and to provide the student with an opportunity to develop an in-depth understanding of current health care issues. Offered every year.

PPS 576 - Poverty Policy (3)

A multidisciplinary analysis of poverty and its impact on contemporary urban America. Remedial public policies, from Medieval and Victorian England to current American welfare reforms will be studied and evaluated. Related functional reforms (e.g. health care, housing) will be appropriately considered insofar as they affect poverty policy. Offered occasionally.

PPS 578 - Program Evaluation (3)

Based in social action research theory and strategy, the course presents frameworks for summative and formative approaches to assessing programs. Actual evaluation experience is included. Offered every Fall semester.

PPS 585 - Capstone (0-3)

Student selects a project to evaluate planning issues and design planning alternatives toward a development or redevelopment. The formal plan is accompanied by an analytical report. The report is presented in public forum. Offered every semester.

PPS 589 - Field Service (1-6)

Field experience by the student as community organizer, research assistant or administrative intern with a voluntary association, community organization or public or private agency. A paper evaluating the field experience is required. Offered every semester.

PPS 591 - Journal Club (0)

Readings and/or presentations in recent research specialty area. Offered every semester.

PPS 600 - Scope and Methods of Pol Anal (3)

Introduction to the theories, models, concepts and methods of policy analysis. Topics include alternate conceptualizations of what constitutes policy, epistemology, process analysis, modeling, problem structuring, and evaluation. Offered every Fall semester.

PPS 605 - Policy Ethics/Soc. Respons (3)

A case study approach to ethical decision making in public management. Offered every Spring semester.

PPS 608 - Industrial Orgs/Anti-Trust Pol (3)

Microeconomics theory of utility and demand; theory of production, cost and supply; price determination for factors and products under varying market structures; efficiency in allocation of resources; welfare issues. Offered occasionally.

PPS 609 - Industrial Org&Regulatory Pol (3)

An evaluation of market versus regulatory control of business. Topics include welfare theory with particular emphasis on market failure, theories of government intervention, required revenue and rate determination through regulation, case studies of specific regulatory issues, and other matters. Offered occasionally.

PPS 611 - Economics of Gov-Fed Sector (3)

Allocation, stabilization, and distribution functions of government in the national economy. Optimum theory of budget policy; problems of the satisfaction of public wants; theories of taxation, alternative tax policies, their differential impact on revenue yield, equity and economic efficiency. Incidence theory, output and income effects of budget policy. Taxation reform proposals. Offered occasionally.

PPS 612 - Financing the Public Sector (3)

The public finance functions of governments: Stabilization, allocation, and distribution. Elements of a good tax structure; in-depth analysis of revenue sources. Offered every Spring semester.

PPS 630 - Power/Coalition&Dec-Making (3)

Intensive consideration of power, coalition and decision theory and models for purposes of describing and analyzing behavior and policy outcomes in communities and formal organizations. Offered occasionally.

PPS 635 - Judicial Policy Making (3)

The role of the judiciary in the policy making process is examined and compared with the roles of legislators and policy implementors. Offered occasionally.

PPS 636 - Econ of Govt-State&Local Secto (3)

Role of governments in the modern economy. Alternative expenditure policies and financing techniques, taxation, borrowing, sale of governmental services, intergovernmental aid. Metropolitan area finances; role of expenditures and financing in resolving urban problems. Offered occasionally.

PPS 639 - Contemporary Iss in Soc. Psyc. (3)

Advanced seminar in newly developing areas of social psychology. Offered occasionally.

PPS 649 - Topics:Organizational Chng&Dev (3)

Advanced seminar in newly developing areas of organizational psychology. Offered annually.

PPS 650 - Intro to the Nonprofit Sector (3)

The course examines the American nonprofit sector and administration of nonprofit organizations. It analyzes the nonprofit sector from the perspective of civil society and political economy. Furthermore, the course examines nonprofit organization management from the perspective of voluntarism and citizen participation. Offered annually.

PPS 663 - Consultation Skills (3)

Theories, types and goals of consultation as well as relevant research associated with each type of consultation. Primary focus on training in systems consultation and its evaluation. Offered every summer.

PPS 670 - Sem: Law & Society (3)

Examination of the complexities and concerns inherent in sociological and legal understanding of the relationship between law and society. Offered occasionally.

PPS 678 - Corrections Policy (3)

In the context of public policy planning and analysis, community-based corrections are examined. Emphasis on methods to evaluate various correctional innovations. Offered occasionally.

PPS 681 - Policy Implementation Theory (3)

Focuses of the interaction among program and policy decision, program delivery, and program evaluation. Emphasis on conceptualizations and procedures for political feasibility analysis and for program output and impact assessment. Offered occasionally.

PPS 689 - Research Topics (3)

Research seminar with varying topics offered on an occasional basis.

PPS 701 - Social Justice (3)

Helps students understand the meaning of social justice, community building, human liberation and environmental parity within the context of social work practice. Based on social work's historical mission of intervention in high-risk communities while advocating for social reform, this course is aimed at teaching students the history, theory and practice realities of community building locally and globally.

PPS 702 - Social Policy (3)

An examination of social policy within the context of its historical development and its current functions within contemporary society. Focus on the substance of policy choices, the values and beliefs that underlie these choices, the political process through which the choices are made, and the potential roles of social workers in that process.

PPS 708 - Social Policy & the Family (3)

Problems and issues confronting American families and existing and proposed policy initiatives to address the matters. Focus on the values, the political forces, and the knowledge base behind policy intervention. Major emphasis on policy analysis as a systematic means of approaching this topic.

PPS 710 - Policy Leadership Comm Dev (3)

This course will explore conceptual, analytical, and strategic parameters of effective policy leadership for community work. It seeks to provide for the community social worker both perspective and guidance for facilitating changes in community policy forums, decision-making structures, and policy implementation arenas. An operational goal of the course is to increase the community policy development skill repertoire of the MSW professional to inform and enhance effective community practice.

PPS 715 - Social Work Practice with Low Income Families

This course examines the needs of families, neighborhoods, and communities struggling with high levels of poverty and its effects. This course will examine structural poverty and responses on a micro, mezzo, and macro level to empower families and neighborhoods.

PPS 717 - Foundations of Peacemaking (3)

This course focuses on essential knowledge and skills necessary to engage in the peacemaking process. Students explore and analyze their own understandings of the concepts of peace and conflict. Catholic Social Teaching regarding peace and peacemaking is examined as a framework for approaching peacemaking. Emphasis is placed on the development and application of practical peacemaking strategies in responding to conflict at the interpersonal, community, and global level.

PPS 721 - Comm Develop, Planning and Org (3)

This course is designed to equip students with a broad range of interactional, analytical and political skills needed to assist communities and organizations, and to serve as change agent to promote social and economic justice. The technical and practical elements of planning, organizing and development work will be explored with an emphasis on the values of democratic, participatory models that empower individuals and groups. Content also includes assessment of major social problems and how the assessment influences the choice of intervention strategies.

PPS 737 - Organizational Theory & Lead (3)

This seminar focuses on the critical analysis of who should participate in making various organizational and community decisions, and the forms this participation should take. Of particular concern are the potentials and problems of participatory forms of organization and the conditions necessary for their success.

PPS 768 - Health & Mental Health Policy (3)

Health care system of the United States from medical, sociological, political and economic perspectives; policy issues and alternatives.

PPS 775 - Social Work Research (3)

Development of empirical and evaluative research skills in data gathering, analysis, and presentation of findings. Learning experiences include both theory and practice.

PPS 785 - Planning, Programming & Budget (3)

Conceptual, methodological and strategic principles and skills in selected areas of human services management. All students will be expected to do an applied research project related to their area of concentration. It is recommended that this course be taken concurrently with concentration practicum in order to facilitate the research project.

PPS 798 - Intro Non-Profit Org (3)

This course examines the American nonprofit sector and administration of nonprofit organizations. It analyzes the nonprofit sector from the perspectives of civil society and political economy. Furthermore, the course examines nonprofit organization management from the perspective of voluntarism and citizen participation.

PPS 828 - Intro to Fund Raising (3)

This course focuses on the cycle, stages and progression of fund development for formal, nonprofit organizations and grassroots associations. It introduces the concept of advancement, development, relationships and cultivation for nonprofit organizations. It emphasizes the importance of developing relationships within and matched to the stages and activities of institutional advancement and development.

Aerospace Engineering (AENG)

AENG 101 - Introduction to Aerospace & Mechanical Engi

This course will introduce aerospace and mechanical engineering. Through hands-on activities, students will learn the basics of engineering design and entrepreneurship. Working in teams, students will build aerospace and mechanical systems, practice entrepreneurial thinking, and develop the personal and professional skills needed to engage in lifelong learning. This course is open to non-majors.

AENG 102 - Computer-Aided Engineering Design (1)

This course is an introduction to engineering drawing and computer aided design (CAD) and 3D solid modeling. Students will learn to interpret engineering drawings, create engineering drawings, and create 3D models of mechanical systems.

AENG 200 - Intro to Aeronautics & Astron (3)

The nature of aerodynamic forces; incompressible and compressible fluid flow; lift and drag; introduction to performance, stability and control; propulsion; structures; rocket performance and orbits. The design process. Prerequisite: ESCI 102 and PHYS161; both may be taken concurrently.

AENG 201 - Engineering Shop Practice (1)

This course conditions the students in the shop environment and the use of common hand and machine tools found in a typical fabrication shop. The students will be prepared for the design-build class projects. Emphasis is placed on using the right processes and right tools for the job. Safety in a fabrication shop is introduced and practiced.

AENG 275 - Co-op with Industry (0)

Prerequisite: Sophomore standing. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester

AENG 297 - Co-op in Aerospace Eng. (0)

Aerospace Engineering (AE) - Lower Division Course An optional supervised work experience with an agency, firm or organization which employs engineers. The student receives a Pass or No Pass grade.

AENG 302 - Structure and Design (4)

Material properties; Statically indeterminate structures; weld and rivet analysis; working stresses, torsion of non circular sections. Torsion of thin-walled structures, unsymmetrical bending. Spring Semester. Prerequisite: ESCI200 or ESCI210 and ESCI310 ESCI311.

AENG 310 - Gas Dynamics (3)

One-dimensional gas dynamics; normal and oblique shock waves; Prandtl-Meyer flows; Rayleigh and Fanno-line flow; method of characteristics. Prerequisite: ESCI220 and ESCI322 Corequisite: MATH370 Spring semester.

AENG 311 - Aerodynamics (3)

Circulation and vorticity; irrotational flows and potential flow theory; Kutta-Joukowski theorem, subsonic thin airfoil and finite wing theory; subsonic compressible flow; supersonic thin airfoil theory; slender body theory, Newtonian impact theory. Spring semester. Prerequisite: ESCI322 and MATH370.

AENG 320 - Performance (3)

Aircraft performance characteristics, level flight, rate-of-climb, range and endurance, take-off and landing, turn performance, energy state approximation, propeller theory and analysis, constraint analysis, carpet plots and design methodology. Prerequisite: AENG200.

AENG 322 - Astrodynamics (3)

Space environment; two-body problem and introduction to orbit mechanics; rigid body dynamics; satellite dynamics, rocket performance; re-entry dynamics. Prerequisites: AENG200 and ESCI211. Spring semester.

AENG 330 - Aerospace Structures I (3)

Basic theory of elasticity with application to two dimensional problems in bending and torsion of solid and thin-walled sections; unsymmetrical bending; flight vehicle loads; properties of materials. Prerequisite: ESCI310. Spring semester.

AENG 365 - Computer Aided Engineering (3)

The course outlines the principles of Computer Aided Engineering. The computer applications to structural design, kinematic synthesis and design optimization are explored. Prerequisites: ESCI310 Mechanics of Solids.

AENG 375 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: AENG275. Offered every semester.

AENG 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing. Offered every semester.

AENG 401 - Flight Vehicle Structures (3)

Introduction to theory of elasticity; behavior of materials including composites; torsional and bending shear flows in thin walled structures; shear center; analysis of semi-monocoque structures; joints and fittings; elastic and inelastic buckling; and fatigue analysis. Application of FEM methods.

AENG 410 - Propulsion (3)

Ramjet, turbojet, turbofan and turboshaft cycle analysis; component analysis and matching; turbojet off-design performance. Aircraft/engine integration. Prerequisite: AENG310. Fall semester.

AENG 411 - Aerospace Laboratory (1)

Experimental studies in subsonic and supersonic air flows. Measurements of strains and deflections in aerospace structures under simulated loading conditions; static and dynamic measurements. Design of experiments, collection, reduction, evaluation and comparison of data. Prerequisite: AENG320 and AENG330. Fall semester.

AENG 414 - Hypersonics (3)

Introduction to hypersonics. Newtonian and Busemann Theory; slender body theory; shock expansion theory; small disturbance theory and supersonic similitude; blast wave theory. Thin shock layer theory. Prerequisite: AENG310.

AENG 416 - Physical Gas Dynamics (3)

Introduction of kinetic theory of gases, and statistics of classical and quantum mechanical systems. Equilibrium properties of gases, particularly air; ideal dissociating gas; equilibrium flow of real gasses including effects of dissociation and ionization. Introduction to free flow molecular flow. Prerequisite: AENG310.

AENG 417 - Viscous Flow Aerodynamics (3)

Introduction to compressible and incompressible viscous flow. Navier-Stokes and energy equations developed using tensor techniques. Exact solutions to parallel flows. Laminar boundary layer; Von Karman Integral conditions; introduction to turbulence. Prerequisite: AENG310, ESCI322.

AENG 420 - Stability and Control (3)

Static stability and aircraft control; equations of motion, dynamic stability; closed loop control. Fall semester. Prerequisite: AENG320 and ESCI330.

AENG 422 - Flight Simulation (3)

Overview of various types of simulators; introduction to major software and hardware components of state-of-the-art simulators; development of computer models of aircraft systems and performance characteristics and interfacing the models with each other to achieve high-fidelity, real time aircraft simulation. Use of reconfigurable flight simulator, whenever possible. Prerequisite: AENG420.

AENG 423 - Flight Testing (0-3)

Theory and practice of obtaining flight-test data on vehicle drag polar; performance and stability of aircraft from actual flight tests; students plan the flight, fly the mission, record, reduce data, evaluate and compare with theory, engineering simulator, FAR, Navy, Air Force manuals, owners manual, etc. Permission of Instructor. Prerequisite: AENG320.

AENG 424 - Helicopter Theory and Perform. (3)

Airfoil theory as applied to propellers and rotors. Momentum and blade element theories, rotor dynamics during climb, hover, descent and autorotation; preliminary design techniques and rotor blade dynamics. Prerequisite: AENG320.

AENG 425 - V/STOL Vehicles (3)

Performance analysis of V/STOL vehicles. Lifting rotor and propeller analysis. Transition problems, stability and control analysis. Prerequisite: AENG320.

AENG 430 - Aerospace Structures II (3)

Joints and fittings; bending, shear, and torsion of open and closed, thin-walled beams followed by applications to aircraft structures; energy methods; introduction to finite element analysis, elementary aeroelasticity. The course includes a design laboratory wherein students complete a variety of design projects. Prerequisite: AENG330.

AENG 432 - Aeroelasticity (3)

Aerodynamic loads on a flexible surface. General formulation of aeroelastic problems. Control effectiveness and reversal. Wing divergence. Two - and three dimensional flutter theory. Empennage vibration and flutter analysis. Flutter prevention. Testing techniques. Prerequisite: AENG430 and ESCI330.

AENG 433 - Composite Structures & Design (3)

Fiber and resin systems. Composite material properties and characterization; laminae. laminates, macro and micro-mechanics. Analysis and design of lamina and laminate. Prerequisite: AENG430 and MATH370.

AENG 434 - Finite Element Analysis I (3)

Mathematical background (Variational forms for 1D and 2D, Rayleigh Ritz, Galerkin, element matrices and assembly, formulation of axial/truss/beam/plane-frame structural elements, 2D field problem formulation, linear and triangular elements for heat transfer/irrotational flow, torsion of noncircular sections, elasticity, higher order and mapped elements, numerical integration. Lab applications and project included.

AENG 441 - Orbital Mechanics (3)

Orbital dynamics of space vehicles with emphasis on engineering design and application to specific mission analysis. Orbit determination and maneuvers; interplanetary transfer and trajectory optimization; proximity operations; perturbation effects. Prerequisite: AENG440.

AENG 442 - Intro to Space Dynamics (3)

Motion in moving reference frames; Euler's equations; attitude dynamics; motion of a rigid spacecraft; attitude control systems and maneuvers; spacecraft and attitude feedback control; attitude stabilization; attitude determination. Prerequisite: AENG440 and ESCI430.

AENG 450 - Flight Vehicle Analys & Dsgn I (0-3)

Application of aerospace engineering to the design methodology of a flight vehicle. Fall Semester. Prerequisite: AENG320.

AENG 451 - Flight Vehicle Analy & Dsgn II (0-3)

Application of aerospace engineering to the detail design of a flight vehicle, model design, fabrication testing, evaluation and analysis. Spring Semester. Prerequisite: AENG420 and AENG450.

AENG 452 - Hypersonic Propulsion & Design (3)

Application of aerodynamic, propulsion, and thermodynamics to the design of an integrated airframe/propulsion system from a first principles approach. Identification of converged design space in which a possible solution can exist is inherent in approach. Prerequisite: AENG410.

AENG 453 - Intro to Comp. Fluid Dynamics (3)

This course is designed to establish the fundamentals of computational fluid dynamic schemes and methods to solve the PDEs. The students will learn how various schemes are applied to proposed to model equations, and analyze the resulting solutions. Prerequisites: ESCI322, CSCI125

AENG 475 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisites: AENG375. Offered every semester.

AENG 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisites: AENG376 or Senior standing. Offered every semester.

AENG 477 - Senior Engineering (1)

Review of topics related to FE exam, topics in engineering economy. Guest lectures focused on contemporary issues and life long learning.

AENG 493 - Special Topics in Aerospace Engineering (3)

Selected topics of special interest to aerospace engineering majors.

AENG 498 - Independent Study (1-3)

Credit to be arranged. Independent study on an aerospace engineering topic under the direction of a faculty member.

AENG 500 - Seminar (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters. (Cross listed with MENG 500)

AENG 501 - Fluid Dynamics (3)

Introduction to the physical concepts and mathematical analysis of fluid flow. Kinematics, stress, and thermodynamic properties of a fluid. Integral and differential equations for conservation of mass, momentum and energy. Applications in potential flow, viscous flow and compressible flow. Fluid flow measurements. (Cross listed with MENG 501) Prerequisite: Undergraduate fluid dynamics.

AENG 502 - Found. of Aerospace struc. Ana (3)

Analysis of stress and strain. Compatibility and uniqueness of solutions. Fundamental equations of the linear theory of elastic media. Plane stress and plane strain. Stress function. Energy principles and variational methods. (Offered every semester.)

AENG 503 - Numerical Methods Using Matlab and Laview (

This course will introduce students to the Matlab and Labview programming packages while teaching how to use software and numerical methods to solve engineering problems. Problems of interest to Aerospace, Mechanical, Civil, Electrical, and Biomedical Engineering programs will be addressed. (Cross listed with MENG 503) Prerequisites: Undergraduate programming coursework.

AENG 511 - Aerodynamics (3)

This course will introduce idealized aerodynamics in order to predict lift, drag, and pitching moment of airfoils and wings. A particular emphasis will be on modeling flow fields and their boundary conditions using potential flow solutions. With several group projects, the students will develop numerical tools for the analysis and design of flight vehicles. The theoretical predictions will be compared with experimental and empirical data. Prerequisites: Undergraduate Fluid Dynamics, Programming

AENG 512 - Experimental Methods in Fluid Dynamics (3)

This lab-based course introduces students to the modern techniques used to investigate fluid dynamic problems, including pitot-static tubes, wake rakes, thermal anemometry, laser Doppler anemometry, particle image velocimetry, and pressure and temperature sensitive paints. Prerequisite: AENG 501 (Cross listed with MENG 512)

AENG 513 - Introduction to Computational Fluid Dynamics

This course is designed to establish the fundamentals of computational fluid dynamic schemes and methods to solve the governing PDEs. The students will learn how various schemes are applied to proposed model equations, and analyze the resulting solutions. Prerequisites: undergraduate fluid mechanics, heat transfer, and programming. (Cross listed with MENG 513)

AENG 514 - Hypersonics (3)

This course covers the history of hypersonic efforts; characteristics of hypersonic flow; slender body theory; hypersonic similitude; viscous interactions; transition to turbulence; high-temperature gas dynamics; thermal protection systems; and hypersonic propulsion systems. Prerequisites: undergraduate fluid mechanics, heat transfer, and programming.

AENG 515 - Parachute Systems and Design (3)

This course is an introduction to the various applications, aerodynamics and design rules of parachute systems. It is intended for engineering graduate students and professional engineers. The topics include: review of current use in aviation and space; parachute configurations and components; parachute testing techniques and facilities; parachute aerodynamics and flight dynamics; parachute inflation; gliding parachutes; non-terrestrial applications; parachute system design. Prerequisites: Undergraduate Fluid Dynamics, Aerodynamics.

AENG 516 - Unsteady Aerodynamics of Bluff Bodies (3)

This course is an introduction to the aerodynamics of non-streamlined (i.e. bluff) bodies in both the steady and unsteady regimes. Topics include: aerodynamics of bodies in accelerated motion vs. steady motions; structure of the near and far wakes behind flat plates (in normal flows). Several examples shall be discussed in depth as well, encompassing examples from both engineering and natural worlds: 1) blimp flight and the role of apparent mass; 2) parachute under descent; 3) inflating parachutes; 4) spacecraft drag during atmospheric re-entry; 5) wake re-contact during decelerating motion 6) wave-generated drag on ocean piles; 7) engulfment drag by whales; 8) fast start by shrimp. Prerequisites: Undergraduate Fluid Dynamics, Aerodynamics

AENG 518 - Applied Aerodynamics (3)

This course introduces students to analytical and numerical methods applicable to airfoils and wings. Student will be able to model two- and three-dimensional flows. Student will understand how to estimate lift and drag of wings using analytically and numerically methods. Students will have an understanding of high-lift systems and of rotor aerodynamics. Prerequisites: Incompressible Flows, Programming

AENG 522 - Flight Simulation (3)

Overview of various types of simulators; introduction to major software and hardware components of state-of-the-art simulators; development of computer models of aircraft systems and performance characteristics and interfacing the models with each other to achieve high-fidelity, real time aircraft simulation. Field trips to area flight simulation facilities. Use of, and projects in, reconfigurable flight simulator. Prerequisites: Programming skills, Undergraduate Stability and Control

AENG 523 - Engineering Flight Test (3)

Theory and practice of obtaining flight-test data on vehicle drag polar; performance and stability of aircraft from actual flight tests; students plant the flight, record, reduce data and evaluate/report the results. Graduate students will also be required to design a flight test instrument. (Offered every semester.)

AENG 531 - Viscous Flow (3)

Study of viscous fluid flow with emphasis on the development of Navier Stokes Equations, laminar and turbulent boundary layers and origin of turbulence. Analytical and numerical solutions of engineering problems will be emphasized. (Offered every Spring semester.)

AENG 532 - Aeroelasticity (3)

This course presents the fundamentals of Aeroelasticity involved with divergence, flutter and control surface reversal of primary lifting surfaces and empennage on aircraft and missiles. Beam vibration, aeroelastic equations and their solutions, unsteady aerodynamics, quasi-steady aerodynamics and finite state aerodynamics. Prerequisites: Undergraduate Flight Vehicle Structures, Linear Vibrations

AENG 533 - Composite Materials for Structure and Design

Fiber and resin systems, Composite material properties and characterization, lamina, Laminate, Micro-mechanics, Stress analysis of lamina and laminate, Design of laminate, Failure theories, and Manufacturing of laminate. Prerequisites: Undergraduate Mechanics of Solids. (cross listed with MENG 533)

AENG 534 - Finite Element Analysis I (3)

Variational forms for 1D and 2D, Rayleigh Ritz, Galerkin, element matrices and assembly, formulation of axial/truss/beam/plane-frame structural elements, 2D field problem formulation, linear and triangular elements for heat transfer/irrotational flow, torsion of noncircular sections, elasticity, higher order and mapped elements, numerical integration. Lab applications and project included. Prerequisites: Undergraduate Mechanics of Solids. (cross listed with MENG 534)

AENG 536 - Shock Wave Interactions (3)

Unsteady wave propagation. Method of characteristics for unsteady flow. Moving shock waves. Blast waves, shock tubes, shock tunnels, hyper ballistic guns, detonation, deflagration. (Offered occasionally.)

AENG 540 - Automatic Control Systems (3)

Block diagrams and transfer functions of feedback systems and controllers, series compensation using PID controllers, root loci and frequency response for phase-lag and phase-lead compensations, systems with transport lag, multi-variable and nonlinear control systems. (Offered every Spring semester.)

AENG 541 - Space Dynamics & Control (3)

Motion in moving reference frames; Euler's equations; attitude dynamics; motion of a rigid spacecraft; attitude control systems and maneuvers; spacecraft and attitude feedback control; attitude determination and attitude control. Prerequisite: Undergraduate Astroynamics.

AENG 542 - Optimal Control (3)

Principle of optimality, the Hamilton-Jacobi equation, performance of finite time, infinite time and time invariant regulators, Riccati equation, quadratic cost functions and weighting selection, frequency shaping, robustness, controller reduction, optimal tracking. (Offered every Spring semester.)

AENG 543 - Digital Control Systems (3)

Introduction to synthesis and analysis of digital control systems. State variable representation of sample- data systems, Z and W plane analysis of system stability and performance. Linear feedback digital controllers and observers for multi variable systems. Compensation techniques and digital filters. Applications to control of flight vehicles. (Offered every other Fall, odd years.)

AENG 544 - Aircraft Performance Opt. (3)

Aircraft performance at polysonic speeds and their optimization. Analysis and design of aircraft mission profiles using optimization techniques. Effects of aeroelasticity, compressibility, aerodynamic heating and high altitude on vehicle performance. (Offered occasionally.)

AENG 550 - Optimization Techniques (3)

Minima in problems with constraints, classical multiplier and gradient methods, energy modeling, application to flight and control of aerospace vehicles. (Offered occasionally.)

AENG 551 - Space Mission Failures (3)

Space systems are designed to operate in the presence of multiple failures. And yet, occasionally, systems will still fail spectacularly. Reasons for failure include operator error, incorrect design, and manufacturing defects. The odds of these failures occurring can be significantly reduced through good systems engineering practice. But, in some cases, the very systems engineering practices themselves directly contribute to the failure. This course will introduce the fundamentals of good systems engineering practice. A series of case studies in failures (rockets, spacecraft, rovers, etc.) will be used to illustrate these principles and the new vulnerabilities they introduce. Prerequisite: Undergraduate Astroynamics, Space Mission Analysis and Design

AENG 553 - Space Mission Analysis and Design (3)

Basic spacecraft types and their applications. Major subsystems of a spacecraft system. Space environment, propulsion system, power system, structural design, spacecraft dynamics and attitude control, orbit mechanics, thermal control, communications, and ground segments, command and data handling. Spacecraft integration and testing. Prerequisites: Senior or graduate standing.

AENG 554 - Orbital Mechanics (3)

Orbital dynamics of space vehicles with emphasis on engineering design and application to specific mission analysis; orbit determination and maneuvers; interplanetary transfer and trajectory optimization; proximity operations; perturbation effects. Prerequisite: Astrodynamics

AENG 555 - Guidance, navigation and Estimation for Dyna

This course covers three aspects of advanced control of dynamic vehicles. The Estimation module is concerned with topics in automatic control theory related to the modeling of a vehicle state: observability, noise and uncertainty, filtering theory (Weiner Filters, Standard and Extended Kalman Filtering), and simulation. The Guidance module complements Estimation with respect to control: controllability, linear quadratic regulation, as well as a review of rotational dynamics and orbital mechanics. The Navigation module covers real-world examples of sensors and actuators, including inertial systems and GPS, with an emphasis again on noise and uncertainty. Students will develop complete dynamic simulations of real vehicles, including state estimation and control. Prerequisite: Stability and Control, Analysis of Linear Control Systems.

AENG 556 - Modern Control Systems (3)

Introduction to system theory, state variables and state space description to dynamic systems, linear vector space and dependence. Jordan canonical forms, Cayley-Hamilton theorem, system stability, controllability and observability, relation between state-space and transfer function models. A brief introduction to Nonlinear systems, Lyapunov stability theory will be provided. This course will give the basic knowledge for more advanced control courses, such as nonlinear control, robust control, optimal control, adaptive control. Prerequisite: Analysis of Linear Control Systems. (Cross listed with MENG 556)

AENG 557 - Advanced Control Systems (3)

Introduction to nonlinear systems. Differences between linear and nonlinear systems. Mathematical preliminaries. Equilibrium points of nonlinear systems. Phase plane analysis and limit cycles. Stability definitions for nonlinear systems. Lyapunov's indirect and direct methods. Stability of autonomous and non-autonomous systems. Describing function analysis. Brief introductions to modules on nonlinear control design including adaptive and nonlinear robust control. Applications of nonlinear control design. Prerequisite: AENG/MENG 556 (Cross listed with MENG 557)

AENG 558 - Autonomous Systems Design (3)

This course introduces students to the design of autonomous systems. Student will demonstrate the ability to evaluate a system and develop a correct mathematical model of its dynamics. Student will understand the fundamentals of autonomous operation and the required integration of the various sub-systems. Prerequisite: Programming, Analysis of Linear Control Systems (Cross listed with MENG 558)

AENG 559 - Advanced Space Mission Design (3)

Working in teams, students will perform a complete λ Phase A λ study of a proposed space mission, culminating in an overall system description, preliminary design and subsystem-level requirements, as well as a feasibility study for developing this mission at St Louis University. The proposed mission will relate to near-term research interests of the instructor and other faculty with the intent of developing a real spacecraft. Students will be responsible for developing requirements and performing trade studies, preliminary sizing and mission analysis for all necessary subsystems (structures, power, thermal control, communications, command & data handling, attitude control, and/or navigation). Where possible, hardware prototypes and simulations will be created. Students will learn through lecture, individual research, and team projects. Prerequisite: AENG 553

AENG 593 - Special Topics (1-3)

A one-time course on a particular topic, or a trial course that is expected to become a standard course with its own unique course number.

AENG 596 - Masters Project (1-3)

Theoretical/computational/experimental work that leads to a Project Report and defense of the Project.

AENG 598 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

AENG 599 - Masters Thesis Research (0-6)

Research that leads to a Masters Thesis and final defense of the Thesis.

AENG 697 - Research Topics (1-3)

Theoretical or Computational or experimental work that is not part of the Dissertation.

AENG 698 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

AENG 699 - Doctoral Dissertation Research (0-6)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Aerospace Studies (AES)**AES 101 - Found. of the U.S. Air Force (1-2)**

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 102 - The Air Force Today (2)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

AES 201 - Evo. of USAF Air & Space Power (2)

A survey course concerned with the beginnings of manned flight and the development of aerospace power in the United States, including the employment of air power in WWI, WWII, Korea, Vietnam, the Gulf War and the peaceful employment of U.S. air power in civic actions, scientific missions and support of space exploration. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing cadets with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-202) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average, but credit hours for these courses will not be included in the total hours for graduation.

AES 202 - The Air Force Way (1-2)

A survey course concerned with the beginnings of manned flight and the development of aerospace power in the United States, including the employment of air power in WWI, WWII, Korea, Vietnam, the Gulf War and the peaceful employment of U.S. air power in civic actions, scientific missions and support of space exploration. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing them with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-202) are basic courses designed to acquaint cadets with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 301 - Air Force Leadership & Manag. (3)

This course is a study in the anatomy of leadership, the need for quality and management leadership, the role of discipline in leadership situations and the variables affecting leadership. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts. Cadets deal with actual problems and complete projects associated with planning and managing the Leadership Laboratory. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving cadets opportunities to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 302 - Air Force Leadership & Manag. (3)

This course continues the study in the anatomy of leadership, the need for quality and management leadership, the role of discipline in leadership situations and the variables affecting leadership. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts. Cadets deal with actual problems and complete projects associated with planning and managing the Leadership Laboratory. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving cadets opportunities to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 401 - Natl Sec. Aff. / Prep for AD (3)

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Air Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 402 - Prep. for Active Duty (3)

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Air Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

Aerospace Engineering Tech (AET)**AET 201 - Concepts in Aerodynamics (3)**

Aircraft types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of aircraft stability and control, effects of flight loads on aircraft structure.

AET 219 - Airframe Analysis (3)

This course included the basic theory, construction, and design principles of aircraft components and systems, maintenance, inspection and servicing.

AET 220 - Airframe Analysis Lab (1)

This course includes laboratory projects to reinforce and supplement the lecture material in AET219. Prerequisite: Concurrent enrollment with AET219

AET 401 - Dsgn & Rpair of Aircraft Struc (3)

This course presents analysis techniques for the evaluation and disposition of aircraft structural discrepancies. The emphasis of the course is on the design of effective repairs and returning damaged structure to design equivalent stiffness and strength. Prerequisite: ET311, ET331, ET341

AET 490 - Senior Project I (2)

The first course of a two-course sequence intended to demonstrate the student's mastery of prior coursework and serve as a culminating experience for the student. This group project includes identification of a project of interest to the group members and the associated research required to determine the feasibility of the project. A formal report and presentation to the department faculty and students highlights the semester activities. Prerequisite: Senior standing and permission from department.

Aircraft Maint. Engineering (AME)**AME 102 - Basic Electricity (3)**

Basic principles of electricity; power in electrical circuits; energy sources; circuit diagrams; applications to aviation electrical and avionics systems.

AME 103 - Nondestructive Inspection (2)

Classroom and laboratory studies directed toward understanding the methods for determining durability and service life to aircraft. Methods include ultrasonics, magnetic particle, liquid penetrants and eddy current testing.

AME 104 - Federal Aviation Regulations (2)

Selected Federal Aviation Regulations covered; controls exercised by Federal Aviation Administration (FAA) over the production, operation and maintenance of aircraft; mechanics of compliance with regulations.

AME 105 - Engineering/Computer Graphics (3)

This course prepares the student to read blueprints and to prepare manual and computer generated drawings of structures and machine parts. The use of spreadsheets for basic laboratory data processing and presentation is also covered. An introduction to word processing is provided with the focus on producing laboratory reports which incorporate spread sheets, graphs and computer generated drawings. Additionally, this course provides an introduction to Computer Numerically Controlled (CNC) fundamentals.

AME 115 - Powerplant, Piston (3)

Basic theory, construction and design principles of aircraft reciprocating engines; required facilities; equipment and procedures to overhaul and evaluate performance after reconditioning.

AME 201 - Concepts of Aerodynamics (3)

Aircraft types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of control, aircraft stability, effects of flight loads on aircraft structure.

AME 207 - Metallic Structures (4)

Application of drawing techniques, tools, materials and principles of operation to construction and maintenance of aircraft metallic structures.

AME 208 - Machine Tools (3)

Principles of construction, operation, use and care of machine tools; includes use of lathes, shapers, milling machines, drill presses, and grinders; use of hand tools, precision measuring tools, coolants, lubricants, abrasives; projects involve working from engineering drawings to layout, turn, drill, knurl, thread, taper cut, shape and finish, using general production procedures.

AME 209 - Aircraft Electrical Systems (4)

Transition from principles of electricity and magnetism to design theory, operation, maintenance and overhaul of aircraft electrical systems and units; power generation (AC and DC), voltage control, power control, circuit breakers, starter systems, lighting systems, trouble shooting and testing.

AME 210 - Basic Airframe Systems (4)

Theory, analysis, maintenance factors and procedures of mechanical systems of control for rotor and fixed wing aircraft; structural alignment and rigging; weight and balance analysis and procedures; cabin atmosphere system analysis, theory and maintenance.

AME 214 - Powerplant Accessories (4)

Theory, principles of operation, maintenance and inspection of reciprocating engine fuel metering systems, general fuel systems, external lubrication systems, induction systems, supercharging systems, cooling systems and exhaust systems; turbojet aircraft general fuel systems; practice in use of tools and assembly procedures.

AME 218 - Airframe Analysis (3)

Basic theory, construction and design principles of powerplant components, systems, maintenance, inspection and servicing. For non-aviation maintenance majors.

AME 219 - Powerplant Analysis (3)

Basic theory, construction and design principles of reciprocating and gas turbine aircraft; components, systems, maintenance, inspection and servicing. For non-aviation maintenance majors.

AME 228 - Composites/Wood (2)

Structural assembly and repair principles; use of tools, machinery, and FAA procedures in airframe construction, inspection, and repair for composite and wood structures.

AME 229 - Fabric/Dope/Welding (2)

FAA procedures in airframe construction, inspection, application and testing of fabric covering techniques of various methods of welding to aircraft fabrication and repair.

AME 275 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AME 293 - Helicopter Maintenance (3)

Basic fundamentals of helicopter maintenance. Theory of operation and systems description and operation.

AME 301 - Advanced Propulsion (3)

A second level course in gas turbine powerplants emphasizing specific operating techniques, malfunction detection and identification, and automatic diagnostic and condition monitoring systems.

AME 311 - Instruments and Avionics (4)

Basic principles of instrumentation; application to aircraft instrument systems; applications of basic electronic principles to aircraft control and navigation systems including radio and radar aids; shop testing; calibration and adjustment of aircraft instruments and avionics equipment.

AME 313 - Advanced Airframe Systems (4)

Theory, analysis, maintenance factors and procedures of fluid power systems; mechanics of fluids related to aircraft hydraulic and pneumatic systems; fluid lines, fittings and components of landing gear and control systems; fire protection system analysis, theory, and maintenance; ice and rain protection system theory, analysis, and maintenance.

AME 316 - Gas Turbine Powerplants (4)

Fundamentals of theory and construction, both in principle and practice, of aircraft gas turbine engines; turbojet and turboshaft engines controls, maintenance, inspection and servicing.

AME 317 - Propeller and Trouble Analysis (3)

Theory, design, construction, operation and repair of aircraft propellers and components installed on reciprocating engines, procedures and equipment applied to diagnose, analyze and correct operational problems in reciprocating engines.

AME 375 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course.

AME 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AME 401 - Flight Line Maintenance (4)

Study and application of maintenance techniques to aircraft in service. Emphasis is placed on scope and performance of required inspections and daily maintenance of live aircraft. Tools and procedures used to determine airworthiness are implemented.

AME 403 - Capstone in Aerospace Tech. (1)

General review of all subject matter covered in Airframe and Powerplant courses.

AME 475 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course.

AME 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course.

AME 498 - Special Topics in AME (1-6)

Credit to be arranged.

Aviation Management (AMGT)

AMGT 260 - Airport Planning (3)

To acquaint the student with the basic concepts of airport planning and construction, as well as investigation of various community characteristics and resources.

AMGT 275 - Co-op with Industry (0)

Prerequisite: Sophomore standing. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AMGT 360 - Airport Management (3)

This course is designed to acquaint the student with the basic concept of airport planning and management. A comprehensive survey of a typical community with an eye toward present and future business potential is made. This includes a study of the socioeconomic characteristics, and the political and governmental influences, followed by various stages and types of airport construction.

AMGT 375 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: AMGT275

AMGT 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department. Prerequisite: Junior standing.

AMGT 405 - Aviation Law (3)

Basic principles of law which impinge on the use of the air; history of air law; principles and rules governing use of air space by aircraft; multilateral conventions pertaining to the use of air space among nations; aviation security procedures; product liability. Prerequisite: MGT300.

AMGT 440 - Econ of Air Transportation (3)

A detailed study of present and future air carrier operations including organization, operating costs and revenues, aircraft utilization and scheduled operations, equipment analysis, aircraft performance in relation to efficient and economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation. Prerequisite: ECON190. Pre or Corequisite AMGT405

AMGT 450 - Seminar in Air Carrier Mgt. (3)

This course is the capstone experience for the Aviation Management degree and is taken along with an internship with an air carrier. This seminar will provide an opportunity for students to study and present information on important and current air carrier management issues. Topics may include, but not be limited to: History of Air Carriers, Government Regulations, Safety, Leadership Issues, Marketing and Finance. Prerequisite: AMGT440.

AMGT 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department. Prerequisite: AMGT376 or senior standing.

AMGT 497 - Practicum (3)

Designed to encourage breadth of study and understanding of the field of management, emphasizing the practical application of theory. Practicums in aviation-related industries will be used to the maximum extent possible. Prerequisite: Senior standing and permission of practicum coordinator.

AMGT 498 - Research Problems (1-3)

No formal class session but weekly appointment with course advisor is required. This course requires the practical use of the methods of organizing theoretical and experimental research, formulation of problems, project planning, research proposal preparation, and submission of a final research report. Prerequisite: Senior standing and permission of the Department Chair.

Aviation Science - General (ASCI)**ASCI 100 - Aviation Orientation (2)**

This is a broad-based course designed to familiarize the student with the field of aviation. Students will be introduced to aviation from the historical and regulatory perspective. Various aviation career fields will be reviewed along with an overview of each aviation degree programs offered at Parks College.

ASCI 101 - Professional Orientation (2)

This course will provide an orientation to the University system, the teaching philosophy of the Department, and opportunities for professional development in specific career tracks such as professional pilot, system safety, and quality management. Opportunities such as internships, scholarships, research assistantships, and general networking and social events on campus, etc. will be discussed.

ASCI 102 - Intro to Air Traffic Control (2)

This course provides instruction in basic air traffic control procedures and phraseology used by personnel providing air traffic control services. Students will become familiar with FAA handbooks and regulations that pertain to the operational responsibilities of an air traffic controller. Students will receive hands-on training on air traffic control radar simulators. Prerequisite: FSCI 125

ASCI 130 - Aviation Weather (3)

This course will provide the fundamentals of meteorological theory with a specific application to aviation and flight. Appropriate weather services that are available to the pilot will be covered.

ASCI 150 - Aviation Human Factor & Safety (3)

This course will introduce the student to the concept of aviation human factors and safety. Particular emphasis will be placed on strategies for improving aviation safety, and judgment and decision-making strategies. Corequisite: PP150

ASCI 195 - Safety Management Systems (3)

Safety Management Systems (SMS) is a standard throughout the worldwide aviation industry. SMS is recognized by the International Civil Aviation Organization (ICAO) as the next step in the evolution of safety in aviation. SMS is a standards based system for the management of safety. Safety Management Systems integrate risk management and safety assurance concepts into repeatable, measurable, proactive systems.

ASCI 201 - Seminar in Aviation Safety (2)

An examination of aviation safety to help the student identify major problem areas, evaluate safety programs and recognize the value and total impact of aviation accident prevention efforts. Human factors are identified and a study is made of those organizations and agencies -- both governmental and in the private sector -- involved in aviation safety activities. Case studies of aviation accidents are studied and evaluated.

ASCI 202 - Air Traffic Control Operations and Procedures ()

A study of the history and function of the ATC system. Theory of ATC taught in the classroom will be reinforced by 10 hours of "hands-on" instruction on the ATC radar simulators.

ASCI 205 - Seminar in General Aviation (2)

Selected readings and topics on current problems related to general aviation. The seminar method of instruction is used. An important part of this course is contact with executives currently working in the various areas of general aviation. Included in the course material is consideration of general aviation equipment, the divisions (or types) of general aviation, the "use" of general aviation as a business tool and the relation of business (or general) aviation to commercial aviation. The organization and management of fixed base operation as a career field is also considered.

ASCI 210 - Introduction to Air Safety Investigation (3)

An introduction to aircraft accident investigation and its use as a tool in hazard identification, risk analysis and mishap prevention. Students will apply theory and practical skills developed in the classroom to an actual aircraft accident during the field work portion of the course.

ASCI 220 - Concepts in Aerodynamics (3)

Aircraft types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of aircraft stability and control, effects of flight loads on aircraft structure.

ASCI 240 - Advanced Aircraft Systems (3)

Study of systems in a turbine powered aircraft in use in commercial aviation. Course will examine the mechanics of the aircraft systems as well as how to properly and effectively operate them in both normal and emergency procedures in accordance with the aircraft flight manual.

ASCI 275 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing

ASCI 280 - General Aviation Operations (3)

A study of general aviation operations including fixed base operations (fuel, sales, flight training, charter, etc.) and corporate aviation (Business aviation, corporate flight departments, executive air fleets, etc.).

ASCI 298 - Special Topics in Aviation Science (Credit to b

Prerequisites: Approval of the Department Chair.

ASCI 299 - Thesis (3)

Demonstrate mastery of basic principles of Aviation Science; ability to apply principles in the investigation and solution of problems in Aviation Science.

ASCI 301 - Jet Transport Systems I (0-3)

This course includes an introduction to a typical turboprop airplane currently used in commercial aviation. The systems will be covered from a pilot's perspective. Normal and emergency operating procedures will be covered as presented by the aircraft flight manual. Prerequisite: PHYS 135

ASCI 302 - Jet Transport Systems II (0-3)

This course includes an introduction to a typical jet aircraft currently used in commercial aviation. The systems will be covered from a pilot's perspective. Normal and emergency operating procedures will be covered as presented by the aircraft flight manual. Recommend that students take ASCI 301 prior to this course. Prerequisite: PHYS 135

ASCI 303 - Basic Air Traffic Control: Tower and Radar (3)

This course will examine the principles, procedures, and regulations regarding the use of integrated flight and navigation systems for use in domestic, international, and oceanic flight.

ASCI 306 - Turbine Aircraft Transition (2)

This course utilizes flight training device based training in a lab setting to develop an understanding of airline, corporate and turbine aircraft operations. Topics include: turbine aircraft systems, FAR part 121 regulations, airline operational specifications, advanced aircraft avionics, advanced weather avoidance, crew resource management and airline operating procedures. Prerequisites: PP 254 and PP 260 OR FSCI 255 and FSCI 265.

ASCI 310 - Air Carrier Operations (3)

This course includes the study of the operations of a representative air carrier in commercial aviation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Restricted to Juniors and Seniors.

ASCI 360 - Humanitarian Action (3)

This course introduces the student to the field of humanitarian aviation and related issues. The course examines the Jesuit character of the university mission, the logic and history of humanitarian work, practical aspects of aviation located within the broader context of humanitarian aid, international flight operations, aviation safety and humanitarian aviation, the similarities between faith-based aid agencies, governmental and non-governmental organizations, the student's personal belief systems and motivations for humanitarian work. As service is an integral component of humanitarian work, students will engage in community service in the local area, reflect upon their experience, and draw from it to inform their study of humanitarian aviation.

ASCI 365 - Applied Statistics (3)

In this course, the students will apply fundamental statistical analysis techniques to interpret data from their professional career interests. Discussion topics will include data collection, set-up of statistical analysis software, statistical sampling, parametric and non-parametric data analysis, report writing, and interpretation of previously published statistical reports. Prerequisite: MATH132 or higher.

ASCI 375 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: ASCI275

ASCI 376 - Internship with Industry (0-3)

Seniors in the Department of Aviation Science are afforded the opportunity of working in a commercial airline or a corporate flight department environment for a semester. Students compete for limited spaces. Prerequisite: Senior standing and permission of the Department Chair.

ASCI 381 - Aviation Finance (3)

An introduction to the fiscal problems encountered in the administration of aviation facilities. The course covers the basics of budgeting, forecasting, financial management, taxation, and cost recovery. It also provides an accounting primer to allow aviation professionals to better understand accounting principles and financial reports. The financial, taxation and insurance considerations of aircraft acquisitions and ownership are presented. This course will be of good foundational value to students who are entering financial management in the air transportation industry. Prerequisites: MATH 120, ACCT 220 and ECON 190.

ASCI 401 - Jet Transport Flying Techniques I (0-3)

This course emphasizes effective management of technology and people in a modern flight deck through an understanding of situational awareness under normal, extended duration and emergency conditions. Line Oriented Flight Training (LOFT) Scenarios are used to reinforce theoretical principles. Prerequisites: ASCI 301, ASCI 302, and ASCI 306.

ASCI 402 - Jet Transport Flying Techniques II (0-3)

The student will integrate the operation of advanced aircraft systems, air carrier flight crew techniques, and crew resource management principles through a Line Oriented Flight Training simulator experience.

ASCI 405 - Human Factors (3)

This course will introduce the student to the concepts of human factors as applied to Flight, System Safety, and Quality Management. Particular emphasis will be placed on improving safety, judgment, and decision-making strategies. The student will make direct applications to the work environment. Prerequisite: PSY101. Restricted to Juniors and Seniors.

ASCI 420 - Crew Resource Management (3)

This course includes an expansion of Crew Resource Management principles emphasizing human factors theory. Leadership styles along with other elements of a multicrew environment are the foundation subject areas. A practical application of the principles involved may be offered in a small group setting. Prerequisite: ASCI150, ASCI350, PSY101

ASCI 425 - Prof Ethics and Standards (3)

Exposes the participant to various moral and ethical dilemmas inherent to business and more specifically the aviation industry. Participants will identify ethical problems, understand and evaluate differing ethical perspectives, and formulate viable policy recommendations. Prerequisites: PHIL 105 and PHIL 205.

ASCI 435 - Team Resource Management (3)

This course will prepare students to build high-performance teams in critical sectors such as flight, maintenance, safety, and quality. Concepts of team building and technology management under normal as well as emergency conditions will be discussed. Case studies will be used to analyze team performance in a variety of high-consequence sectors. Prerequisite: ASCI 405. Restricted to Seniors.

ASCI 450 - Flight Crew Techniques and Procedures (0-3)

The student will integrate the operation of advanced aircraft systems, air carrier flight crew techniques, and crew resource management principles through a Line Oriented Flight Training simulator experience. Prerequisite: ASCI410, ASCI420, ASCI430 and PP351.

ASCI 475 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisite: ASCI375.

ASCI 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisite: ASCI376 or Senior standing

ASCI 478 - Internship with Industry (3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time but with three credit hours of academic credit. Prerequisite: Senior standing.

ASCI 480 - International Aviation (3)

This course provides in-depth examination of the history and development of the international regulatory environment governing the aviation industry. Participants will gain a knowledge of the international governing bodies and resulting regulations that impact aviation companies in the global marketplace.

ASCI 490 - Senior Seminar (2-3)

This seminar is the capstone experience for the Aviation Science Professional Pilot degree program. The student will study various aspects of the aviation industry that relates to each one's particular interest area.

ASCI 501 - Analysis of Aviation Safety Data (3)

Provides the necessary strategies and tools for aviation managers to properly collect, examine, and interpret aviation operational and safety data. Special emphasis is placed on the application of statistical methods, risk management and quality assurance concepts.

ASCI 502 - Aviation Safety Data Analysis (3)

Practical application and research of aviation and aerospace safety databases.

ASCI 503 - Aviation Security Management (3)

The challenges of managing an aviation security program are addressed from the following perspectives: means, motives, and opportunities. Discussion topics include technical as well as behavioral science based approaches to detecting threats; the role of global political climate in influencing terrorism; and federal and international regulations as counter-terrorism measures.

ASCI 504 - Human Factors in Avtn Safety (3)

This course will include elements of human factors theory applied to various aviation environments. Human factors theory will be reviewed and then applied to flight operations and maintenance issues. Emphasis will be placed on the management of safety programs toward a reduction of accidents caused by human error.

ASCI 508 - Management of Avtn Safety Prog (3)

Synergistic application of five perspectives is discussed: organizational psychology, behavioral psychology, engineering, accounting, and underwriting. Discussion topics include the following: organizational risk management, hazard identification and management, failure modes and effects analysis, fault-tree analysis, values-based safety program development, and cost analysis of safety programs.

ASCI 510 - Avtn Safety Career & Per. Dev. (3)

Aviation safety career and personal development in private and public aviation organizations.

ASCI 512 - Aviation Safety Quality Issues (3)

A study of the practice and research involved in implementing aviation and aerospace quality issues.

ASCI 513 - Aviation Safety Ethics (3)

A study of ethical behavior and decision making involved in implementing an aviation safety philosophy.

ASCI 515 - Avtn Incident/ Accident Analys (3)

This course emphasizes the fundamental understanding of aircraft performance and technology, regulations governing aircraft operation, aircraft maintenance, and incident/accident investigation; incident/accident investigation techniques, and comprehensive solutions to minimize future occurrences of similar incidents or accidents are also addressed.

ASCI 521 - Aviation Organization Theory and Management

Explores the various models of organizational structure and culture including the implications for organizational leadership, project management and employee motivation. Topics include contingency theory, systems theory, group dynamics, and change management.

ASCI 522 - Aviation Safety Programs (3)

Explores the development and administration of safety management systems (SMS) and emergency response plans. Examination of accident related case studies are used to discuss the impact of organizational culture on safety management.

ASCI 523 - Prof Ethics and Standards (3)

Exposes the participant to various moral and ethical dilemmas inherent to business and more specifically the aviation industry. Participants will identify ethical problems, understand and evaluate differing ethical perspectives, and formulate viable policy recommendations.

ASCI 546 - Qualitative Data Analysis (3)

Qualitative Data Analysis will introduce the student to various methods of qualitative analysis. Students will be expected to identify various types of qualitative data, develop research approaches, identify the most appropriate data collection method, and interpret and report analysis findings.

ASCI 547 - Quantitative Data Analysis (3)

Quantitative Analysis is an introduction to the observation and application of quantitative data analysis. Students who complete this course will be capable of conducting statistical test supporting theoretical application in the current literature. Additionally, students will be capable of interpreting the results of statistical analysis found in various publications.

ASCI 601 - Federal & International Regs (3)

This course provides in-depth examination of the history and development of domestic and international regulations governing the aviation industry. Participants will discuss the impact of domestic and international governing bodies and the resulting regulations that impact aviation companies in the global marketplace.

ASCI 602 - Flight Op's Business & Admin (3)

A survey of aviation business strategies including, the marketing of aviation products, principles of product design and management, pricing and revenue management, advertising and promotion, and product distribution channels.

ASCI 603 - Aviation and Public Policy (3)

This course explores the domestic and international regulatory, economic, legal and political environment that aviation companies operate within. The specific influences and relationships between the various market participants and regulating bodies are thoroughly explored.

ASCI 605 - Lgl & Ethical Issues Aviation (3)

The exploration and analysis of selected legal and ethical issues related to aviation education regulation, the college student, and the academic institution.

ASCI 606 - Aviation Curriculum Dev. (3)

Surveys practices and problems in the development, submission, approval and assessment of collegiate aviation curriculum in light of evolving U.S. and international pilot training considerations and requirements.

ASCI 607 - Aviation Training Methods (3)

Provides a critical analysis of practices, expectations, strategies, and responsibilities of the aviation instructor, including an in-depth study of learner-centric pedagogy and its application to collegiate flight education.

Avionics (AVN)

AVN 100 - Introduction to Avionics (1)

An introductory course to familiarize the freshman student with the Avionics field. Fall semester.

AVN 103 - Digital Tech. Familiarization (3)

An introduction to modern concepts of technology in the cockpit. Digital fundamentals, microprocessors, data bases, modern glass cockpit, B-767 systems familiarization. For non-avionics majors. Fall and spring semesters.

AVN 105 - Fundamental Circuits Analysis I (3)

Basic concepts of DC circuits; units and notation; current and voltage; resistance; Ohm's law, power and energy; series and parallel circuits; Kirchoff's laws; series-parallel networks; methods of analysis; network theorems; capacitors; magnetic circuits; inductors; Faraday's Law; DC instruments. Fall semester.

AVN 106 - E. C. Analysis I Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-105. Fall semester.

AVN 131 - Electricity & Electronics (5)

DC and AC circuits; solid state electronic devices and circuits; power supplies; oscillators; digital fundamentals; measuring instruments; audio and RF amplifiers; basic transceivers. Summer semester.

AVN 132 - Electricity & Electronics Lab (3)

Laboratory experiments to emphasize material covered in lectures of AVN-131. Summer semester.

AVN 133 - Electronic Comm. and Avionics (5)

AM and FM; antennas; two-way communications; microwaves; radar; aircraft batteries; aircraft ignition and electrical power supply; avionics fundamentals; General Radiotelephone Operator License review. Summer semester.

AVN 134 - Electronic Com. & Avionics Lab (3)

Laboratory experiments to emphasize material covered in lectures of AVN-133. Summer semester.

AVN 155 - Circuit Layout, Fab. & Install (1)

Layout and fabrication of printed wiring boards, and chassis assemblies, wiring harness and cables, multi-pin and coaxial connectors and associated hardware. Spring semester.

AVN 201 - Electrical Circuits (3)

D.C. networks: Basic elements and laws; circuit analysis and theorems; circuits with inductors and capacitors. A.C. networks: waveform analysis; phasors; Series-parallel A.C. networks; network theorems filters; transformers. Fall semester.

AVN 202 - Electrical Circuits Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-201. Fall semester.

AVN 205 - Fundamental Cir. Analysis II (3)

Sinusoidal alternating current; phasors; series and parallel circuits; series-parallel AC networks; methods of analysis; AC network theorems; AC power; resonance; polyphase systems; AC meters; non-sinusoidal circuits; transformers; two-port parameters; and computer analysis. Spring semester.

AVN 206 - Fund. Cir. Analysis II Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-205. Spring semester.

AVN 293 - Electronic Devices I (3)

The course covers diode theory and circuits, bipolar transistors, field-effect transistors (FET), JFETs, MOSFETs, circuits and applications. Fall semester.

AVN 294 - Electronic Devices I Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-293. Fall semester.

AVN 295 - Electronic Devices II (3)

The course covers bipolar transistors, field-effect transistors (FET), JFETs and MOSFETs amplifiers, operational amplifiers, circuit parameters, and wave shaping circuits. Spring semester.

AVN 296 - Electronic Devices II Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-295. Spring semester.

AVN 297 - Internship With Industry (0-3)

Opportunities to gain experience as offered by interested companies. On demand

AVN 299 - Co-op Education with Industry (0)

Alternating periods of work and study with participating companies. On demand.

AVN 301 - Electronics (3)

Diodes; bipolar junction transistors; field-effect transistors; silicon controlled rectifiers; electronic circuits; multistage and large-signal amplifiers; operational amplifiers; digital logic, digital circuits. Spring semester.

AVN 302 - Electronics Lab (1)

Laboratory experiments to emphasize materials covered in lectures of AVN-301. Spring semesters.

AVN 305 - Digital Circuits/State Machine (3)

Number systems, logic gates, Boolean algebra, multivibrators, counters and registers, multiplexers and memories, and state machine design. Fall semester.

AVN 306 - Digital Cir/State Mach. Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-P305. Fall semester.

AVN 307 - Microprocessors/controllers (3)

Number systems, microprocessor basics, computer arithmetic, programming, microprocessor architecture, timing, microcomputer interfacing and applications. Spring semester.

AVN 308 - Microprocessors/Controllers Lab (1)

Laboratory experiments to emphasize material covered in lectures of AVN-307. Spring semester.

AVN 351 - Electronic Communications (3)

Principles of electronic communications, noise considerations, frequency synthesis modulation and demodulation. Fall semester.

AVN 352 - Electronic Comm. Lab (1)

Laboratory experiments to emphasize material covered in AVN-351. Fall semester.

AVN 353 - Adv Dig Comm Systems (3)

Principles and applications of digital transmission, data communications, microwave systems and satellite communications. The goals are to understand the principles of digital, data, microwave and satellite communication systems and to apply the principles to current applications in Avionics and Engineering Technology. Prerequisite: Communication Electronics EET351.

AVN 354 - Adv Dig Comm Systems Lab (1)

Laboratory experiments emphasizing the material covered in AVN353.

Prerequisites: Communications Electronics Lab EET352 and concurrent registration with AVN353

AVN 355 - Elec Navig & Surveillance Sys (3)

Principles, applications, and maintenance concepts of electronic navigation and surveillance systems. Pre-requisites: AVN353 Advanced Digital Communications.

AVN 356 - Elec Nav & Surveillance Sys Lab (1)

Laboratory experiments emphasizing the material covered in AVN355.

Prerequisites: Advanced Communications Systems Laboratory AVN354, and concurrent registration with AVN355.

AVN 401 - Avionics Systems Analysis I (3)

Modern methods of electronic circuit and aviation systems analysis; advanced avionics equipment, automatic control systems; integration of avionics equipment into the total aviation system; study of methods in systems analysis. Fall semester.

AVN 402 - Avionics Sys. Analysis I Lab (1)

Laboratory project to emphasize material covered in AVN-401. Fall semester.

AVN 403 - Avionics Systems Analysis II (3)

A continuation of AVN-401 with emphasis on avionics systems. Spring semester.

AVN 404 - Avionics Sys. Analysis II Lab (1)

A continuation of the laboratory project begun in AVN-402. Spring semester.

AVN 421 - Global Positioning System (3)

This course defines the major system elements of GPS and covers trajectory and atmospheric characteristics which affect performance and coverage. Signal characteristics and coding are related to the performance objectives of the GPS. Interfacing characteristics are presented for some of the major GPS receivers. Laboratory exercises cover interfacing receivers with computers as well as typical navigation displays and lead up to a laboratory project to illustrate a GPS application.

Prerequisites: MATH244 Engineering Calculus III, PH-P161 Engineering Physics I, and electrical circuit analysis.

AVN 451 - Advanced Avionics System (3)

Advanced topics in avionics systems, including automatic test equipment. On demand.

AVN 490 - Senior Project I (1)

Principles of avionics engineering technology in practice. A study of unified, methodical approach to engineering technology project development. Project planning, scheduling, prototyping, production and presentation of a project. Pre-requisite: Senior Status and ET403

AVN 498 - Special Topics in AET (0-6)

Independent or lecture based study in an appropriate avionics engineering technology subject area under the direction of an ET faculty member.

Pre-Requisites: Senior Status

Biomedical Engineering (BME)**BME 100 - BME Orientation (1)**

Introduction to BME Faculty and Students. Discussion of BME-related topics that involve math, chemistry, biology, physics, and engineering.

BME 101 - BME Introduction (1)

Continuation of BME100. Discussion of BME-related topics that involve math, chemistry, biology, physics, and engineering.

BME 200 - BME Computing (0-3)

Introduction to computer modeling and analysis in biomedical engineering. Introduction to the MATLAB programming environment, develop algorithms and computer programs that address biomedical engineering problems. Prerequisites: MATH 143 with a grade of C or higher.

BME 275 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing. Offered every semester.

BME 305 - Measurements (3)

A study of various measurement techniques in engineering and statistical analysis of experimental data. Instrumentation concepts including linearity, frequency response, energy transduction, sensor fundamentals, signal-to-noise ratio, data acquisition. Measurement of pressure, flow, motion, force, temperature, electric and magnetic fields. Measurement system design from sensor to recording or display. Prerequisites: BME310

BME 310 - Signals (3)

Signal representations, Fourier methods, Laplace transforms, linear systems, transfer functions, system response in time and frequency, feedback, analog and digital processing of signals. Relating signal properties to physical parameters. Prerequisites: MATH355, ECE 200/201 with a grade of C or higher.

BME 320 - Mechanics (3)

Topics include analyses of systems at static equilibrium; analyses of the deformation and stress of elastic and plastic materials under various loading modes; and an introduction to viscoelasticity. Prerequisites: PHYS 161 with a grade of C or higher.

BME 330 - Transport Fundamentals (0-3)

Introductory topics in fluid, heat, and mass transfer including both integral and differential analysis. Develop and utilize Bernoulli's equation, Navier-Stokes relationships, Fourier heat transfer relationships, and Fick's laws. Analysis of problem statements and determination of assumptions for each set of equations is covered. Prerequisites: BME200, BME320, MATH355, PHYS341. With grade of C or higher.

BME 340 - Materials Science (3)

Materials Science is a multidisciplinary field requiring knowledge of chemistry, physics, and mechanics. In this first course, we examine effect of chemistry on molecular structure and physical and mechanical properties of materials, and we examine methods of controlling those properties. Examples from the various engineering disciplines are used. Prerequisites: BME320, CHEM164 with a grade of C or higher.

BME 375 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: BME275 Offered every semester.

BME 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing. Offered every semester.

BME 394 - Junior Lab (1)

Laboratory to provide an experience in engineering design and experimentation at level appropriate to the student's background. Students will work on developing fundamental lab and analysis skills across a broad array of core BME topics, including mechanics, materials, transport, signals, and instrumentation.

BME 395 - Design of BME LAB Experiments (0-2)

Laboratory to provide an experience in engineering research and design at a level appropriate to the student's background. Students will work on developing their laboratory skills and ability to successfully design and implement a research plan. Prerequisites: Consent of instructor.

BME 396 - AFM Training (0-2)

Laboratory to provide experience in engineering research design and analysis at a level appropriate to the student's advanced background. Students will assist others in designing laboratory experiments to further develop laboratory skills. Key components are the statistical analysis of the experiment and presentation of the project. Prerequisites: BME 395 And/Or consent of instructor.

BME 405 - Biomedical Instrumentation (3)

Building on the foundations of the Measurements course, this course covers both clinical and medical research instrumentation. Specific examples include the design and application of electrodes, biopotential amplifiers, biosensors, therapeutic devices, clinical measurements, implantable devices, non-invasive methods, and medical imaging machines. Electrical safety, noise analysis, and the FDA approval process for medical devices are also discussed. Prerequisites: BME200 & ECE 200 & 201 & BIOL 260 & BME310 or ECE 350, all with a grade of C or higher.

BME 410 - Biomedical Signals (3)

Physiological origins of measured signals. Digital processing of 1-dimensional (1D) and 2-dimensional (2D) biosignals. Digital processing of biomimages. Computational tools in 1D & 2D. Relating signal properties to physiological parameters. Prerequisites: BIOL260 & BME 200 & either BME 310 or ECE 350, all with a grade of C or higher.

BME 415 - Sensory Systems (3)

Topics include: relevant background in neuroscience; structure and function of central nervous system, perception, and movement. Integration of sensory and motor function. Specific sensor modalities including touch, pain, vision, hearing, smell, and taste. BME Senior Standing or consent of instructor. Prerequisites: BME305, BIOL260 with a grade of C or higher, consent of instructor.

BME 420 - Biomechanics (3)

Advanced topics in skeletal tissue mechanics, including: skeletal biology, fracture healing, and bone remodeling; the mechanical properties, fracture resistance, and adaptability of bone to external forces; and the mechanics of synovial joints, cartilage, tendons, and ligaments. Prerequisites: BME 320 & BIOL 260. Prerequisite/Corequisite: BME 340.

BME 430 - Biotransport (3)

With the foundations of fluid, heat and mass transfer established in Transport Fundamentals, this course focuses on specific biological examples of transport including oxygen transport, blood flow and solute transport in biological systems. Additionally, discussion will include integration of fluid, heat and mass transfer in specific biomedical examples such as artificial organ development and extracorporeal devices. Prerequisites: BME200, BME330, BIOL360, MATH403.

BME 431 - Advanced topics in Biotransport (3)

This course will explore advanced topics in transport phenomena, including utilizing dimensional analysis & unsteady state equations and studying multiple forms of transport simultaneously. Mathematical techniques to reduce and solve partial differential equations will be investigated to model biomedical systems more accurately. Prerequisites: BME430, BME440, BME310, & consent of instructor.

BME 440 - Biomaterials (3)

Biomaterials is a multidisciplinary field requiring knowledge of biology, chemistry, materials science, mechanics, transport and medicine. In this course we will examine aspects of chemistry, biology, material science and mechanics as they apply to the interaction of a material with a biological system. Our examination of the field will lead to a general understanding of biocompatibility and how to design experiments that assess biocompatibility. Prerequisites: BME340, BIOL260, PHYS341 Corequisite: MATH403 with a grade of C or higher.

BME 441 - Tissue Engineering (3)

This course will explore quantitative topics in tissue engineering, including utilizing engineering topics such as materials science, kinetics and transport phenomena to describe biological processes in tissue engineering.

BME 442 - Tis/Mat Interfaces & Relat Phe (3)

Biomaterials is a multidisciplinary field requiring knowledge of biology, chemistry, materials science, mechanics, transport and medicine. We will examine aspects of material and device function, integration with tissues, improving biocompatibility, and modeling of these or other events. Prerequisites: BME430, BME440, consent of instructor

BME 450 - Numerical Methods in BME (3)

This course will explore numerical methods to characterize a variety of the major topics in Biomedical Engineering (transport phenomena, measurements, materials, mechanics and signals). Topics range from simple modeling of biosystems to steady and dynamic behavior of these systems. Various modeling tools and applications will also be explored. The course will utilize Matlab as its primary programming tool. Prerequisite: BME200 with a grade of C or higher.

BME 460 - Quantitative Physiology (3)

This course will explore mathematical application in human physiology that will aid in engineering medical devices. The course is intended for advanced undergraduate engineering students with a background in advanced mathematics, biomaterials, biomechanics, and transport phenomena. Topics to be covered include developmental biology, human anatomy (cardiac, renal, pulmonary and gastrointestinal), physiological function, and functional changes due to disease.

BME 475 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisite: BME375 Offered every semester.

BME 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisite: BME376 or Senior standing. Offered every semester.

BME 493 - Special Topics in Biomedical Engineering (0-3)

Experimental or one-time courses of special interest. Course must be approved by BME faculty prior to offering. Prerequisite: Approval of instructor.

BME 495 - Senior Project I (0-3)

Capstone project; process of design; proposal development; project planning and scheduling; prototyping; quality; testing; regulatory issues; biomedical ethics; design review; teamwork; oral and written reports.

Prerequisites: Completion of BME core requirements (BME 100, 101, 200, 310, 330, 340, 405 with a grade of C or higher), or consent of project advisor and consent of BME Chair.

BME 496 - Senior Project II (0-3)

Continuation of first Senior Project I. Prerequisites: BME495 with a grade of C or higher, consent of research advisor, or consent of BME Chair. (This class must normally be taken in the same academic year as BME495.)

BME 497 - Independent Research (0-2)

Individual or small group investigation of a topic. Pass/Fail grading only.

BME 498 - Independent Research (0-3)

Individual or small group investigation of a topic. Prerequisites: Consent of instructor.

BME 500 - Seminars (0)

A biweekly departmental lecture-discussion presented by students, faculty, and invited guests. Registration required in the first semester. Seminar attendance expected in all semesters. Offered every semester.

BME 501 - Current Topics I (1)

Student presentations and discussion of papers selected from current literature. Offered every fall semester.

BME 502 - Current Topics II (1)

Continuation of BME 501. Offered every spring semester.

BME 503 - Current Topics III (2)

Continuation of BME 502. Offered every fall semester.

BME 504 - Current Topics IV (2)

Continuation of BME 503. Offered every spring semester.

BME 505 - Data Handling (3)

This required course addresses issues of data acquisition, filtering, model fitting, analysis, and visualization. The data will include one-dimensional signals, images, and multidimensional data. The course will serve as a general overview of data handling, and some students may follow with more specialized courses that address the specific topics. Offered every spring semester.

BME 506 - Ethics & Compromise (3)

Students and faculty will discuss the positive and negative impact of engineering and science on society. Examples and case studies will illustrate the scientific, economic, and social effects of new devices and new knowledge. The discussion will focus on the role of engineers and scientists, the ethical considerations, and the acceptable compromises. Offered every year.

BME 515 - Sensory Systems (3)

Human mechanisms for sensing the environment will be addressed with a focus on the basic neurosciences and supplemented with material from various engineering sources that examine and describe specific sensory mechanisms. More advanced topics will include clinical tests of human sensing capability and efforts to compensate for sensory deficits. Offered every fall semester.

BME 520 - Continuum Biomechanics (3)

This course will expand on the two-dimensional mechanics typically offered in undergraduate biomechanics courses. The course will introduce and expand on the use of vectors and tensors to describe and analyze stresses and strains in biological tissues as well as complex man-made materials. Offered every spring semester.

BME 530 - Drug Delivery (3)

Appropriate delivery of a drug requires knowledge of both properties of the drug itself and properties of the body. This course covers the mathematics behind the distribution of a drug in a biological system including the study of drug delivery systems. Offered every other fall semester.

BME 540 - Tissue-Material Interfaces (3)

This course will expand on the concepts introduced in the typical undergraduate biomaterials sequence. In particular, the response of tissues to implanted materials will be studied extensively. Offered every spring semester.

BME 541 - Tissue Engineering (3)

Beginning with the history of tissue engineering, this course will describe the challenges in developing new functional human tissue including the ethical and legal implications of "designing" tissue, relevant background, and current directions in research and development. Offered every other fall semester.

BME 545 - AFM Techniques and Training (0-2)

Laboratory to provide an experience and training in atomic force microscopy (AFM) to allow graduate students the ability to utilize the equipment in their research. Students will be exposed to AFM background, along with directed training and independent use of the microscope. Course requires instructor's approval.

BME 550 - Experimental Technique & Design (0-2)

Laboratory to provide an experience in engineering research and design at a level appropriate to the student's background. Students will work on developing their laboratory skills and ability to successfully design and implement a research plan. Course open to BME graduate students with Instructor's permission.

BME 580 - Research Rotation (0-3)

Students with or without previous research experience are provided the opportunity to carry out a research project with the guidance of a faculty member. A wide variety of topic in the fields of tissue engineering, biomaterials, biomechanics, biosignals, and biomeasurements are available. Course open to BME Graduate Students.

BME 593 - Special Topics (0-3)

A one-time or trial course.

BME 596 - Project Guidance (0-3)

For the M.S. project option.

BME 597 - Research Topics (1-3)

For research other than the thesis or project.

BME 598 - Graduate Reading Course (1-3)

An independent study with a faculty member.

BME 693 - Special Topics (1-6)

A one-time or trial course.

BME 697 - Research Topics (1-3)

For research other than dissertation research.

BME 698 - Graduate Reading Course (1-3)

An independent study with a faculty member.

Civil Engineering (CVNG)**CVNG 101 - Freshman Engineering I (1)**

An introduction to Civil Engineering profession that consists of a series of project-based learning modules designed to explore various specialty areas within Civil Engineering. Basic drafting skills are also covered. Offered every fall semester.

CVNG 102 - Freshman Engineering II (1)

Introduction to engineering drawing and computer aided drafting techniques. Prerequisite: CVNG 101. Offered every spring semester.

CVNG 150 - Civil Engineering Computing (3)

Introduction to computer programming tools applicable to Civil Engineering, including MatLAB/MathCAD, advanced Excel, and 3-D CAD applications. Prerequisites: MATH 142; Co-requisites: CVNG 102. Offered every spring semester.

CVNG 203 - Sustainability and Environmental Engineering

Course provides an overview of sustainability and environmental engineering principles. Topics include: population, environmental impact, and resource depletion; environmental laws; biodiversity and ecosystem functioning; climate change, air pollution, and ozone depletion; solid-waste management, hazardous and nuclear waste management; water resource and pollution management; and water and wastewater treatment and systems. Prerequisite: CHEM 163 or CHEM 151. Offered every fall semester.

CVNG 204 - Sustainability and Environmental Engineering

Course provides an overview of environmental testing methods, including dissolved oxygen, BOD, pH and alkalinity, conductivity, plate counts, and turbidity. Prerequisite: CHEM 165. Co-requisite: CVNG 203. Offered every fall semester.

CVNG 301 - Structural Analysis (3)

Analysis of statically determinate structures including influence lines. Deformations using different techniques. Analysis of statically indeterminate structures using the force method and displacement method. Prerequisite: ESCI 310. Offered every fall semester.

CVNG 302 - Structural Analysis Lab (1)

Introduction to computational tools used for the analysis of structures. Co-requisite: CVNG 301. Offered every fall semester.

CVNG 303 - Civil Engineering Materials (2)

Introduction to the characteristic properties and the fundamental behavior of the materials used by civil engineers with emphasis on concrete, steel, masonry, wood, and asphalt. Laboratory experiments and testing is used to give knowledgeable perception of the behavior when materials are subjected to various loads. Prerequisite: ESCI 310/311. Offered every fall semester.

CVNG 305 - Introduction to Surveying (1)

Introduction to surveying equipment, including use of a level, theodolite, and total station; and basic survey data interpretation and analysis. Prerequisite: EAS 217. Offered every fall semester.

CVNG 307 - Engineering Project Management (2)

An introduction to basic concepts of management, business, public policy, and leadership. Topics include engineering economics and cost estimating methods, including labor, material, equipment and indirect costs; analytical techniques for project planning and scheduling; legal issues in engineering projects, including zoning regulations, proposals, and contracts; and understanding the importance of professional licensure. Offered every fall semester.

CVNG 309 - Geotechnical Engineering (3)

This course is an introduction to soil properties and analysis techniques for geotechnical applications. Topics include soil formations, mass-volume relationships, soil classification, effective stress, compaction, seepage, soil deformation, state of stress, consolidation, strength, and failure. Prerequisites: CVNG 303. Offered every spring semester

CVNG 310 - Geotechnical Engineering Lab (1)

Overview and use of measurements methods that can evaluate the properties of soils. Experiments include grain size distribution and soil classification, Atterberg Limits, compaction, permeability, consolidation, shear strength, and unconfined compressive strength. Co-requisite CVNG 309. Offered every spring semester.

CVNG 311 - Transportation Engineering (3)

Introduction to transportation analysis and design. Course includes topics on road user and vehicle characteristics; geometric design of roadways, including horizontal and vertical alignment and cross-sectional elements; and signalized intersections. Also included is an Introduction to traffic engineering and transportation planning. Prerequisite: MATH 403. Offered every spring semester.

CVNG 312 - Transportation Engineering Lab (1)

Overview and use of measurement methods that can evaluate traffic flow and pavement condition and an introduction to computational methods used in transportation analysis and design. Co-requisite: CVNG 311. Offered every spring semester.

CVNG 313 - Hydraulic Engineering (3)

Hydraulic and hydrological analysis applicable to civil engineering design. Topics include pressure pipe system analysis and design, open channel flow analysis and design, groundwater flow fundamentals and well design, hydrologic processes, storm water system analysis and design, and sanitary sewer analysis and design. Prerequisite: ESCI 322. Offered every spring semester.

CVNG 314 - Hydraulic Engineering Lab (1)

Overview and use of measurement methods that can evaluate hydraulic and hydrologic conditions and an introduction to computational methods used hydraulic and hydrologic analysis and design. Co-requisite: CVNG 313. Offered every spring semester.

CVNG 315 - Intro to Structural Design (3)

Introduction to structural design codes and provisions. Loads and loads combinations. Theory and design of reinforced concrete structures: beams, columns, slabs, walls and buildings. Theory and design of simple steel structural members and connection. Prerequisite: CVNG 301. Offered every spring semester.

CVNG 401 - Senior Engineering (1)

Review of topics related to FE exam. Offered every spring semester.

CVNG 403 - Foundation Engineering (3)

Application of the fundamental concepts of soil behavior to evaluate, select, and design shallow and deep foundation systems. Topics include the design and analysis of footing, mat, pier, and pile foundations. Professional development elective. Prerequisite: CVNG 309.

CVNG 405 - Advanced Structural Analysis (3)

Direct stiffness method for analysis of two-dimensional trusses and frames, equivalent nodal forces, thermal and settlement effect, principal of virtual work, space trusses, grid structures, static condensation, Lagrange multipliers, tapered elements. Pre-requisite: CVNG 301 or equivalent.

CVNG 407 - Structural Dynamics (3)

Single degree of freedom systems, lumped-mass multi-degree systems, and multi degree of freedom systems. Numerical evaluation of system responses due to blasts, wind, and earthquake loading. Applications. Prerequisite: CVNG 301 or equivalent.

CVNG 409 - Advanced Reinforced Concrete (3)

Advanced topics in flexural design; torsion in beams; behavior and design of slender columns; biaxial bending of columns; design of two way slabs; inelastic analysis of flexural members; use of strut and tie analysis; yield line analysis; design of mat foundations.

CVNG 411 - Advanced Steel Design (3)

Interpretation of current codes as related to the physical behavior of steel structures. Design of structural steel members: tension, compression, flexural and beam-columns. Design of connections. Prerequisite: CVNG 315

CVNG 413 - Bridge Engineering (3)

Structural systems for bridges, loading, analysis by influence lines, slab and girder bridges, composite design, pre-stressed concrete, rating of existing bridges, specifications and economic factors. Prerequisite: CVNG 315.

CVNG 419 - Sustainable Land Development Engineering (3)

Introduction to land development engineering and urban planning; site design and sediment control; transportation planning and roadway design; water resource and waste disposal issues; ecological impact analysis; application sustainable development principles to land development projects at local and regional scales. Prerequisite: CVNG 203.

CVNG 421 - Sustainable Water Resources Management (3)

Water Management and alternative analysis considering water resource, legal, political, and ecological issues; determination and forecasting of water demand; supply and estimating drought impacts resulting from cycle and permanent shifts in the climate. Prerequisites: CVNG 203 and 313.

CVNG 445 - Traffic Engineering (3)

Design, analysis and use of traffic control devices. Traffic administration, traffic flow theory, and highway capacity. An introduction to computer and traffic engineering. Acquisition, evaluation, statistical analysis and reporting of traffic engineering data used to design, evaluate and operate transportation systems.

CVNG 450 - Capstone Design I (3)

Interdisciplinary teams working on an open-ended project. Topics include application of civil engineering principles to design problems with an emphasis on large-scale problem solving, engineering professional practice and ethics, and sustainability principles. Written, graphical and oral communications will be an integral part of the course. Offered every fall semester. Prerequisites: CVNG 301, 303, 305, 307, 309, 311, 313, and 315

CVNG 451 - Capstone Design II (3)

Continuation of Capstone Design I. Prerequisite: CVNG 450. Offered every spring semester.

CVNG 493 - Special Topics (0-6)

A one-time course on a particular topic or a trial course that is expected to become a standard course with its own unique course number.

CVNG 505 - Advanced Structural Analysis (3)

Direct stiffness method for analysis of two-dimensional trusses and frames, equivalent nodal forces, thermal and settlement effect, principal of virtual work, space trusses, grid structures, static condensation, Lagrange multipliers, tapered elements. Pre-requisite: CVNG 301 or equivalent.

CVNG 507 - Structural Dynamics (3)

Single degree of freedom systems, lumped-mass multi-degree systems, and multi degree of freedom systems. Numerical evaluation of system responses due to blasts, wind, and earthquake loading. Applications. Prerequisite: CVNG 301 or equivalent.

CVNG 509 - Advanced Reinforced Concrete (3)

Advanced topics in flexural design; torsion in beams; behavior and design of slender columns; biaxial bending of columns; design of two way slabs; inelastic analysis of flexural members; use of strut and tie analysis; yield line analysis; design of mat foundations.

CVNG 511 - Advanced Steel Design (3)

Interpretation of current codes as related to the physical behavior of steel structures. Design of structural steel members: tension, compression, flexural and beam-columns. Design of connections.

CVNG 513 - Bridge Engineering (3)

Structural systems for bridges, loading, analysis by influence lines, slab and girder bridges, composite design, pre-stressed concrete, rating of existing bridges, specifications and economic factors. Prerequisite: CVNG 315.

CVNG 515 - Prestressed Concrete (3)

Theory and analysis of prestressed concrete members by various methods of prestressing; design of simple and continuous beams and slabs; prestress losses; composite beams. Extensive study of materials used in prestressed concrete. Precast concrete systems. Prerequisite: CVNG 315

CVNG 517 - Seismic Design (3)

Theory, analysis, and design of building structures under earthquake loading. Application of current codes and standards related to steel, concrete, masonry, and wood structures. Pre-req: CVNG 315.

CVNG 519 - Sustainable Land Development Engineering (3)

Introduction to land development engineering and urban planning; site design and sediment control; transportation planning and roadway design; water resource and waste disposal issues; ecological impact analysis; application sustainable development principles to land development projects at local and regional scales. Prerequisite: CVNG 203.

CVNG 521 - Sustainable Water Resources Management (3)

Water Management and alternative analysis considering water resource, legal, political, and ecological issues; determination and forecasting of water demand; supply and estimating drought impacts resulting from cycle and permanent shifts in the climate. Prerequisites: CVNG 203 and 313.

CVNG 545 - Traffic Engineering (3)

Design, analysis and use of traffic control devices. Traffic administration, traffic flow theory, and highway capacity. An introduction to computer and traffic engineering. Acquisition, evaluation, statistical analysis and reporting of traffic engineering data used to design, evaluate and operate transportation systems.

CVNG 593 - Special Topics (3)

A one-time course on a particular topic or a trial course that is expected to become a standard course with its own unique course number.

CVNG 599 - Thesis Research (0-6)

Research that leads to a Master's Thesis and final defense of the Thesis

CVNG 699 - Doctoral Dissertation Research (0-6)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Electrical & Computer Engnr (ECE)**ECE 101 - Introduction to Electrical and Computer Engine**

Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Fall semester.

ECE 102 - Introduction to ECE II (0-1)

Continuation of the Intro to ECE I - Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Spring semester.

ECE 200 - Electrical and Computer Engineering (3)

Basic DC circuit analysis techniques including current, voltage and power concepts, mesh analysis, node analysis and circuit reduction techniques. Basic AC circuit analysis techniques including impedance concepts, phasor notation, power principles, principles of circuit frequency response and filter concepts. Transient analysis of simple inductive and capacitive networks. Principles of operational amplifier circuit analysis including basic active filter design. Introduction to transformers, power supplies and motors.

ECE 201 - Electrical and Computer Engineering Lab (1)

Laboratory experiments to emphasize materials covered in ECE 201. Every semester.

ECE 202 - Engineering Circuits I (1-3)

Physical foundations of electrical circuits. Ohms's Law, Kirchhoff's Laws, node and mesh analysis, Thevenin's/Norton's equivalents, and the principle of superposition. Transient analysis of simple RL, RC and RLC circuits. Operational amplifier circuits. Fall semester.

ECE 203 - Engineering Circuits II (3)

Sinusoidal steady-state analysis, sinusoidal steady-state power calculation, balanced 3-phase systems. Mutual inductance and transformers, series and parallel resonance. Applications of Laplace and Fourier transforms to circuit analysis. Spring semester.

ECE 204 - Electrical Science Laboratory (1)

Laboratory experiments to emphasize materials covered in ECE 202 and 203. Spring semester.

ECE 205 - Digital Design (3)

Number systems. Boolean algebra. Logical function. Combinational circuits. Flip-flops, registers and counters. Arithmetic, memories. Introduction to digital computers and microprocessors. Fall semester.

ECE 206 - Digital Design Lab (1)

Laboratory experiments to emphasize materials covered in ECE 205. Fall semester.

ECE 275 - Co-Op with Industry (0-3)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester.

ECE 275 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester.

ECE 297 - Co-op in ECE (0)

An optional supervised work experience with an agency, firm or organization which employs engineers. Every semester.

ECE 298 - Special Topics (1-3)

Independent study on any electrical engineering topic under the direction of a faculty member. O demand. Prerequisite: Sophomore ECE Standing.

ECE 305 - Advanced Digital Design (3)

Digital Design with Programmable Logic Devices (PLDs) and Field Programmable Gate Arrays (FPGAs); HDL design entry methods; Event driven simulation; Verification using simulation testbenches; Timing verification using Back Annotated simulations.

ECE 310 - Electric Energy Conversion (3)

Magnetic theory and circuits. Transformers. Electromechanical energy conversion. Induction motors. Direct current machines. Electromechanical components of control systems. Direct energy conversion methods. Fall semester Prerequisite: ECE-203 and MATH-355 or equivalent.

ECE 315 - Computer Systems Design (3)

Organization and design considerations of computer expansion peripherals. Analysis of expansion channel throughput and the influences that impact throughput including resource sharing and overhead. Special emphasis is placed on design concerns automating the movement of data into and out a modern PC.

ECE 316 - Computer Systems Design Lab (1)

Laboratory investigation of microcomputing expansion covering the material in ECE 315. Practical aspects of peripheral design and implementation. Design, construction, programming, simulation and testing of expansion hardware and the software required to interact with them. Use of hardware description languages and software development tools.

ECE 317 - Computer Architecture and Organization (3)

Introduction to the organization and architecture of computer systems, including aspects of digital logic, data representation, assembly level organization, memory systems, and processor architectures. Spring semester. Prerequisites: CSCI 150 & MATH 135.

ECE 325 - Microprocessors (3)

Review of number systems. Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Fall semester. Prerequisite: ECE 205

ECE 326 - Microprocessors Laboratory (1)

Concurrent registration with ECE 325. Laboratory experiments to emphasize materials covered in ECE 325. Fall semester

ECE 330 - Semiconductor Devices (3)

An introduction to fundamentals of semiconductors and semiconductor devices. Electrical properties of solids, energy band diagrams, semiconductor theory. Introduction to workings of devices such as p-n junctions, bipolar junction transistors, field effect transistors (JFETs, MOSFETs, MODFETs). Fall semester. Prerequisites: ECE 203 & MATH 355

ECE 331 - Electronic Circuit Design (3)

Review of semiconductor materials and their electronic properties and applications to electronic devices. Introduction to designing circuits using P-N junction (diodes), bipolar junction transistors (BJTs), and field effect transistors (FET). Introduction to design of Class A, B, and AB amplifiers. Analysis and design of single and multi-stage amplifiers using BJTs and FETs transistors. Spring semester Prerequisite: ECE 330.

ECE 332 - Electronics Laboratory (1)

Laboratory experiments to emphasize materials covered in ECE 331. Spring semester. Prerequisite or Corequisite: ECE 331.

ECE 340 - Electromagnetic Fields (3)

The electromagnetic model. Vector analysis. Static electric fields, static magnetic fields. Time-varying fields and Maxwell's equations. Plane electromagnetic waves. Spring semester. Prerequisites: ECE 203 & MATH 355

ECE 350 - Signals and Systems (3)

Introduction to signals and systems. Linear time-invariant systems. Fourier analysis of continuous-time signals and systems. Fourier analysis of discrete-time signals and systems. The Laplace transforms, Z-transforms. Fall Semester. Prerequisites: ECE 203 & MATH 355

ECE 351 - Signals & Systems Lab (1)

Laboratory experiments to emphasize materials covered in ECE 350. Fall semester.

ECE 375 - Co-op with Industry (0-3)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 275.

ECE 375 - Co-op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 275.

ECE 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Junior standing.

ECE 390 - Junior Design (1)

This is a breadth first course in system design and design group dynamics. This course is intended to prepare students for their capstone design sequence by introducing them to the design of multi-system open ended design problems. This introduction will be facilitated through several design problems. Students will work in design groups with similar objectives as are expected in the capstone design class.

ECE 398 - Special Topics (1-3)

Independent study on any electrical engineering topic under the direction of a faculty member. O demand. Prerequisite: Junior ECE Standing.

ECE 408 - Antenna Engineerig (3)

Antenna parameters. Polarization. Basic antenna types. Antenna arrays. Broadband antenna design. Antenna measurements. On demand.

Prerequisite: ECE 302.

ECE 410 - Power Systems Analysis I (3)

The course deals with analysis and design of electrical power transmission lines and its components. Per-Unit and power systems: Transformers and power lines. RLC ζ Computing transmission line parameters, ABCD parameters and transmission line steady-state operation. Power flows and system protection.

ECE 411 - Power Systems Analysis II (3)

The course builds on topics covered in part I. Study of symmetrical faults, methods of symmetrical components and basis for studying unsymmetrical faults, power system protection, power system controls, Transient operation of transmission lines and Transient stability. Prerequisite: ECE 410.

ECE 420 - Automatic Control Systems (3)

Linear time-invariant systems. Transfer functions, block diagrams and signal flow graphs. Stability, time and frequency response, and root locus analysis. Compensator design in time and frequency domain. Spring semester Prerequisite: ECE 350, MATH 355.

ECE 421 - Image Processing (3)

Introduction to digital images and image capture. Image transforms: DFT, FFT, Walsh, Hadamard, DCT, Hough and Hotelling transforms. Image enhancement, image restoration, image encoding and image segmentation. On demand. Prerequisites: ECE 301, MATH 355.

ECE 425 - Hardware/Software Co-Design (3)

This course provides an understanding of hardware and software co-design. Topics include type of processors (software), types of integrated circuits (hardware), types of memory and memory architectures, interfacing and system design for real-time operation. This course will emphasis design space exploration and have a capstone project requiring the integration of real-time system into communicating hardware and software pieces.

ECE 426 - Mobile Robotics (3)

This course is an introduction to robot kinematics, sensor technology and basic machine control. This course will develop the low level tools required to move robots in an environment and an appreciation of the requirements for doing so in an autonomous fashion. This course will have a capstone project requiring the design or development of a robot platform to meet a goal drawn from current topics.

ECE 429 - Microcomp-Based System Design (3)

Study of 16-bit microprocessors architecture, programming, and interfacing. On demand.

ECE 432 - Analog Integrated Circuit Design (3)

The purpose of the course is to build on introductory level analog electronics design. It will cover such topics as active loads and current mirrors and then proceed to output stages of amplifiers utilizing Class A, Class B, and Class AB amplifiers. We will employ both Bipolar and MOS technologies. Multistage amplifiers will be introduced. Design of Operational Amplifiers and Differential amplifiers will be covered. Frequency response of amplifiers and stability of feedback circuit will also be covered.

ECE 435 - Digital IC Design (3)

Introduction to digital electronics. Metal-oxide semiconductor transistors, (MOST's), MOS inverters and gate circuits. Design of MOSFET based combinational and sequential circuits. Issues related to design of modern Digital Integrated Circuits is covered. Fall semester. Prerequisite: ECE 205 and ECE 331.

ECE 440 - Electromagnetic Waves (3)

Introduction, elementary transmission line concepts. Standing-wave AC configurations. Smith chart and matching problems. Plane waves and wave impedance. Mode theory of rectangular waveguides. Microstrips, stripline and other practical transmission lines. Fall semester Prerequisite: ECE 340.

ECE 441 - Radar Systems (3)

Nature of radar, basic elements of the radar systems. Radar waveforms and applications. Tracking radar techniques and applications, radar electronic counter countermeasures (ECCM). On demand. Prerequisite: Instructor's permission or ECE 460.

ECE 442 - Microwave Theory & Techniques (3)

Introduction. Microwave frequencies. Microwave devices and systems. Microwave measurements. Microwave components and tubes. Measurement of microwave fields and their components. On demand.

Prerequisite: ECE 340.

ECE 445 - Computer Networks Design (3)

Introduction to modern computer communication networks. Topics include point to point communication links and transmission of digital information; packet switching; multiplexing and concentrator design; multi-access and broadcasting; Local Area Networks; Wide Area Networks; ATM Networks; and ISDN; architectures and protocols for computer networks; the concept of OSI reference mode; discussion of the OSI seven layers; physical interfaces and protocols; dat link control layer; network layer; design issues and modeling techniques; case studies. Co-requisite or Prerequisite: ECE 315 and ECE 316.

ECE 450 - Filter Design (3)

Transfer functions. Op-amp RC circuits. Design of Butterworth, Chebyshev, elliptic and delay filters. Frequency transformation and switched capacitor filters. On demand. Prerequisite: ECE 331 and MATH 355 or equivalent.

ECE 451 - Digital Signal Processing (3)

Filtering, convolution, and Fourier transform of digital signals. Analysis, design and implementation of FIR and IIR filters. Quantization, round-off and scaling effects. DFT and circular convolution. FFT algorithms and implementation. On demand. Prerequisites: ECE 350, MATH 355.

ECE 460 - Communication Systems (3)

Review of signal analysis and probability theory. Amplitude modulation systems. Frequency and phase modulation systems. Pulse modulation systems. Noise in CW modulation. Spring semester Prerequisite: ECE 350 and MATH 403.

ECE 461 - Spacecraft Communication (3)

Overview of satellite systems. Orbits and launching methods. The space segment and the earth segment. Baseband signals and modulation, the space link. Satellite access: single access, preassigned FDMA, demand-assigned FDMA, spade system, TDMA, CDMA. On demand. Prerequisite: Instructor's permission.

ECE 462 - Cellular Communications (3)

This course covers the basic elements of Cellular communications include propagation phenomenology, multipath, frequency reuse and fading. Included are important aspects of cellular system performance including Grade-of-Service, cellular coverage, and cellular capacity. The course also covers select topics in current cellular system standards including digital modulation and error correction coding schemes.

ECE 470 - Energy Technologies I (3)

The course is to introduce current energy consumption of the United States and the World. It is to review/study various energy sources and energy consumption portfolio of the United States and major industrial nations. It is then to consider the impact of various alternative renewable energy sources and energy conservation methods on overall energy consumption equation. In this course several major renewable energy sources such as wind, solar, geothermal as well as energy conservation methods will be studied.

ECE 475 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 375.

ECE 475 - Co-Op with Industry (0-3)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 375.

ECE 476 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 376 or Senior standing.

ECE 490 - ECE Design I (0-3)

Principles of engineering experimentation and design. Development of engineering design proposal. Fall Semester. Prerequisite: Senior ECE standing

ECE 491 - ECE Design II (0-3)

Development, analysis and completion of detailed design in electrical engineering. Completion of a project under faculty supervision. Project results are presented in a formal report. Spring semester. Prerequisite: ECE 490.

ECE 493 - Special Lecture (0-3)

Selected topics of special interest to electrical engineering majors. On demand. Prerequisite: Senior ECE standing.

ECE 498 - Special Topics in ECE (1-3)

Independent study on any electrical engineering topic under the direction of a faculty member. On demand. Prerequisite: Senior ECE standing.

ECE 500 - Seminar (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters. (Cross listed with AENG 500, MENG 500, ASCI 500, BME 500 and CVNG 500) 0.000 Credit hours 0.000 Lecture hours

ECE 510 - Power Systems Analysis I (3)

The course deals with analysis and design of electrical power transmission lines and its components. Per-Unit and power systems: Transformers and power lines. RLC ζ Computing transmission line parameters, ABCD parameters and transmission line steady-state operation. Power flows and system protection.

ECE 511 - Power Systems Analysis II (3)

The course builds on topics covered in part I. Study of symmetrical faults, methods of symmetrical components and basis for studying unsymmetrical faults, power system protection, power system controls, Transient operation of transmission lines and Transient stability. Prerequisite: ECE 410.

ECE 520 - Modern Control Theory (3)

State-space representation (discrete and continuous) of linear systems. Observability and controllability. Controller design, estimator design and stability concepts. Digital control: continuous and discrete design. Hardware characteristics - A/D, D/A, prefilters. Quantization and sampling effects in digital control. On demand.

ECE 521 - Image Processing (3)

Introduction to digital images and image capture. Image transforms: DFT, FFT, Walsh, Hadamard, DCT, Hough and Hotelling transforms. Image enhancement, image restoration, image encoding and image segmentation. On demand.

ECE 525 - Hardware Software Co-Design (3)

This course provides an understanding of hardware and software co-design. Topics include type of processors (software), types of integrated circuits (hardware), types of memory and memory architectures, interfacing and system design for real-time operation. This course will emphasize design space exploration and have a capstone project requiring the integration of a real-time system into communicating hardware and software pieces. Recommended prerequisite: ECE 315.

ECE 526 - Mobile Robotics (3)

This course is an introduction to robot kinematics, sensor technology and basic machine control. This course will develop the low level tools required to move robots in an environment and an appreciation of the requirements for doing so in an autonomous fashion. This course will have a capstone project requiring the design or development of a robot platform to meet a goal drawn from current topics. Prerequisites: ECE 325 & 350

ECE 530 - Advanced Semiconductor Devices (3)

This course will focus mostly on MOSFET and CMOS, but also some advance topics in BJT and photonic devices. First non-ideal characteristics of MOSFETs will be discussed, like channel-length modulation and short-channel effects. Threshold voltage modification by doping will be covered. Issues with MOS scaling will be covered. A combination of an n-channel and p-channel MOSFET is used for CMOS devices that form the basis for current digital technology. Fundamentals of the CMOS inverter operation will be discussed. The Operation of a CMOS inverter will be explained. Silicon on Silicon and Silicon on Insulator issues will be covered. Prerequisites: ECE 330.

ECE 531 - Low Noise Electronics Design (3)

This course is an introduction to the area of low-noise electronic design. It presents an overview of noise fundamentals, a description of noise models for passive devices and active devices, methods of calculating the noise performance of circuits, and techniques for minimizing noise in circuit design. Prerequisite: ECE 331

ECE 532 - Analog Integrated Circuit Design (3)

The purpose of the course is to build on introductory level analog electronics design. It will cover such topics as active loads and current mirrors and then proceed to output stages of amplifiers utilizing Class A, Class B, and Class AB amplifiers. We will employ both Bipolar and MOS technologies. Multistage amplifiers will be introduced. Design of Operational Amplifiers and Differential amplifiers will be covered. Frequency response of amplifiers and stability of feedback circuit will also be covered.

ECE 535 - Digital IC Design (3)

The course covers the whole range of basic issues related to digital integrated circuit design and development. The course will be mostly based on CMOS technology. It will cover some of the timing issues. Students are expected to carry out term project. Prerequisites: ECE 330

ECE 541 - Radar System Design & Analysis (3)

Basic radar definitions; transmitter power, antenna coverage and gain; target cross-section, receiver noise and system losses; radar equations, pulsed radars; reflection of radar waves and weather conditions; synthetic array radars and pulse compression techniques; track-while scan and electronic scan; millimeter wave and laser radar systems. Prerequisites: ECE 302 & 403.

ECE 542 - Microwave Theory & Techniques (3)

Introduction to: microwave Transmission lines; microwave network analysis; microwave resonators; microwave components; active microwave circuits; and introduction to microwave systems. Prerequisite: ECE 407.

ECE 543 - Antenna Theory and Design (3)

Antenna fundamentals and definitions; some simply radiating systems; antenna arrays; wire antennas; broadband antennas; and aperture antennas. Prerequisites: ECE-407

ECE 550 - Advanced Filter Design (3)

Frequency transformations, high-pass and low-pass band elimination filters, sensitivity. Passive ladder, ladder design with simulated elements, leap frog simulation of ladders. Switched-capacitor filters, delay filters, delay equalization. The Z-transform, IIR and FIR digital filters. On demand. Prerequisite: ECE 402.

ECE 551 - Digital Signal Processing (3)

This course includes IIR and FIR discrete-time filter theory, mapping from continuous-time to discrete-time filters, bilinear-Z transform, Impulse Invariance method, implementation structures such as Direct form I & II, and numerical precision effects. Prerequisites: Linear Systems, Probability & Statistics, and programming

ECE 555 - Stochastic Processing (3)

Introduction to probability theory, stochastic processes, statistical inference, and probabilistic models used in science, engineering, economics, and related fields. The course covers the fundamentals of probability theory (probabilistic models, discrete and continuous random variables, multiple random variables, and limit theorems), which are typically part of a first course on the subject. It also contains, a number of more advanced topics, from which an instructor can choose to match the goals of students. These topics include transforms, sums of random variables, a fairly detailed introduction to Bernoulli, Poisson, and Markov processes, Bayesian inference, and an introduction to classical statistics.

ECE 560 - Communication Systems (3)

Review of signal analysis and probability theory. Amplitude modulation systems. Frequency and phase modulation systems. Pulse modulation systems. Noise in CW modulation. Additional topics at graduate level. Spring semester Prerequisite: ECE 350 and MATH 403.

ECE 561 - Spacecraft Communications (3)

Overview of satellite systems; orbits and launching methods; the geostationary orbit; radio wave propagations; the space segment; the earth segment; the space link; interference; satellite access; satellite services and the internet. Prerequisites: Senior status and permission of the instructor.

ECE 562 - Cellular Communications (3)

This course covers the basic elements of Cellular communications include propagation phenomenology, multipath, frequency reuse and fading. Included are important aspects of cellular system performance including Grade-of-Service, cellular coverage, and cellular capacity. The course also covers select topics in current cellular system standards including digital modulation and error correction coding schemes.

ECE 570 - Energy Technologies I (3)

The course is to introduce current energy consumption of the United States and the World. It is to review/study various energy sources and energy consumption portfolio of the United States and major industrial nations. It is then to consider the impact of various alternative renewable energy sources and energy conservation methods on overall energy consumption equation. In this course several major renewable energy sources such as wind, solar, geothermal as well as energy conservation methods will be studied.

ECE 593 - Special Topics (3)

Special topics course is based on faculty and students interests. This would be an avenue to develop new courses on a trial basis.

ECE 596 - Masters Project (1-3)

Theoretical/ computational/ experimental work that leads to a project Report and defense of the Project.

ECE 597 - Research Topics (1-3)

Theoretical or experimental work that is not part of the Thesis or Project.

ECE 598 - Independent Study (1-3)

An individualized study course, in which students explore topics related to their graduate work and career goals. Students work with faculty members on a specific topic compatible to master's level and produces a report.

ECE 697 - Research Topics (1-3)

Theoretical or experimental work that is not part of the Dissertation.

ECE 698 - Independent Study (1-3)

An individualized study course, in which students explore topics related to their graduate work and career goals. Students work with faculty members on a specific topic compatible to master's level and produces a report.

Electronics Engineering Tech (EET)

EET 293 - Electronic Devices I (3)

The course covers diode characteristics and circuits, bipolar transistor circuits and applications, field-effect transistor (JFETs and MOSFETs) circuits and applications. Pre-Requisites: EET207, EET208 and MATH143

EET 294 - Electronic Devices I Lab (1)

Laboratory experiments to emphasize material covered in lectures of EET293. Pre-Requisites: EET208, concurrent registration EET293.

EET 305 - Digital & State Machine Dsgn (3)

The course covers number systems, logic gates, Boolean algebra, combinational logic, PLDs, multiplexers, decoders, encoders, flip-flops, registers, counters, state machine design, memories and VHDL. Pre-Requisites: CSCI140 and EET293

EET 306 - Digital & State Mach Dsgn Lab (1)

Laboratory experiments to emphasize material covered in lectures of EET305. Pre-Requisites: Concurrent registration of EET305.

EET 307 - Microproces & Microcontrollers (3)

The course covers microprocessors/microcontrollers basics, Motorola M68HC12 hardware, the M68HC12 instruction set, assembly language programming, assembler, interrupts, memory mapping, interfacing and applications. Prerequisite: EET305

EET 308 - Microproces & Microcontrol Lab (1)

Laboratory experiments to emphasize material covered in lectures of EET307. Pre-Requisites: Concurrent registration of EET307.

EET 351 - Electronic Communications (3)

Frequency generation, amplitude modulation transmission and reception, angle modulation transmission and reception, introduction to spread spectrum techniques, transmission lines, wave propagation, antennas.

Pre-requisites: EET295 and concurrent registration with EET305 and ET354.

EET 352 - Electronic Communications Lab (1)

Practical applications of basic principles of electronic communications including signal generation, transmission reception and processing, methods of modulation and demodulation. Co-requisite: Concurrent registration in EET351.

EET 421 - PC Interfacing & Applications (3)

A general approach to the uses of computers as embedded systems. Computer interfaces, serial, parallel, USB, LAN, etc. Interfacing projects using Serial, Parallel and the USB ports will be emphasized. Prerequisite: CSCI140 or equivalent.

EET 490 - Senior Project I (2)

Principles of electrical and electronics engineering technology in practice. A study of unified, methodical approach to engineering technology project development. Project planning, scheduling, prototyping, production and presentation of a project. Pre-requisite: Senior Status.

EET 498 - Special Topics in EET (0-6)

Independent or lecture based study in an appropriate electronics engineering technology subject area under the direction of an EET faculty member. Pre-requisite: Senior Status.

Engineering Sciences (ESCI)**ESCI 101 - Freshman Engineering I (1)**

An introduction to the philosophy of engineering and engineering design. Introduction to the various laboratory and computing facilities on campus. Introduction to engineering drawing and computer aided drafting techniques.

ESCI 102 - Computer Aided Design (1)

Prerequisite: ESCI101. Further topics in the philosophy of engineering and engineering design. Further topics in skills and tools used in engineering.

ESCI 200 - Engineering Mechanics (4)

Vectors/force, moments, couples, equilibrium of particles and rigid bodies, trusses, frames, machines, friction, centroids, moments of inertia of areas, shear and moment diagrams, kinematics and kinetics of particles and rigid bodies. Prerequisite: MATH153 (or concurrent registration); PH A151 or PHYS161

ESCI 210 - Statics (3)

Study of force systems acting on particles and rigid bodies, 2-D and 3-D equilibrium, trusses, frames machines, shear and moment diagrams, friction, centroids, area moment of inertia. Prerequisite: PHYS161 (or concurrent registration).

ESCI 211 - Dynamics (3)

Particle kinematics and kinetics in rectangular, cylindrical and normal-tangential coordinates; projectiles; relative motion using translating axes; work; conservative forces; conservation of energy; linear and angular impulse and momentum, conservation of momentum, rigid body kinematics and kinetics. Prerequisite: ESCI210 and MATH153.

ESCI 220 - Thermodynamics (3)

Properties, characteristics and fundamental equations of gases, application of first and second laws of thermodynamics in evaluation of engines, cycles and processes. Corequisite: MATH244.

ESCI 303 - Fluid Mechanics (3)

Fluid statics; kinematics of fluid flow; energy equation for steady flow of any fluid; viscosity; flow of incompressible and compressible fluids in pipes; fluid measuring instruments; momentum relations for steady flow; resistance of immersed bodies; dynamic lift and propulsion; flow of liquids in open channels; pumps, turbines. Prerequisite: ESCI200.

ESCI 310 - Mechanics of Solids (3)

Stress and deformation due to axial load, torsion, bending and shear; properties of materials; statically indeterminate problems, analysis of plane stress and strain; combined loading; pressure vessels; beam deflections. Prerequisite: ESCI200 or ESCI210 and MATH 254

ESCI 311 - Mechanics of Solids Lab (1)

Concurrent Registration: ESCI310. Laboratory experiments to emphasize material covered in lectures of ESCI310.

ESCI 322 - Fluid Dynamics (3)

Fluid mechanics, conservation of mass, momentum and energy, stream function; dimensional analysis and similitude; application to problems of inviscid and viscous flows, drag, flow measurements. Prerequisite: ESCI210, MTA244.

ESCI 330 - Linear Vibrations (3)

Single and two degrees-of-freedom with and without damping, vibration dampers and absorbers; model properties of vibrating systems; vibration of lumped parameter and continuous systems; approximate numerical methods and digital computation. Review of test equipment and methods. Prerequisite: ESCI211, MTA355.

ESCI 420 - Heat Transfer (3)

Heat Transfer by conduction, convection and radiation and combinations of these modes.

ESCI 430 - Analysis & Cntrl of Linear Sys (3)

Linear vibration theory; control system block diagrams; analog and digital simulation; frequency and time domain analysis techniques; state space; and introduction to optimal control theory. Spring semester. Prerequisites: ESCI330.

ESCI 450 - Eng Economic Anal & Proj Mgmt (3)

Development and use of time value of money interest formulas. Bases for comparison of alternatives, including present worth, annual worth, rate of return and payout period methods. Depreciation and depletion methods. Engineering project planning, implementation and management. Spring semester. Prerequisite: MTA143 or equivalent.

Engineering Techology (ET)

ET 102 - Intro to Engineering Tech Lab (1)

A laboratory projects to reinforce and supplement the lecture material in ET01. Prerequisite: Concurrent enrollment in ET101.

ET 131 - Com Aid Dsgn with Unigrapic I (2)

This course involves an introduction to solid modeling, geometric dimensioning and tolerancing methods.

ET 301 - Structures & Design (3)

This course introduces the student to static and fatigue analysis, failure theories, and analysis of riveted and bonded joints. Emphasis is on application of analysis procedures, industry standards, and cost-effective design. Prerequisite: ES310, ET331.

ET 302 - Structures & Design Lab (1)

This course includes laboratory projects to reinforce lecture material in ET301. Prerequisite: Concurrent registration with ET301.

ET 303 - Technology & Project Managemnt (3)

This course allows the student to identify and understand the elements of project management in relation to an organizational strategy. Specific emphasis on tools and techniques as well as philosophies applicable to the management of technology oriented projects.

ET 309 - Logistics (3)

This course introduces the student to the structure, application, and concepts of contemporary logistics and associated systems.

ET 331 - Metallic Materials (3)

This course is a survey of the sources, preparation, properties and uses of engineering materials. Topics include the following: the iron-carbon system, ferrous metallurgy, nonferrous metallurgy, heat treatment, properties, manufacturing and repair, and NDI of metals. Prerequisite: CHEM151.

ET 332 - Metallic Materials Lab (1)

This course includes laboratory projects to reinforce the lecture material in ET331. Prerequisite: Concurrent registration with ET331

ET 403 - Control Systems (3)

Introduction to servomechanism analysis under transient and steady state conditions. Negative and positive feedback. Laplace transform analysis of feedback systems. Frequency response. System stability analysis using Bode plots and Root locus methods. Analog computers. Microprocessor control and the analog/digital interface. Pre-Requisites: ET401 Network Analysis

Flight Science (FSCI)**FSCI 115 - Flight 1 (2)**

This course will provide the fundatmental knowledge required for the student to successfully learn the maneuvers and procedures for pre-solo flight, dual and solo local operations, and an introduction to VFR cross-country operations. Corequisite: FSCI 125.

FSCI 125 - Basic Flight Foundations (3)

This course will provide the fundamental knowledge of the pilot's role in operations including aircraft design, aircraft operating characteristics, aircraft maintenance, airports, airspace, air traffic control, VFR and IFR communications and aircraft performance.

FSCI 130 - Aviation Weather (3)

This course will provide the fundamentals of meteorological theory with a specific application to aviation and flight. Appropriate weather services that are available to the pilot will be covered.

FSCI 155 - Flight 2 (2)

This course provides the fundamentals of cross-country flight from solo pilot in command to the Private Pilot Certificate; introduction to commercial maneuvers. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Prerequisite: FSCI 115.

FSCI 156 - Flight 2 Transition (1)

This course provides a transition for holders of a Private Pilot Certificate into the curriculum and will introduce them to commercial maneuvers. This will include the elements of airmanship, practical weather, and other cross-country skills.

FSCI 215 - Flight 3 (2)

This course provides instruction for the application of previously learned commercial maneuvers; introduction of instrument flying and navigation skills in the flight environment. Prerequisite: FSCI 155.

FSCI 225 - Instrument Flight Foundations (3)

This course will provide instruction in the advanced knowledge areas of aviation law for instrument flight, mass & balance, flight planning, and radio navigation for high performance aircraft as pilot in command.

FSCI 255 - Flight 4 (2)

This course will provide the principles of flight to qualify for the Instrument Rating for Single engine. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning.

FSCI 265 - Navigation Foundations (3)

This course will provide instruction in the advanced knowledge areas necessary of general and global navigation for high performance aircraft as pilot in command. Prerequisites: FSCI 225 and MATH 120.

FSCI 275 - Accident Investigation (3)

An introduction to aircraft accident investigation and its use as a tool in hazard identification, risk analysis and mishap prevention. Students will apply theory and practical skills developed in the classroom to an actual aircraft accident during the field work portion of the course. Prerequisites: ASCI 220 amd PHYS 135.

FSCI 335 - Advance Aircraft Systems (3)

This course will provide the technical knowledge necessary to understand advanced aircraft systems on board typical modern turboprop/turbojet aircraft. Prerequisites: PP253, PP260, PHYS124

FSCI 355 - Flight 5 (2)

This course will provide the principles of flight to qualify for the Commercial Certificate with the Single and Multi engine rating. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning.

FSCI 395 - Air Charter Operations (3)

This course includes the study of the operation of a representative air charter operation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Prerequisite: FSCI335, PP260

FSCI 415 - Air Carrier Operations (3)

This course includes the study of the operation of a representative air carrier in commercial aviation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Prerequisite: FSCI335, Corequisite: FSCI425

FSCI 445 - Aviation Law (3)

Basic principles of law which impinge on the use of the air; history of air law; principles and rules governing use of air space by aircraft; multilateral conventions pertaining to the use of air space among nations; aviation security procedures; product liability. Restricted to Seniors.

FSCI 465 - Econ of Air Transportation (3)

A detailed study of present and future air carrier operations including organization, operating costs and revenues, aircraft utilization and scheduled operations, equipment analysis, aircraft performance in relation to efficient and economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation. Prerequisite: ECON 190.

FSCI 523 - Econ of Air Transportation (3)

A detailed study of present and future air carrier operations including organization, operating costs and revenues, aircraft utilization and scheduled operations, equipment analysis, aircraft performance in relation to efficient and economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation.

Inter-Disciplinary Engineering (IDE)**IDE 200 - Energy in the City (3)**

With focus on energy efficiency and sustainability in an urban environment, students will identify energy sources, examine the use of energy, determine the costs of energy, and explore how oil-based energy can be conserved and eventually replaced. Students will conduct experiments for better understanding of basic energy concepts.

Mechanical Engineering (MENG)**MENG 101 - Introduction to Aerospace & Mechanical Engi**

This course will introduce aerospace and mechanical engineering. Through hands-on activities, students will learn the basics of engineering design and entrepreneurship. Working in teams, students will build aerospace and mechanical systems, practice entrepreneurial thinking, and develop the personal and professional skills needed to engage in lifelong learning. This course is open to non-majors.

MENG 102 - Computer-Aided Engineering Design (1)

This course is an introduction to engineering drawing and computer aided design (CAD) and 3D solid modeling. Students will learn to interpret engineering drawings, create engineering drawings, and create 3D models of mechanical systems.

MENG 200 - Foundation to Engineering Design (3)

Introduction to engineering, design philosophy, design methodology, design process, human factors, ethics, and economics. Various case studies will be presented to understand the principles of engineering. This course would prepare a student to think creatively in other engineering courses. Prerequisite: PHYS161 Engineering Physics I and ESCI102 Intro to Computer Aided Design.

MENG 201 - Engineering Shop Practice (1)

This course conditions the students in the shop environment and the use of common hand and machine tools found in a typical fabrication shop. The students will be prepared for the design-build class projects. Emphasis is placed on using the right processes and right tools for the job. Safety in a fabrication shop is introduced and practiced.

MENG 225 - Manufacturing Process (0-3)

This course provides detailed discussion on various manufacturing processes: netshape, material removal, and joining and assembly processes. Students learn the fundamental principles and the tools-of-the-trade by working hand-on with the machine tools. The current manufacturing techniques such as rapid prototyping, manufacturing cells, and lean-manufacturing are discussed.

MENG 235 - Applied Thermodynamics (3)

This course is an extension of the course on Thermodynamics. A detailed study on cycle analysis is included. Applications to compressors, turbines, heat pump, refrigeration and air-conditioning are emphasized. A design, comparison and evaluation of several design cycles is included.

MENG 275 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Sophomore standing

MENG 297 - Co-Op in Mechanical Engineerin (0)

An optional supervised work experience with an agency, firm, or organization which employs engineers. The student receives a Pass or No Pass grade.

MENG 310 - Machine Design (3)

Design methodology, optimization, design of various machine elements including shafts, springs, belts, gears, and bearing. Design for strength and rigidity, fatigue and fracture.

MENG 337 - Kinematics (3)

A study of linkages and their motion, velocity and acceleration analysis, dynamics of mechanical systems. An emphasis is given to design and numerical methods with computer applications. Prerequisite: ESCI211 Dynamics.

MENG 339 - Measurements (3)

A study of various measurement techniques in engineering and statistical analysis of experimental data. Applications to the measurement of strain, force, pressure, temperature, and fluid flow. An emphasis is given to design of an experiment and error analysis using statistical data analysis. Prerequisite: EENG201 Electrical Engineering (or co-requisite).

MENG 345 - Machine Design (3)

Design methodology, optimization, design of various machine elements including shafts, springs, belts, gears, and bearing. Design for strength and rigidity, fatigue and fracture. Prerequisite: MENG200 Foundations of Engineering Design, ESCI310 Mechanics of Solids

MENG 351 - Material Science (3)

A study of the material properties, atomic structure and bonding, mechanical failure theory, dislocation, phase diagrams, polymer structure, and ceramics. Prerequisite: CH P113 Engineering Chemistry II. Prerequisite: ESCI310 Mechanics of Solids.

MENG 365 - Computer Aided Engineering (3)

The course outlines the principles of Computer Aided Engineering. The computer applications to structural design, kinematic synthesis and design optimization are explored. Prerequisites: ESCI310 Mechanics of Solids.

MENG 375 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: MENG275

MENG 376 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Junior standing.

MENG 415 - Innovation, Creativity and Sustainability (3)

This is course provides state-of-the-art coverage on creativity and innovation effectiveness that leads to market success. The course discusses the latest concepts, theories, models, strategies and cases of market-focused creativity and innovation. Various tools for technological innovation will be covered. Further, the course discusses new opportunities and potential product innovations in the sustainability area. Students will be actively involved in practical and challenging exercises of creativity, innovation, and sustainability that lead to market-ready green technology products and services.

MENG 420 - Technology Entrepreneurship (3)

This is course provides a basic understand of the entrepreneurial of new venture process. Students discuss the critical role that opportunity recognition and product creation plays in that process. The emphasis is on identifying high-potential, technology-intensive opportunities, gathering resources, and managing rapid growth and significant risks using principled decision-making skills. The students will develop a feasibility study for a product in the studio component.

MENG 430 - Tribology (3)

A study of wear and lubrication. It includes viscometry, thrust and journal bearing, rolling contact bearing, dry bearing, and thermal effects. Prerequisite: ESCI220 Thermodynamics, ESCI 322 Fluid Dynamics, MATH 370; Corequisite: MENG355 Heat Transfer.

MENG 431 - Thermal Design (3)

A study of the modeling and design of thermal systems. These systems include pumps, fans, compressors, turbines, and heat exchangers. An emphasis is given to optimization, system control, and cost analysis. Prerequisite: MENG355 Heat Transfer.

MENG 433 - Composite Materials for Structure and Design

(Cross listed with AENG433) Fiber and resin systems. Composite material properties and characterization; laminae. Laminates, macro and micro-mechanics. Analysis and design of lamina and laminate. Prerequisite: ESCI310 Mechanics of Solids and MATH370.

MENG 434 - Experimental Mechanics (3)

An experimental study of stress and strain, electrical measurement of strain, optical methods of stress analysis including photoelasticity and Moire methods. An emphasis is also given to photoelastic coating, brittle coating and error analysis of data. Prerequisite: ME -P339 Measurements.

MENG 435 - Computational Mechanics (3)

Applications of matrix methods to the study of both statics and dynamics. An emphasis is given to the mechanics of rigid body as well as elastic body. The application of finite element method for static problems and eigen solution methods for dynamic problems are discussed. Prerequisite: ESCI310 Mechanics of Solids, MT P370 Advanced Math for Engineers.

MENG 441 - Optimal Design (3)

Development of math models for optimal design of engineered systems. Development and use of algorithms for optimization. Linear and non-linear programming. Prerequisite: MT P370 Advanced Math for Engineers.

MENG 445 - Principles of Mechatronics (0-3)

Introduction to basic components: sensors, transducers, microprocessor-based systems and PLC's. Applications in motion control (AC/DC motors & stepper motors). A major project in electro-mechanical system design and development. Corequisite: ESCI430.

MENG 450 - Design I (0-3)

Preliminary design of a mechanical system with emphasis on concurrent engineering, human factors, costs analysis, and material selection. The design project may be sponsored by industry or department. Also an emphasis is given to writing the design proposal and presenting it to a committee from the department. Prerequisite: MENG345 Machine Design.

MENG 451 - Design II (0-3)

Detailed design of a mechanical system, manufacturing the product if feasible, cost estimation, testing and demonstration of the product. A report on the final design is required and also the design should be presented to the faculty and peers from industry. Prerequisite: ME -P450 Design I.

MENG 475 - Co-Op with Industry (0-3)

Prerequisite: ME-P375. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Offered every semester.

MENG 476 - Internship with Industry (0-3)

Prerequisite: ME-P376 or Senior standing. A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Offered every semester.

MENG 477 - Senior Engineering (1)

This course prepares the students for Fundamentals in Engineering (FE) exam. It exposes them to engineering economy. Guest lectures will be delivered to imbibe contemporary issues and life long learning.

MENG 496 - Topics in Energy (3)

A study of energy related topic of current interest solar energy, nuclear energy, energy storage, energy conversion, internal combustion engine, etc.

MENG 497 - Topics in Mechanical Systems (3)

A study of mechanical systems of current interest, multi-body dynamics, advanced dynamics, advanced manufacturing, robot mechanisms, etc.

MENG 498 - Special Topics in Mechanical Engineering (0-)

Credits to be arranged. Independent Study on a topic in Mechanical Engineering under the direction of a Faculty member.

MENG 500 - Seminar (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters. (Cross listed with AENG 500)

MENG 501 - Advanced Fluid Dynamics (3)

Introduction to the physical concepts and mathematical analysis of fluid flow. Kinematics, stress, and thermodynamic properties of a fluid. Integral and differential equations for conservation of mass, momentum and energy. Applications in potential flow, viscous flow and compressible flow. Fluid flow measurements. Prerequisite: Undergraduate fluid dynamics. (Cross listed with AENG 501)

MENG 502 - Technology & Entrepreneurship (3)

The course is intended as a general introduction to the models and applications of entrepreneurship. The course provides the basis for technology entrepreneurship mindset. The course will introduce the three major forms of entrepreneurship-independent (as in self-employment), corporate entrepreneurship and social venturing. In addition, the course will educate students about the three key elements of modern entrepreneurship: the recognition and creation of opportunities, the development of strategies to realize those opportunities, and the packaging of those opportunities for maximum impact in intended markets. Prerequisites: None

MENG 503 - Numerical Methods Using Matlab and Labview

This course will introduce students to the Matlab and Labview programming packages while teaching how to use software and numerical methods to solve engineering problems. Problems of interest to Aerospace, Mechanical, Civil, Electrical, and Biomedical Engineering programs will be addressed. Prerequisites: Undergraduate programming coursework. (Cross listed with AENG 503)

MENG 512 - Experimental Methods in Fluid Dynamics (3)

This lab-based course introduces students to the modern techniques used to investigate fluid dynamic problems, including pitot-static tubes, wake rakes, thermal anemometry, laser Doppler anemometry, particle image velocimetry, and pressure and temperature sensitive paints. Prerequisite: MENG 501 (Cross listed with AENG)

MENG 517 - Viscous Flows (3)

This course covers the development of the Navier-Stokes equations; laminar and turbulent boundary layers and associated similarity laws; introduction to stability; analytical and numerical solutions of engineering problems will be emphasized. Prerequisites: Undergraduate fluid dynamics and heat transfer. (cross listed with AENG 517)

MENG 519 - An Introduction to Turbulence (3)

This course introduces the nature and origins of turbulence, transition mechanisms, turbulent transport of momentum and heat, dynamics of turbulence, wall-bounded and free shear flows, spectral dynamics, and statistical description of turbulence. Prerequisites: Undergraduate fluid mechanics, heat transfer. (cross listed with AENG 519)

MENG 533 - Composite Materials for Structure and Design

Fiber and resin systems, Composite material properties and characterization, lamina, Laminate, Micro-mechanics, Stress analysis of lamina and laminate, Design of laminate, Failure theories, and Manufacturing of laminate. Prerequisites: Undergraduate Mechanics of Solids. (cross listed with AENG 533)

MENG 534 - Finite Element Analysis I (3)

Variational forms for 1D and 2D, Rayleigh Ritz, Galerkin, element matrices and assembly, formulation of axial/truss/beam/plane-frame structural elements, 2D field problem formulation, linear and triangular elements for heat transfer/irrotational flow, torsion of noncircular sections, elasticity, higher order and mapped elements, numerical integration. Lab applications and project included. Prerequisites: Undergraduate Mechanics of Solids. (cross listed with AENG 534)

MENG 535 - Finite Element Analysis II (3)

Review of the finite element method and elasticity, variational methods, derivation of stiffness and mass matrices, isoparametric element formulation, 3D beam elements, plates and shells, Guyan reduction, constraints, statically equivalent loading, eigenvalue problems, modal superposition, dynamic transient response, nonlinear finite element analysis (large deformation, plasticity, contact) Prerequisite: MENG/AENG-534 (cross listed with AENG 535)

MENG 536 - Multidisciplinary Optimization (3)

Linear and nonlinear programming, unconstrained optimization, constrained optimization, structural optimization of large-scale systems with constraint approximations, analytical and numerical sensitivity analysis, design variable linking, optimization techniques for finite element problems, surrogate modeling techniques, shape and topology optimization. Interdisciplinary engineering applications emphasized. Prerequisite: MENG/AENG 534

MENG 537 - Structural Reliability (3)

Fundamentals of reliability theory (factor of safety vs. reliability, modeling uncertainty, random variable distributions, design process uncertainty), Simulation methods and integration, computational issues for large scale problems, expansion techniques), second moment methods, reliability of structural systems (response surfaces, FFT approach, series and parallel systems, system reliability). Interdisciplinary engineering applications included. Prerequisite: MENG/AENG-534 (cross listed with AENG 537)

MENG 538 - Advanced Mechanics of Solids (3)

Elasticity relations, linear elasticity assumptions, St. Venant's principle, transformation of stress, principal stresses in 3D, plane elasticity, Airy stress function, polynomial solutions, thermal stresses, relations in polar coordinates, point load solutions, stress concentration, axisymmetric problems, stresses in disks & cylinders, energy methods, Rayleigh Ritz, Buckling. Emphasis on advanced applications. Prerequisite: Undergraduate Mechanics of Solids (cross listed with AENG 538)

MENG 539 - Fracture Mechanics and Plasticity (3)

Advanced elasticity topics: plate theory, stress singularities at re-entrant corners, intro to fracture mechanics, mechanics of bonded interfaces, elastic contact mechanics; Plasticity topics: yield criteria in metal plasticity, deformation and incremental plasticity, elastic-plastic stress-strain relations, strain hardening, small-strain elastoplasticity (bending, torsion, buckling, disks and cylinders). Prerequisite: MENG/AENG-534, MENG/AENG-538 (cross listed with AENG 539)

MENG 593 - Special Topics (1-3)

A one-time course on a particular topic, or a trial course that is expected to become a standard course with its own unique course number

MENG 596 - Master's Project (1-3)

Theoretical/computational/experimental work that leads to a Project Report and of defense of the Project.

MENG 598 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

MENG 599 - Master's Thesis Research (0-9)

Research that leads to a Master's Thesis and final defense of the Thesis.

MENG 697 - Research Topics (1-3)

Theoretical or Computational or experimental work that is not part of the Dissertation.

MENG 698 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

MENG 699 - Doctoral Dissertation Research (0-9)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Mechanical Engineering Tech (MENT)**MENT 201 - Mechanical Design (3)**

This course applies the principles of engineering graphics to problems dealing with the drawing and design of machines and parts. The emphasis is to produce accurate and complete detail and assembly drawings utilizing the latest industrial drafting procedures and practices.

Prerequisite: ET-P231.

MENT 202 - Mechanical Design Lab (1)

This course includes laboratory projects to reinforce and supplement the lecture material of METP201. Prerequisite: Concurrent registration with METP201.

MENT 401 - Design of Mechanical Elements (3)

This course involves an overview of machine design parameters. Included are topics such as design deflection, strength, material selection, bearings, screws, gears, joining methods, fatigue, and failure analysis.

Prerequisite: ET301, ET331, ET341.

MENT 498 - Special Topics in MET (0-6)

Independent or lecture based study in an appropriate engineering technology subject area under the direction of an MENT faculty member.

Pre-Requisites: Senior Status

Aviation Science (Prof Pilot) (PP)**PP 100 - Flight IA (0)**

All required PP -P courses are offered every semester Introduction to flight; minimum hours include 19.5 hours dual flight instruction, 2 hours simulator instruction, 0.5 hours solo flight, and 6 hours pre and post-flight brief. At the end of this course, the student will have completed the initial solo flight and post solo stage check.

PP 101 - Flight IB (2)

All required PP -P courses are offered every semester Minimum hours include 10 hours dual flight instruction, 3 hours simulator instruction, 14.5 hours local and cross-country solo flight and 5 hours pre- and post-flight brief. Upon successful completion of Flight IB, the student will meet the requirements to take the FAA practical test for certification as a private pilot with an airplane single engine land rating.

PP 110 - Basic Flight I (2)

This course provides the fundamental techniques and knowledge for aircraft control and a foundation in airmanship. Aircraft and FTDs are implemented during this course. The student is expected to perform solo operations as pilot in command. Corequisites: PP120, FSCI130.

PP 113 - Aeronautical Science IA (2)

Introduction to basic knowledge for aircraft solo, including requirements for pilot certification, aircraft engine and systems, weight and balance calculations, aircraft performance, and Federal Aviation Regulations.

PP 114 - Aeronautical Science IB (2)

Introduction to subjects relating to the post-solo phase of flight, including Federal Aviation Regulations pertaining to the private pilot, basic weather and weather chart interpretation, cross-country flight planning and navigation, flight physiology, and Federal Aviation Regulations. The student is prepared to take the FAA private pilot knowledge test upon successful completion of this course.

PP 120 - Fundamentals of Flight I (2)

This course will provide the fundamental knowledge required for the student to successfully learn the maneuvers and procedures for pre-solo flight; dual & solo; local operations; introduction to VFR cross-country. Corequisites: PP110, FSCI130.

PP 121 - Introduction to Flight (0)

This course is designed for students outside the professional pilot program seeking to broaden their aviation education. The course consists of three hours of flight and one and one-half hours of brief. Students enrolled in this course must contact the Department within the first week of classes for scheduling of flights. (Special fee assessed).

PP 153 - Basic Flight II (2)

This course provides the fundamentals of cross-country flight from solo pilot in command to the Private Pilot Certificate. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Prerequisites: PP110 and all associated pre/corequisites. Corequisite: PP160.

PP 160 - Fundamentals of Flight II (2)

This course will provide the fundamental knowledge for conducting VFR cross-country flights as pilot in command. The course will also provide an introduction to the fundamentals for instrument navigation. Prerequisites: PP120 and all associated pre/corequisites. Corequisite: PP153.

PP 200 - Aeronautical Science II (3)

This course includes all knowledge areas required by the FAA Approved Part 141 Aviation Regulations for the Instrument rating. Students will be introduced to aspects of instrument flight appropriate to the Private Pilot Certificate with an Instrument rating. Prerequisite: PP150 and PP151. Corequisite: PP201.

PP 201 - Flight Operations II (2)

This course is the second in the flight training sequence. Ground trainers are utilized to teach the knowledge and skills to control the airplane using only flight and navigation instruments. Additionally, multiple VFR solo cross-country flights are included. Prerequisite: PP151. Corequisite: PP200.

PP 202 - Flight II (2)

First of five courses leading to the commercial pilot certificate with an instrument and multi-engine ratings; minimum hours include 13 hours dual instruction in primary training aircraft, 18 hours solo, 3 hours simulator and 8 hours pre- and post-flight brief.

PP 203 - Flight III (2)

Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 9 hours dual instruction in primary training aircraft, 17 hours solo, 9 hours simulator and 8.6 hours pre and post-flight brief.

PP 210 - Intermediate Flight I (2)

This course provides instruction for the application of previously learned instrument flying and navigation skills to the in flight environment and qualifies the student for the Instrument rating practical test. Prerequisites: PP153 and all associated pre/corequisites, PP160 and all associated pre/corequisites. Corequisite: PP220

PP 216 - Aeronautical Science II (3)

Federal Aviation Regulations and flight procedures as outlined in the Airman's Information Manual; aircraft engine operation, aircraft/engine performance; flight instrumentation and systems; airplane operations. The student is prepared to take the FAA commercial pilot knowledge test upon successful completion of this course.

PP 217 - Aeronautical Science III (3)

Attitude instrument flying, parts 61 and 91 of the Federal Aviation Regulations along with the Instrument Flight Procedure set forth in the Airman's Information Manual; introduction to IFR charts and approach plates; theory and operation of flight instruments; radio navigation; theory and analysis of weather reports, forecasts and weather charts. The student is prepared to take the FAA instrument knowledge test upon successful completion of this course.

PP 220 - Prin. of Intermediate Flight I (2)

This course will provide instruction in the fundamental knowledge areas necessary for safe and successful instrument flight. At the conclusion of this course, the student will be ready and qualified to take the FAA written test for the instrument rating. Prerequisite: PP153 and all associated co/prerequisites, PP160 and all associated co/prerequisites. Corequisite: PP210

PP 250 - Aeronautical Science III (3)

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Commercial single and multiengine certificates. Students will be introduced to high performance and multiengine airplanes through the study of advanced knowledge areas. Prerequisite: PP200. Corequisite: PP251.

PP 251 - Flight Operations III (2)

This course is the third in the flight training sequence. Instruction to complete the Instrument Rating and the Commercial Pilot Certificate is included. This involves a transfer of knowledge and skills from the ground trainer to the airplane for instrument procedures. Advanced VFR maneuvers and complex operations for the Commercial Pilot Certificate are included. Prerequisite: PP201. Corequisite: PP250.

PP 253 - Intermediate Flight II (2)

This course will provide the principles of flight to qualify for the Commercial Certificate with the Multi engine rating. These principles will include airmanship, multi engine systems, high altitude operations and weather, and flight planning. Prerequisite: PP210 and all associated

pre/corequisites. Corequisite: PP260.

PP 254 - Intermediate Flight II-SE (2)

This course will provide the principles of flight to qualify for the Commercial Certificate with the Single engine rating. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning. Pre-requisites: PP 210 and all pre/co-requisites. Co-requisites: PP 260.

PP 260 - Prin. of Inter. Flight II (3)

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Commercial single and multiengine certificates. Students will be introduced to high performance and multiengine airplanes through the study of advanced knowledge areas. Prerequisite: PP 220. Corequisite: PP 254

PP 271 - Flight III (1)

This course is the third in the flight training sequence, and provides introduction for the completion of the Instrument Rating. The instruction enables the student to transfer the knowledge and skills learned in the ground trainer to the airplane. Prerequisite: PP200, PP201.

PP 291 - Flight IV (2)

This course is the fourth in the flight training sequence. Instruction is provided to complete the multiengine Commercial Pilot certificate. Prerequisite: PP271. Corequisite: PP250.

PP 301 - Flight Operations IV (1)

This course is the fourth and final course in the flight sequence. The safe operation of a multiengine airplane, including normal and emergency operations in visual and instrument conditions, is included.

PP 304 - Flight IV (2)

Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 14 hours dual instruction in primary and complex aircraft, 17 hours solo in primary and complex aircraft, 3 hours simulator and 7.8 hours pre- and post-flight brief.

PP 305 - Flight V (2)

Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 9 hours dual instruction in primary and complex aircraft, 20 hours solo flight in primary and complex aircraft, 6 hours simulator and 5.5 hours pre- and post-flight brief.

PP 306 - Flight VI (2)

Final preparation for the pilot certificate with instrument and multi-engine ratings; minimum hours include 18 hours dual instruction in primary, complex, and multi-engine aircraft; 14 hours solo; 5 hours simulator; and 9.8 hours pre and post-flight brief. Upon successful completion of Flight VI, the student will meet the requirements to take the FAA practical tests for certification as a commercial pilot certificate with airplane single and multi-engine land and instrument ratings.

PP 307 - Flight VII (2)

Instruction leading to flight instructor certificate with Single Engine Land rating; minimum of 15 hours instructor training including 5 hours of dual flight instruction on analysis and performance of flight training maneuvers; 10 hours practice flight instruction with the flight instructor aboard the airplane and 7 hours practice ground instruction Prerequisite: commercial pilot certificate with instrument rating. Corequisite: PP319 or approval of the Department Chair.

PP 308 - Flight VIII (1)

Instruction leading to the addition of an instrument rating to a flight instructor certificate; minimum of 10 hours instructor training including 5 hours dual flight instruction on analysis and performance of instrument flight training maneuvers; 5 hours practice instrument flight instruction with flight instructor aboard the airplane; and 5 hours practice instrument ground instruction. Prerequisite: flight instructor certificate. Corequisite: PP320 or approval of the Department Chair.

PP 309 - Flight IX (1)

Instruction leading to the addition of a multiengine class rating to a flight instructor certificate; minimum of 10 hours ground training, 15 hours instructor training including 7 hours analysis of flight training maneuvers and 8 hours practice flight instruction. Prerequisite: flight instructor certificate.

PP 310 - Flight Instructor Prep I (2)

This course will provide the appropriate knowledge and skill to expertly control the airplane from the right seat while teaching a student. Prerequisite: PP254, PP260 or permission of the Chief Instructor. Corequisite: PP320.

PP 318 - Aeronautical Science IV (3)

Multi-engine aircraft systems including normal and emergency procedures, weight and balance, weather radar, windshear avoidance, and high altitude flight physiology.

PP 319 - Aeronautical Science V (3)

Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Prerequisite: PP250.

PP 320 - Aeronautical Science VI (3)

Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Prerequisites: PP 254 and PP 260 OR FSCI 255 and FSCI 265.

PP 350 - Flight Instructor Prep. II (2)

This course will provide the appropriate knowledge and skill to expertly control the airplane from the right seat while teaching instrument and Multi engine flight. Prerequisite: PP253 and PP260. Corequisite: PP360

PP 351 - Intermediate Flight III - SE (1)

This course will provide the principles of flight to qualify for the addition of Single Engine rating to a Commercial Certificate. Pre-requisites: PP 253 and all associated pre/co-requisites.

PP 352 - Intermediate Flight III - ME (1)

This course will provide the principles of flight to qualify for the addition of Multi Engine rating to a Commercial Certificate. Pre-requisites: PP 254 and all associated pre/co-requisites.

PP 360 - Prin. of Flight Instruction II (3)

This course will provide the appropriate knowledge to understand the elements of teaching instrument and multiengine flight. The student will prepare lesson plans and practice various methodologies appropriate for advanced flight instruction. Prerequisite: PP 320.

PP 410 - CFI Practicum I (3)

This course will provide a practical experience in flight education. The student will conduct flight training for at least one flight student. The student will also participate in directed group sessions emphasizing the delivery of quality flight instruction through the development of teaching skill, including, demonstration and the analysis of student performed maneuvers. Prerequisites: Senior Standing, PP310, PP320, or approval of the Department Chair

PP 450 - CFI Practicum II (3)

This course will provide advanced practical experience in flight education. The student will conduct flight training for at least one flight student. The student will also participate in directed group sessions emphasizing the delivery of quality flight instruction. Prerequisite: PP410

Health Care Ethics (HCE)**HCE 201 - Found in Clinical HC Ethics (3)**

This course introduces students to the ethical dimensions of clinical medicine and offers them the basic language and methodology with which to critically examine these dimensions. The course format integrates lecture and active case discussion to provide both the necessary theoretical grounding and the real-world skills sought by students.

HCE 202 - Found in Catholic HC Ethics (3)

This course examines ethical issues in health care through the lens of Catholic moral thought. The course will engage specific teachings of the Catholic Moral tradition that bear directly on issues of health care ethics using lecture and active case-discussion.

HCE 203 - Found in Public Health Ethics (3)

This course will focus on a broad theoretical survey of the most common systems of moral inquiry in public health. Students will learn what various ethical systems have to offer the public health dialogue, and engage in critical analysis of the already-dominant ethical perspectives within public health.

HCE 221 - Superheroes and Social Justice (3)

The great ethical issues in health care today can be dauntingly unfamiliar to new students. Ethical questions of medical research, the limits of technology, enhancement, reproduction, disability, personhood, and social justice have all been fruitfully discussed in the great American narrative medium of comics. Far from being a necessarily shallow medium, comics allows for a suspension of disbelief that renders philosophical thought experiments about morality not only accessible but also riveting. This course examines some of the best and most pertinent morality plays that the medium has to offer and uses these to introduce the student to the fundamentals of bioethics, and illuminate the practical implications for a modern health care ethics.

HCE 301 - Ethics in Clinical Medicine (3)

This course examines ethical issues encountered medicine, specifically by physicians and residents. It employs a case-based approach with supplementary readings on the general principles of biomedical ethics. Clinical problems related to the practice of medicine will be examined contextually, with attention to institutional, cultural, and moral issues that undergird controversies in clinical ethics.

HCE 302 - Found in Catholic HC Ethics (3)

This course examines ethical issues in health care through the lens of Catholic moral thought. The course will engage specific teachings of the Catholic Moral tradition that bear directly on issues of health care ethics using lecture and active case-discussion.

HCE 320 - Freaks and the Medical Body (3)

This course has two parts. The first part examines the spectacles of the *ζfreak showsζ* of the late 19th and early 20th Centuries and how medical science participated in and legitimated the use of deformed and malformed people as both oddity of nature and object of medical and scientific interest. *ζFreaksζ* were showcased and used to expand medical knowledge. We will explore the way in which medical libraries gathered *ζspecimensζ* of deformed persons for the purposes of expanding medical scientific knowledge. The second part of the course will begin with recent and contemporary *ζfreak showsζ* as seen in programs like TLC's *Little People, Big World*, NBC's *The Biggest Loser*, and ABC News's *medical mystery series*. These programs highlight various medical oddities and showcase their transformation. Yet, there is also something slightly different at work, because medicine not only showcases the oddities, but participates in their construction and creation as seen in programs like ABC's *Extreme Makeover*, Fox's *The Swan*, and E!'s *Bridalplasty*, in the cases of *Octomom* and the *Ashley Treatment*, and in art exhibitions like *Orlan* and *Alba the bunny*. This course will explore the themes of power and knowledge and the way in which certain forbidden spectacles gain respectability through the legitimating power of medicine and science, but also how medicine and science deploy that power/knowledge to create those very spectacles, along with our aesthetic and ethical sensibilities.

HCE 321 - Superheroes and Social Justice (3)

The great ethical issues in health care today can be dauntingly unfamiliar to new students. Ethical questions of medical research, the limits of technology, enhancement, reproduction, disability, personhood, and social justice have all been fruitfully discussed in the great American narrative medium of comics. Far from being a necessarily shallow medium, comics allows for a suspension of disbelief that renders philosophical thought experiments about morality not only accessible but also riveting. This course examines some of the best and most pertinent morality plays that the medium has to offer and uses these to introduce the student to the fundamentals of bioethics, and illuminate the practical implications for a modern health care ethics.

HCE 330 - Bioethics & Human Nature Film (3)

This interactive course uses the medium of film to explore how medicine and biotechnology challenge definitions and conceptualizations of being human. The course will examine the social and cultural dynamics that influence approaches to bioethics in Spain and the United States. Students will consider the ethical dilemmas posed by such diverse practices as abortion, euthanasia, cognitive enhancement/manipulation, and genetic enhancement. The course includes field experiences in Madrid, Spain.

HCE 411 - Health Ethics, Race & Identity (3)

This course engages issues of health populations, considering the possible unintended but still untoward effects that certain narrative and cultural constructions have for people. The course will attempt an appropriately rich consideration of the cultural constructions of the health professions and examine the ethical issues that arise. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 420 - Warriors and Medics (3)

The course studies the thought and lives of warriors and medics in order to understand their values, virtues, and wisdom - not only as these pertain to the struggle with mortality, but also to the human condition generally. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 422 - Cont in Reproductive Ethics (3)

This course examines controversial ethical issues surrounding the use of reproductive technology and medicine. Both pro and con perspectives are critically discussed. Topics include: the moral status of the human embryo, maternal-fetal conflicts, contraception, sterilization, in vitro fertilization, surrogate motherhood, prenatal screening, cloning, and the derivation of embryonic stem cells for research purposes. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 423 - Cont. in Research Ethics (3)

This course examines the current state of research ethics in light of the resolution of historical controversies and the emergence of current ones. The course will explore the ethical and regulatory norms that govern research today as well as particular cases that push their boundaries. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 424 - Ethics and Geriatric Care (3)

This course is designed to introduce undergraduate students to the ethics and practice of geriatric medicine and the spiritual dimensions of end-of-life care. In addition to weekly seminar discussions, students will spend three hours each week volunteering, shadowing and engaging with residents at Beauvais Manor on the Park. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 425 - Law and Bioethics (3)

This course will examine the ethical and jurisprudential issues related to areas of health care typically included in the field of bioethics. The course will introduce students to the leading ethico-legal approaches in analyzing cases and examining the judicial history and politics that gave rise to these. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 427 - Organ Procurement & Transplant (3)

This course will examine controversies surrounding organ donation and transplantation. Topics will include: the significance (or insignificance) of ensuring donors of vital organs are dead; appropriate criteria for determining death; the significance (or insignificance) of explicit authorization of donors for donation after death; the appropriateness (or inappropriateness) of incentives for living donation and for donation after death; the ethical character of organ marketing; appropriate treatment of potential donors who are minors or who lack decision-making capacity; and appropriate allocation of organs. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 450 - Ethics in Nursing & Health Care (3)

This course offers an overview of ethical theory, principles, and norms which should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases which arise in the practice of nursing are analyzed and evaluated in light of the identified ethical theory, principles, and norms. Restricted to nursing students who have completed their junior year of nursing studies.

HCE 497 - Ethics in Clinical Nursing (3)

This course explores ethical issues encountered by nurses and nursing students, and critically examines positions regarding these issues. Students gain familiarity with the Code of Ethics for Nurses, and analyze ethical dilemmas in light of its tenets and related ethical principles. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

HCE 533 - Research Ethics for Health Outcomes (1)

This course provides students with an understanding of the principles of ethics in scientific research. Students will gain an understanding of responsible conduct of research including the importance of ethical decision-making and identification of rules, responsibilities, and resources for responsible conduct. Topics include informed consent, research misconduct, policies in human subjects research, data management and data sharing, and dealing with conflicts of interest.

HCE 540 - Race in Science and Medicine (3)

In order to understand the complex role of race in medicine and medical research today, this course will examine race from an interdisciplinary standpoint. It will begin by looking at the historical trajectories of the concept of race in different fields, including sociology, anthropology, genetics and law, and how these have interacted with our folk understandings of race. We will then examine how this evolving concept of race has shaped the medical study of race and health, including research regulations, journal requirements, and assumptions and categories of research studies themselves. Third, we will look at how race manifests in medical practice today, including general treatment, identification and treatment of mental illness, and race-based/personalized drugs and screening. We will conclude with an examination of how all of these interactions with race relate to the experience and practice of raced doctors and patients in the healthcare system today.

HCE 550 - Ethics in Nsg. & Health Care (2)

This course offers an overview of ethical theory, principles, and norms which should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases which arise in the practice of nursing are analyzed and evaluated in light of the identified ethical theory, principles, and norms.

HCE 601 - Methods in Philosophical Ethic (3)

A study of the methodological issues in philosophy concerning the nature and justification of fundamental ethical norms, including: philosophical ethics and non-philosophical disciplines; philosophical methods of justifying ethical norms; Kantian ethics; contractarian ethics; virtue ethics; ethics and psychobiology; different methods of justification; epistemological status of ethics.

HCE 602 - Methods in Religious Ethics (3)

A study of the hermeneutical significance of different methods in religious ethics and a critical analysis of the hermeneutical implications of these methods for the development of ethical theory.

HCE 604 - Interdisciplinary Research in Health Care Ethics

A study of the scope, concerns, and methods of interdisciplinary research in Health Care Ethics, including: interdisciplinary research methods with associated competencies; cross-cultural paradigms of person, community, and health; epistemological processes for interdisciplinary research; criteria for persuasion and ethical justification in interdisciplinary research.

HCE 611 - Intro/Medicine for Ethicists (1)

A study of the principles and practice of medicine as a framework for ethical discourse, including: the classification and etiology of diseases (e.g. genetic diseases); their clinical manifestations and complications (e.g. the use of imaging techniques); and principles of medical and surgical treatment (e.g. life support systems).

HCE 613 - Clinical Ethics (3)

A study of fundamental skills and core areas of knowledge essential for ethics consultation, integrating process and outcomes, to identify, analyze, and resolve ethical dilemmas, cases and issues, that emerge in the context of patient care.

HCE 631 - Hlth Care Ethics Catholic Trad (3)

This course will examine moral methodology and critical issues in Catholic bioethics, primarily through the lens of four contemporary moral theologians who present differing, sometimes opposing, viewpoints on the subject matter.

HCE 632 - Gerontology and Ethics (3)

A study of the aging process and of the dying process in the context of end-of-life technology, including: quality of life; chronic pain; independence and inter-dependence; home care, case management, and long-term care; life-prolonging treatment; nutrition and hydration; futile care; euthanasia and suicide.

HCE 633 - The Human Genome (3)

A study of the human genome and its implications for the sanctity and dignity of human life, including: genetic make-up, disease, testing, engineering, counseling, and therapies; privacy, consent, and confidentiality; the management of genetic information (e.g. insurance companies); patenting scientific information in genetics; legal and social policies on genetic technology.

HCE 634 - Health Care Reform (3)

A study of governmental, organizational, and market developments in health care reform, including: social justice and the common good; fragmented health care, capacity, and cost; integrated delivery systems and the continuum of care; managed care, capitation, resource allocation, and quality; universal coverage, community health, and preventative care; information technology.

HCE 636 - Religious Scholars in HCE (3)

A study of one or several religious scholars in health care ethics, including: the genesis of the scholar's thought and works (e.g. response to previous religious theories); a systematic critique of the method adopted (e.g. implications for social/ecclesial policy); an evaluation of the scholar's contribution (e.g. influence upon religious traditions).

HCE 637 - Psych Issues in HCE (3)

A study of psychological issues as they relate to health care ethics. Specific issues include: psychological interpretations of ethical behavior; psychological approaches to moral development; developmental approaches to moral education; and psychological factors embedded in controversial issues of interest to health care ethicists, such as sexual practices, suicide, and abortion.

HCE 639 - Research Ethics (3)

This course introduces students to a range of topics in research ethics. The focus of the course is academic human subjects research ethics, though issues of regulation and compliance will be discussed throughout. For each topic selected, there will be four main study elements: (1) identify the ethical issues that emerge; (2) identify the major ethical arguments concerning these issues; (3) assess the major arguments; (4) examine the relevance of these issues and arguments to particular instances of human subjects research.

HCE 640 - Foucault and Biopolitics (3)

Foucault's interests were broad, including psychiatry, medicine, economics, politics, penal systems, and sexuality. This course will examine several works, place him in philosophical and historical context, and explore how his philosophical methods for critical engagement—genealogy and archaeology—might be used to engage questions of embodiment, medicine, psychiatry, politics, and ethics.

HCE 641 - Practicum, Health Care Ethics (1-3)

This practicum engages students in medical care settings with these goals: to experience a wide range of acute clinical care; to observe the patient/family/caregiver dynamics involved in clinical care; to reflect critically on the ethical challenges and principles involved in these patient care settings.

HCE 651 - Interdisciplinary Rsch Seminar (0)

The interdisciplinary research seminar is recommended for students between the end of coursework and completing the dissertation. This seminar examines ongoing dissertation research, integrating the knowledge of method and systematic analysis in ethics, of interdisciplinary study, and of foreign literature in health care ethics.

HCE 652 - Quantitative Rsch in Dscrp Eth (3)

Prerequisites: Enrollment in the quantitative track of the certificate program and RMET650 Multivariate Statistical Analysis. This course provides the opportunity to design and carry out directed, quantitative research in descriptive ethics. The course fosters the development of skills necessary to secure grant funding, to gain Institutional Review Board approval, and to do empirical research that can be integrated into the doctoral dissertation in health care ethics.

HCE 653 - Qual Rsch in Dscrp Ethics (3)

Matriculation in and in the second year of the J.D.-PhD program. Course fosters the development of research skills needed to conduct legal and ethical research on topics related to healthcare. Through close mentoring, students will also develop expertise on a specific topic in health law and ethics and a publishable manuscript.

HCE 660 - Bioethics and the Law (2)

This course examines legal issues in health care decision making in areas typically considered a part of bioethics, such as organ transplantation, genetic medicine, end-of-life care, determination of death, and experimentation with human subjects. While the course focuses on cases, statutes and regulations applicable to these issues, the course also studies the leading approaches in ethics as they are applied in these situations. The course includes consideration of the primary processes used for dispute resolution in bioethics, including litigation, institutional ethics committees, and institutional review boards.

Allied Health (AHP)**AHP 412 - Survey of Diseases (3)**

This course presents an overview of human diseases. The pathogenesis of disease as well as health promotion and disease prevention is included. All major systems will be covered. This course is offered in a distance learning format but exams are held at the College.

AHP 450 - Issues in Health Care Delivery (2)

This interdisciplinary course introduces students to contemporary issues in the organization and delivery of health care services. Interaction with other future health care professionals enhances a team approach to care of patients.

Biomedical Laboratory Science (BLS)**BLS 110 - Foundations of Medical Laboratory Science (1)**

The purpose of this course is to describe and illustrate career options available to the Clinical Laboratory Science (CLS), Investigative and Medical Sciences (IMS) and Cytotechnology (CYTO) graduates. The course incorporates a combination of lectures, and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

BLS 115 - Foundations of MLS Laboratory Discussion (0-1)

This laboratory course incorporates a combination of lectures and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

BLS 170 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Prerequisites: Freshman; determined individually based on project; Permission of the instructor

BLS 185 - Research (1-3)

This experiential course provides the opportunity to familiarize students with basic principles of research design, data collection, data analysis, and hypothesis testing. In consultation with a faculty mentor, the student selects a research project and begins the preliminary activities associated with developing a research question to include searching the literature, participation in grant, IRB and animal control protocols, procedure writing and training in research techniques. Experimentation and data collection may begin as time permits. Students are required to meet with their faculty mentor on a regular basis during the semester. Prerequisites: Freshman; determined individually based on project; Permission of the instructor

BLS 210 - Microbiology (3)

This course is an introduction to the basic concepts in Microbiology. Emphasis on bacterial and viral diseases.

BLS 270 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Sophomores; determined individually based on project; Permission of the instructor

BLS 285 - Research (1-3)

This experiential course provides the opportunity to familiarize students with basic principles of research design, data collection, data analysis, and hypothesis testing. In consultation with a faculty mentor, the student selects a research project and begins the preliminary activities associated with developing a research question to include searching the literature, participation in grant, IRB and animal control protocols, procedure writing and training in research techniques. Experimentation and data collection may begin as time permits. Students are required to meet with their faculty mentor on a regular basis during the semester. Pre-requisite(s): Sophomores; determined individually based on project; Permission of the instructor

BLS 311 - Urinalysis & Body Fluids (2)

Course focuses on the basic physiology of the kidney, mechanism of urine formation, and urine composition. The formation, function, analysis and evaluation of various other body fluids will be discussed to include cerebrospinal fluid (CSF), synovial fluid, (SF), pleural, pericardial, peritoneal, and seminal fluids. Content will focus on the principles and clinical significance of the various procedures used in testing urine and body fluids and their role in disease diagnosis. Prerequisites: BIOL 104 & CHEM 164

BLS 370 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Juniors; determined individually based on project; Permission of the instructor

BLS 385 - Research (1-3)

This experiential course provides the opportunity to familiarize students with basic principles of research design, data collection, data analysis, and hypothesis testing. In consultation with a faculty mentor, the student selects a research project and begins the preliminary activities associated with developing a research question to include searching the literature, participation in grant, IRB and animal control protocols, procedure writing and training in research techniques. Experimentation and data collection may begin as time permits. Students are required to meet with their faculty mentor on a regular basis during the semester. Pre-requisite(s): Juniors; determined individually based on project; Permission of the instructor

BLS 411 - Medical Chemistry I (3)

Part one of a two-part course to study the biochemical principles as applied to clinical investigation of disease. Topics include: protein structure and function; enzyme kinetics; carbohydrate and lipid metabolism; hormonal regulation; pathophysiology of water, electrolyte, and acid-base balance. Medical chemistry testing will be applied to the evaluation of organ systems for disease. Lecture includes presentations of recent molecular diagnostic approaches to detect the pathophysiology of diseases and biomarkers used in current cancer diagnosis. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): CHEM 345; BIOL 302 recommended; Permission of the instructor

BLS 412 - Medical Chemistry II (2)

Continuation of BLS 411 focusing on biochemical principles and their application to the clinical investigation of disease. Topics include: endocrinology, therapeutic drug monitoring and toxicology investigative techniques. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 411; Permission of the instructor

BLS 413 - Principles & Techniques in Molecular Biology (1)

Course provides an introduction to principles and application of molecular biology to include nucleic acid biochemistry as well as basic molecular techniques to include isolation and analysis of DNA and RNA, hybridization, amplification, sequence analysis, mutation detection, gel electrophoresis and array technology. Application of concepts and principles to the diagnosis of human disease. Pre-requisite(s): BIOL 104 & CHEM 164; BIOL 302 recommended; Permission of the instructor

BLS 421 - Hematology (4)

Content emphasizes the physiology of the blood forming organs and the maturation and function of their cellular products. Routine and confirmatory laboratory testing will be discussed to include purpose of test, performance of test and interpretation of results. Discussions will involve the pathophysiology, evaluation and diagnosis of blood dyscrasias to include anemias, leukemias, lymphomas, myeloproliferative and myelodysplastic conditions and other blood diseases using laboratory test results. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BIOL 104 & CHEM 164; BIOL 302 recommended; Permission of the instructor

BLS 422 - Hemostasis and Thrombosis (2)

Principles and laboratory analysis of normal hemostasis and fibrinolysis will be presented to include blood vessel, platelet, and coagulation protein function. Discussions will include the pathophysiology of bleeding conditions, thrombotic disorders, and thrombophilia, and their diagnosis using laboratory results. The physiology and laboratory monitoring of anticoagulant therapy will be discussed. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BIOL 104 & CHEM 164; Permission of the instructor

BLS 431 - Immunohematology (3)

This course introduces basic immunologic and genetic principles governing blood groups and blood transfusion practice. Blood group systems (including ABO and Rh), antibody identification, compatibility testing, and transfusion therapy are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 441; Permission of the instructor

BLS 441 - Medical Immunology (4)

Course focuses on the theories of innate, humoral and cellular immunity, development and functions of T-cells and B-cells, the antibody response, the genetics of antibody diversity, hypersensitivity, immune deficiencies, transplantation and tumor immunology. Lecture presentations of the recent advances in immunology that are relevant to transplantation, infectious disease, tumor immunology and nutrition. Course also involves case study discussions. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BIOL 104 & CHEM 164; BIOL 302 recommended; Permission of the instructor

BLS 451 - Medical Microbiology (4)

Content focuses on microorganisms of pathologic importance to include bacteria and viruses with an overview of parasites and fungi involved in human disease. Included are discussions on structure, molecular biology, molecular diagnostics, metabolism, growth, replication, food borne illnesses, current topics and emerging concerns. Pathogenicity, epidemiology, diagnosis and laboratory identification of important groups of human pathogenic bacteria are emphasized. Modes of action of selected antimicrobics and chemotherapeutic agents are also discussed. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BIOL 104 & CHEM 164; Permission of the instructor

BLS 461 - Research Design, Critique & Presentation (3)

Course focuses on the processes involved in biomedical research, evaluation of published literature, and presentation methods. Topics include an overview of procedures involved in human research, the Institutional Review Board (IRB), animal care concerns, and principles of effective presentations. Additionally, steps in the research process from proposal development to presentation of the final product will be discussed. Critical evaluation of published literature will serve as a basis for developing one's own research project. The course culminates in the development of a research proposal, a research protocol, and a research-focused presentation. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): MATH 130; MLS, CYTO & IMS Juniors; Permission of the instructor

BLS 462 - Senior Synthesis (3)

This is a contracted course that may incorporate a variety of educational modalities. All options will serve to allow junior and senior level investigative and medical sciences (IMS) students an opportunity to integrate courses taken in relation to their degree and area of concentration with postgraduation goals. One component of the course is experiential learning through the participation in an intern/shadowing experience. Students may also choose to develop a case study, participate in a creative investigation, or co-op experience. Students will give a formal verbal presentation on their Senior Synthesis experience. This course is optional for MLS and CYTO students. Pre-requisite(s): IMS Junior & Senior students; Permission of the instructor Co-requisite: BLS 463

BLS 463 - Senior Seminar (1)

Course will focus on providing the required content, support, and documentation for students performing research or synthesis projects to include: safety training (fire, electrical, biohazard, etc.), development and delivery of a formal presentation, and preparation for graduates to enter their chosen profession. The course culminates in the presentation of results of the research or senior synthesis project selected. Pre-requisite(s): MLS, IMS Junior & Senior, & CYTO Junior students Co-requisite(s): BLS 462 or BLS 485

BLS 470 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Seniors; determined individually based on project; Permission of the instructor

BLS 485 - Research (3)

This experiential course provides the opportunity to put basic principles of research design, data collection, data analysis, and hypothesis testing into practice. In consultation with a faculty mentor, the student selects and conducts a modest research project with data collection. The experience will culminate in a publication-ready manuscript. The student is encouraged but not required to submit the manuscript for publication and/or submit an abstract for presentation at a professional conference. Students are required to meet with their faculty mentor on a regular basis during the semester. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 461 or equivalent; MLS & IMS Senior, & CYTO Senior students; Permission of the instructor. Co-requisite: BLS 463

BLS 490 - Introduction to Clinical Laboratory Medicine (2)

The purpose of the course is to discuss the most common laboratory tests ordered, performed, and interpreted in the areas of Clinical Chemistry, Hematology, Immunology, Transfusion Medicine (Blood Bank), Hemostasis, Medical Microbiology, and Urinalysis. The course is designed for healthcare profession students other than laboratory profession students. Discussions will include the purpose of each test, test ordering practices, relationship to disease pathophysiology, result interpretation, and how test results are included in diagnostic algorithms. Pre-requisite(s): BIOL 104 & CHEM 164

Health Sciences (BSHS)

BSHS 100 - Intro to Health Sciences (1)

This course was developed to increase students' understanding of various health professions, especially those for which Saint Louis University offers a degree program. The goal is to better clarify the health professions to assist students in developing appropriate educational and career paths. Additionally the hope is for a better understanding of how the various professions work together and complement each other within the field of healthcare.

BSHS 250 - Human Dev Across Life Span (3)

Presentation of the developmental process throughout the life span including physical, motor, social, and some personality development. To develop an understanding of the theories of development and what factors influence a child and adult's development.

BSHS 340 - Anatomy and Physiology II (3)

Emphasis in this course is on the gross and microscopic study of the human body; specifically on anatomical and physiological concepts, terminology, and correlation of structure and function. The major organ systems to be studied include the circulatory, cardiovascular, respiratory, digestive, lymphatic, endocrine, urinary and reproductive. The scientific process, histology and molecular basis of disease will also be explored. This course will utilize readings, Internet resources, multi-media presentations, group discussions, other assignments and aligned assessments to expand the topics.

BSHS 450 - Hot Topics in Health Care (3)

This course will focus on examining key issues confronting health care today. The course will include seminars, lectures, and round table discussions reflecting on current issues and trends within the health care industry.

BSHS 460 - Consumer Health (3)

This course will help teach students how to bridge the gap between patients and health resources. It will review technologies focused on patients as the primary users of health information - remote monitoring, videoconferencing and telepresence. The students will determine what are the consumers' needs for health information to include health literacy issues surrounding the understanding of that information.

BSHS 470 - Health Care & Human Resources Management

This course focuses on job descriptions; staffing and scheduling; performance appraisals; counseling; training needs; wage and salary administration; interviewing techniques; retention; motivation; laws related to human resources; and labor organizations in health care; productivity standard development.

Clinical Laboratory Science (CLS)

CLS 422 - Clinical Urinalysis and Hemostasis (1)

The testing of urine and interpretation of test results is performed in the clinical setting. A wide array of both routine and diagnostic hemostasis testing will be performed and interpreted for the purpose of diagnosing bleeding and thrombotic disorders. For hematology certificate students only. Prerequisites: CLS-305 and CLS-306

CLS 428 - Laboratory Operations (3)

This course is designed to introduce the Clinical Laboratory Science (CLS) student to the basic concepts of laboratory operations. Topics to be covered include (this is not an exhaustive list): process design, procedures, accreditation, and laboratory information systems. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric.

CLS 429 - Principles of Laboratory Management and Educ

Basic concepts of management theory and laboratory operations to include human resource management, financial management, quality assurance/improvement, and governmental regulations presented. Students will complete a course project that culminates in a formal presentation using the educational principles learned in CLS-440. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric.

CLS 430 - Clinical Experience (0)

Studies in the clinical areas applying principles and procedures of laboratory testing. Prerequisite: Permission of Department Chairperson

CLS 431 - Clinical Practicum (6-15)

Studies in the clinical areas applying principles and procedures of laboratory testing. Reserved for students with selectively adapted clinical experiences. Prerequisite: Permission of Department Chairperson

CLS 432 - Special Studies (1-4)

Qualified students interested in doing special work in some field of clinical laboratory science or who wish to amplify their knowledge base may pursue an individualized course of study. Prerequisite: Permission of Department Chairperson. Prerequisite determined individually.

CLS 450 - Seminar: Topics in Body Fluids (1)

Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in body fluids. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations. For certificate students only

CLS 451 - Seminar: Topics in Clinical Chemistry (2)

Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in clinical chemistry. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 452 - Seminar: Topics in Hematology (2)

Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in hematology. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 453 - Seminar: Topic in Microbiology (2)

Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in microbiology. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 460 - Clinical Chemistry Practicum (6)

Biochemical investigation of body fluids in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Quality control, reaction principles, instrument operations and evaluation of results emphasized. For certificate students only. Prerequisites: CLS-330 and CLS-331, or equivalent.

CLS 461 - Clinical Hematology Practicum (6)

The application of the principles and theories of hematology and phlebotomy in a clinical setting. Students will learn the technique of blood collection and the performance of laboratory testing to qualitatively and quantitatively evaluate blood cells for disease. Laboratory procedures will be performed on blood, bone marrow and body fluids. For certificate students only. Prerequisites: CLS-301/302 and CLS-306 or equivalent.

CLS 462 - Clinical Microbiology Practicum (6)

Clinical laboratory course applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in the clinical setting. For certificate students only. Prerequisites: CLS-352 and CLS-353 or equivalent.

CLS 471 - Clinical Hematology/ Chemistry/ Urinalysis (5)

Cellular and biochemical investigation of body fluids in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisites: CLS 301, 302, 305, 306, 330 and 331.

CLS 472 - Special Testing: Hemostasis and Chemistry (2)

Specialized hemostasis and chemistry testing in a practicum setting. Concepts and techniques include: evaluation of bleeding and thrombotic disorders, laboratory diagnosis of gammopathies. (DELETE: immunochemistry techniques to identify viral disease) and toxicology investigative techniques. Prerequisites: CLS 306, 330 and 331

Cytotechnology (CYTO)**CYTO 400 - Introduction to Cytology (3)**

This lecture/laboratory course provides an orientation to the profession of Cytotechnology. Content includes the history of the profession, ethics in practice, use and care of the microscope, and basic cell biology. Basic concepts of human pathology, anatomy, normal histology, and benign processes are covered. Prepared slides are used to develop skills in microscopy and recognition of normal versus abnormal cell morphology. Pre-requisite(s): CYTO Seniors or CYTO Post-Baccalaureate Students

CYTO 410 - Female Genital Tract I (3)

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Pre-requisite(s): CYTO 400; CYTO Seniors or CYTO Post-Baccalaureate students

CYTO 411 - Female Genital Tract II (1)

This lecture/laboratory course is a continuation of CYTO-410. Pre-requisite(s): CYTO 410; CYTO Seniors or CYTO Post-Baccalaureate Students

CYTO 420 - Female Genital Tract III (3)

This lecture/laboratory course emphasizes the malignant and disease processes of the uterine corpus, metastatic lesions, and lesions of the vulva and vagina. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting.

Pre-requisite(s): CYTO 411; CYTO Seniors or CYTO Post-Baccalaureate Students

CYTO 430 - The Processing Laboratory (2)

This lecture/laboratory course covers routine procedures for receiving, processing, staining, cover slipping, and filling specimens. Students perform associated laboratory experiences under the supervision of a certified Cytotechnologist. Pre-requisite(s): CYTO 400; CYTO Seniors or CYTO Post-Baccalaureate students

CYTO 440 - Respiratory and Oral Cytology (3)

This lecture/laboratory course introduces the anatomy and histology of the upper and lower respiratory tract. Epithelial appearances and changes associated with normal, benign, and malignant processes are emphasized. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting.

Pre-requisite(s): CYTO 420; CYTO Seniors or CYTO Post-Baccalaureate students

CYTO 460 - Body Fluid Cytology (3)

This lecture/laboratory course examines the cytology/pathology of effusions, cerebrospinal fluid, and other body fluids. Cytologic changes associated with benign and malignant processes are emphasized. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Pre-requisite(s): CYTO 440; CYTO Seniors or CYTO Post-Baccalaureate students

CYTO 470 - Gastrointestinal and Genitourinary Cytology (3)

This lecture/laboratory course reviews the anatomy and histology of the breast, thyroid, lymph nodes, salivary gland, bone, and soft tissue with emphasis on cytologic patterns associated with normal, benign, and malignant processes. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and report. Pre-requisite(s): CYTO 460; CYTO Seniors or CYTO Post-Baccalaureate students

CYTO 480 - Fine Needle Aspiration Cytology (4)

This lecture/laboratory course reviews the anatomy and histology of the breast, thyroid, lymph nodes, salivary gland, bone, and soft tissue with emphasis on cytologic patterns associated with normal, benign, and malignant processes. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Pre-requisite(s): CYTO 470; CYTO Seniors or CYTO Post-Baccalaureate Students

CYTO 490 - Advanced Practices in Cytology (12)

Cellular investigation of human samples from all body sites performed in a clinical cytotechnology laboratory setting using advanced techniques and state of the art computer integrated screening tools to screen, accurately recognize, and differentiate normal, benign, and malignant processes. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): CYTO 480; CYTO Seniors or CYTO Post-Baccalaureate students

Nutrition & Dietetics (DIET)**DIET 100 - Hot Topics in Nutrition (1-2)**

Students will learn how to evaluate nutrition claims related to health and fitness. Nutrition topics of interest to the class will be explored. The basics of healthy eating will also be addressed. Fall semester.

DIET 102 - Career Exploration in Dietetic (0)

Students are introduced to the profession of dietetics and explore the specialties and opportunities for practice in the field of nutrition and dietetics. The historical foundation and the professional credentialing and code of ethics are discussed. Guest speakers from the local community share their experiences and demonstrate skills. Spring semester.

DIET 206 - Survey of Sports Nutrition (3)

Introduction to sports nutrition, overview of nutrients for optimal performance, ergogenics aids, sports nutrition related eating disorders, and practical strategies for achieving a balanced diet and lifestyle for the active individual.

DIET 208 - Foundations in Nutrition (2-3)

The study of human nutrition, incorporating biochemical and physiological aspects; investigation of the role of food in normal growth, development and maintenance of body functions. Fall semester. Prerequisites: CHEM 163/165 (pre) and 164/166 (May be taken concurrently)

DIET 210 - Nutrition in the Lifecycle (3)

A study of the physiological and psychosocial changes throughout the lifecycle that influence the nutritional needs of individuals. Spring semester. Prerequisites: DIET-221 or DIET-208 or DIET-380; BIOL-104, PPY-254.

DIET 212 - Bar and Beverage Management (3)

This is an introductory course in how to set-up, operate, and manage a bar. Students will learn about wines, spirits, and beers and how they are served. Additional material covers layout and design, equipment, marketing, and staffing. The students will be exposed to the legal issues relevant to a food service manager with a particular focus on those issues related to alcohol service. Spring Semester.

DIET 221 - Basic Human Nutrition (2)

A study of the basic elements of nutrition and their inter-relationships. Students are introduced to the role of food and nutrition in health and disease, as well as current and controversial topics in nutrition. Spring semester.

DIET 251 - Ethnic Meal Management (4)

Prerequisite: DIET 208

DIET 290 - Culinary Intercession I (1)

Limited to Culinary Emphasis students. This class is an introduction to the operation of a food service establishment. In this class, students will learn purchasing requirements and receive hands on experience with soup, salad, and entrée production. All cooking techniques will be reinforced, as well as organization, plate presentation, and proper mise en place. This course will begin 2 weeks prior to regular Fall semester courses of Junior year. Prerequisite: DIET 370

DIET 302 - Foundations in Classical Cuisine (3)

Prerequisite: DIET 251

DIET 303 - Sustainable Food Systems (3)

This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

DIET 308 - Nutritional Tutorials for Biochemistry (1)

Gives students an exposure to the biochemistry of nutrition in multiple settings. Topics to be covered include carbohydrate, fat, and protein metabolism, blood lipids and proteins, vitamins and minerals. These areas will be covered in the context of dietary intake of individuals. Fall semester. Prerequisite: CHEM 360 may be taken concurrently.

DIET 333 - Nutrition Tutorials for Organic Chemistry (0)

Students will have the opportunity to review principles learned in Organic Chemistry I. Every Fall Semester.

DIET 360 - Food Science (3)

Lab included. The study of food chemistry and the role of ingredients in food products. The study of the chemical and physical factors that influence food quality and food products. Fall and Spring semesters. Prerequisite: DIET 251

DIET 370 - Quantity Food Procurement/Prep (0-4)

Lab included. This course will consist of a lab and lecture designed to develop managerial food preparation skills. Students will be certified in foodservice sanitation. Spring semester. Prerequisite: DIET-350, DIET-414, and DIET-419.

DIET 375 - Adv Cooking & World Cuisines (2)

Students will explore advanced culinary techniques and ingredients used in cuisines around the world. Particular attention will be paid to flavor profiles, indigenous cooking techniques, and the history of spices. Students will discover how common ingredients are used differently in various cultures. Fall semester. Prerequisite: DIET 370.

DIET 385 - Advanced Nutrition (4)

This course will provide the student with an understanding of 1) nutrition from the cellular level to the whole organism; 2) the metabolism of carbohydrates, lipids and proteins; and 3) the digestion, absorption, transport, function, metabolism, excretion, deficiency, and toxicity of nutrients. Spring and Summer semesters. Prerequisites: BIOL104 or 110, CHEM 360 or BIOL 302, PPY 254, and DIET 208.

DIET 389 - Internship Seminar (1)

Students will explore the process of applying to the dietetic internship. Students will learn how to prepare a professional quality, competitive application. Fall semester.

DIET 390 - Culinary Intercession II (1)

Limited to Culinary Emphasis students. A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to advanced baking in an approved commercial foodservice and hospitality establishment. Baking science, terminology, equipment, technology, ingredients, weights and measures, and formula conversions are included with concentration on production techniques. This course will begin 2 weeks prior to regular Fall semester courses of Senior year. Prerequisites: DIET 290, DIET 414, DIET 419, and DIET 425.

DIET 401 - Catering I (1)

This course is designed to introduce students to catering fundamentals both on and off the premise. During this semester students will be exposed to culinary competitions sponsored by the American Culinary Federation and off-site catering demonstrations assisting an executive chef. Fall semester. Prerequisites: DIET 390 (May be taken concurrently) and ACCT220.

DIET 406 - Maternal & Child Nutr & Health (3)

This course will look at maternal and child health and nutrition through a public health lens. It will focus on both domestic and international health and nutrition issues as they relate to women and children. It will include service learning, for both undergraduate and graduate students, with a community agency that serves women and children. Additionally, graduate students in this course will also develop and lead a discussion on a related evidence-based research effort dealing with domestic or international maternal or child nutrition and health.

DIET 410 - Medical Nutrition Therapy I (3)

Medical Nutrition Therapy I and II are semester-long courses that comprehensively cover the nutritional management of specific disease states. Fall semester. Prerequisites: DIET 487 (May be taken concurrently), DIET 385

DIET 411 - Clinical Practicum Lab (2)

Lab that coordinates clinical and problem-based learning experiences with DIET-410: Medical Nutrition Therapy I, the nutritional management of different disease states. Fall semester. Co-requisite: DIET-410.

DIET 414 - Adv Meat Analysis/Knife Skills (2)

An introduction to meat and meat fabrication for foodservice operations. In this course, you will learn the fundamentals of purchasing specifications; receiving, handling, and storing meat; techniques for fabricating cuts for professional kitchens. Emphasis is placed on primal and sub-primal cuts, federal inspections, grading, yields, and the classification of meats, poultry and fish / shellfish. Laboratory activities include hands-on-fabrication of beef, veal, lamb, pork, poultry, and fish / shellfish. Advanced knife skills will be integrated throughout the course. Fall semester. Prerequisites: DIET 419 (May be taken concurrently), DIET 251

DIET 415 - Medical Nutrition Therapy II (3)

Medical Nutrition Therapy I and II are semester-long courses which comprehensively cover the nutritional management of specific disease states. Spring semester. Prerequisite: DIET 410

DIET 419 - Garde Manger (1-3)

Introduction in garde manger work including sandwiches, salads, sausage production, vegetable carving, canapés, aspic, chaud froid, and buffet presentation. Fall semester. Prerequisites: DIET 414 (May be taken concurrently), DIET 251

DIET 425 - Baking (1-3)

Introduction in fundamental baking - including breads, cookies, and Danish. Principles and procedures of theory and practice of high quality crafted bakery items. Prerequisites: DIET 360, DIET 370

DIET 426 - Pastry (1-3)

Introduction to pastry with fundamentals in icings, creams, cakes, sugars, decorating. Course will offer theory and practice of step-by-step procedures or makeup, assembly and production of quality bakery products. Fall semester. Prerequisite: DIET 425

DIET 430 - Foundations in Comm. Nutrition (3)

This course explores the foundations of public health as well as current governmental programs, policies and administrative offices which address health, hunger and food safety issues at local, state, and national levels. Priority health issues relating to the promotion of good nutrition and preventive health care for each life stage are examined. Students learn basic skills for designing, implementing, evaluating and marketing nutrition intervention programs. Students also learn about food insecurity and sustainability. Fall semester. Prerequisite: DIET 208

DIET 435 - Food Systems Management I (3)

This course focuses on the systems approach to decision-making, kitchen design and layout, equipment purchase specifications, and HACCP regulations for foodservice facilities. Offered every fall semester. Prerequisites: DIET 370, BLS 451, MGT 300 and ECON 190 or ACCT 220

DIET 436 - Food Systems Management II (3)

Lab included. Advanced preparation of students involved in foodservice management with emphasis placed upon management of financial and human resources. Operational budget preparation, strategic planning, marketing for customer satisfaction, and quality improvement projects will apply the concepts taught during this course. Spring semester. Prerequisite: DIET 435

DIET 436 - Food Systems Management II (0-3)

Lab included. Advanced preparation of students involved in foodservice management with emphasis placed upon management of financial and human resources. Operational budget preparation, strategic planning, marketing for customer satisfaction, and quality improvement projects will apply the concepts taught during this course. Spring semester.
Prerequisite: DIET 435

DIET 440 - Nutrition Education (3)

Study of principles and practices of nutrition education of groups, including aspects of public speaking and lesson planning. Spring semester.
Prerequisites: DIET 251, DIET 410, and PSY 101

DIET 450 - Nutrition Counseling (3)

Fall semester. Prerequisites: DIET 210 and DIET 385

DIET 475 - Gastronomy (3)

Gastronomy is the study of the relationship between food and culture. Food is an expression of culture but how we experience that food also creates culture. How, when, and where we eat shape our lives and create the experience of living within a particular culture. With this perspective in mind, we will delve into the relationship between various cultures and their distinct cuisines that arose within that context. As we face increasing homogeneity in world cultures and cuisines due to globalization and the spread of western pop culture, how can distinct ingredients, cuisines, techniques, and flavor profiles remain vital and preserved? How does the concept of "terroir" extend beyond wines to include a culture's cuisine? We will also look at food taboos around the world: cultural and religious. How did these taboos develop, what are the modern forms/incarnations of those taboos, and what purpose do they serve?

DIET 480 - Sustainable Fd Innovation Ext (3)

Prerequisite: DIET 335

DIET 487 - Crit Read of Res Material I (1)

Prerequisites: DIET 410 (May be taken concurrently) and DIET 385

DIET 488 - Crit Read of Res Material II (1)

Assessment and critical analysis of current research papers in various areas of nutrition and dietetics. Emphasis is on examining more complex papers with an analysis of design and advanced statistics of research in the clinical setting. Spring semester. Prerequisites: DIET 415 (May be taken concurrently) and DIET 385

DIET 489 - Independent Study (1-3)

Qualified students interested in doing work in specific areas of dietetics or wishing to amplify their knowledge of dietetics may pursue an individualized course of study. Department approval is required.
Prerequisites: To be determined individually.

DIET 490 - Culinary Philosophy & Practice (3)

Limited to Culinary Emphasis students. This course is designed to integrate students' culinary training, academic studies, and cooking experiences into various practical applications. Students will plan, prepare, and execute events ranging in scale so that students will understand how to be successful when faced with the various challenges presented. There will be an emphasis placed on both front and back of the house planning and preparation. Spring Semester. Prerequisite: DIET 375, 390, 401 & 426.

DIET 497 - Culinary and Medicinal Herbs (3)

This class will be divided into three sections. Section one will include techniques for the identification of the most common classifications of herbs, as well as a history of their uses. This section will focus on the culinary properties of herbs. The second section will focus on medicinal herbs with an evaluation of the indications for use, side effects, and drug/herb interactions. The third section is integrated laboratory experiences throughout the course, including culinary and medicinal preparations and garden design and planting. Spring semester.
Prerequisite: DIET 208

DIET 501 - Survey of Nutrition for AHP (3)

This course offers a condensed presentation of the foundations of human nutrition, incorporating some of the biochemical and physiological aspects. The role of nutrition in normal growth, development and maintenance of body functions will be investigated. Additionally, of nutrition in the management of disease, disease prevention, and physical performance will be addressed with guidelines for referral. Popular dietary supplements, including sport supplements will be reviewed for cost, effectiveness, and side effects. Projects will reinforce application of nutrition concepts. Offered every Spring semester.

DIET 503 - Sustainable Food Systems (3)

This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

DIET 505 - Food Processing: Farm to Institution (4)

With the goal of establishing a robust local and sustainable food system, students will explore and think critically about each link in the food supply chain from farm to institution as they develop a value added product based upon locally sourced ingredients. Spring and Summer semesters.
Prerequisites: DIET 251, DIET 302.

DIET 506 - Maternal & Child Nutr & Health (3)

This course will look at maternal and child health and nutrition through a public health lens. It will focus on both domestic and international health and nutrition issues as they relate to women and children. It will include service learning, for both undergraduate and graduate students, with a community agency that serves women and children. Additionally, graduate students in this course will also develop and lead a discussion on a related evidence-based research effort dealing with domestic or international maternal or child nutrition and health.

DIET 510 - Human Nutr: Physio & Metab. (3)

Examines the role of nutrition in human metabolism and physiology with primary consideration of regulatory mechanisms; relationships appraised in both health and disease; emphasis on current research. Offered every Fall semester.

DIET 513 - Human Nutr: Physio & Meta II (3)

Examines the role of nutrition in human metabolism and physiology with primary consideration of regulatory mechanisms; relationships appraised in both health and disease; emphasis on current research. Offered every Spring semester.

DIET 522 - Gerontological Nutrition (3)

In-depth exploration of the physiological, psychological and social aspects of nutritional needs during the aging process; integration and application of nutritional needs to programs and support systems for the elderly. Offered every Fall semester.

DIET 535 - Clinical Systems Management (3)

A systems approach to clinical nutrition services management, including the human dimensions of management, management tools and techniques for assessing accountability, cost containment, productivity and marketing plans. Includes development of a personnel and operational budget to expand nutrition services. Offered every Fall semester.

DIET 540 - Nutrition Education (3)

Educational theories and principles as applied to nutrition education in a variety of settings. Students will design materials, become familiar with various types of media, and demonstrate skills learned. Review of recent research. Offered every Fall semester.

DIET 545 - Patient/Client Nutr. Mgmt Prac (0-3)

Field experience in patient/client nutritional management at various sites under professional supervision (20 hours per week). Research component required as part of the practicum. Practice experience carried concurrently with theory. Offered every semester.

DIET 555 - Nutrition Counseling (3)

Course will cover counseling theories as they relate to nutrition counseling including Stages of Change, Health Belief Model and Motivational Interviewing. Students will apply lecture material in a lab and community setting where they will practice their counseling skills on volunteers and clients seeking nutrition counseling.

DIET 560 - Current Research in Vitamins (3)

Update on the latest research on vitamins; requirements, deficiencies, and toxicities in humans. Focus on current literature.

DIET 565 - Current Research in Minerals (3)

Update on the latest research on minerals; requirements, deficiencies, and toxicities in humans. Focus on current literature.

DIET 569 - Bioenergetics of Exercise (3)

This course provides a comprehensive survey of the bioenergetics of acute and chronic exercise in humans, with foci on the biochemical and physiologic responses of skeletal muscle and the cardiovascular system to acute and chronic exercise. The course focuses on research literature and emphasizes theory (i.e., principles and concepts).

DIET 575 - Gastronomy (3)

Gastronomy is the study of the relationship between food and culture. Food is an expression of culture but how we experience that food also creates culture. How, when, and where we eat shape our lives and create the experience of living within a particular culture. With this perspective in mind, we will delve into the relationship between various cultures and their distinct cuisines that arose within that context. As we face increasing homogeneity in world cultures and cuisines due to globalization and the spread of western pop culture, how can distinct ingredients, cuisines, techniques, and flavor profiles remain vital and preserved? How does the concept of 'terroir' extend beyond wines to include a culture's cuisine? We will also look at food taboos around the world: cultural and religious. How did these taboos develop, what are the modern forms/incarnations of those taboos, and what purpose do they serve?

DIET 578 - Applied Educ in Dietetics I (1)

Interns write and publish a newsletter for health care professionals; prepare and conduct adult education, including cooking demos, and nutrition education for elementary school children. Offered every Fall semester.

DIET 579 - Applied Educ in Dietetics II (1)

Interns write and publish a newsletter for health care professionals; prepare and conduct adult education, including cooking demos, and nutrition education for elementary school children. Offered every Spring semester. Continuation of DT H578.

DIET 580 - Cardiovascular & Metab. Physio (3)

Designed to acquaint the student with advanced principles and concepts regarding cardiovascular physiology. The course examines in detail the various parameters of the cardiovascular system, the implication of disease and structural abnormalities to these parameters, and the relationship of resting cardiovascular function to exercise adaptation. Offered every Summer semester.

DIET 588 - Seminar in Dietetics Research (0-1)

Define a problem for in-depth research. Review of the research process and University and departmental requirements. Offered Fall & Spring semesters.

DIET 589 - Special Problems in Dietetics (0-3)

Interpretation and discussion of results presented in written format and submitted for publication in a refereed journal. Offered every semester.

DIET 590 - Culinary Practicum (3)

Practical entrepreneurial experience or research in culinary arts and nutrition under professional supervision with a focus on sustainability. (20 hours per week).

DIET 594 - Dietetic Internship (3)

Required of all students participating in the American Dietetic Association accredited internship.

Physical Therapy (DPT) (DPT)**DPT 108 - Student Development I (1)**

This course, like many University 101 courses, is designed to assist in the transition to college for first year students. Students will learn about campus resources, and how to become involved on campus. This interactive course will cover topics including introduction to the Jesuit mission, academic and time management skills, values and career exploration, and awareness of self and others. Students will be introduced to Saint Louis University as well as the procedures of the physical therapy program. Peer mentors will be available to assist with the transition to college and to help assure success as a college student. The overall goal of the course is to prepare the first-year student to be successful at Saint Louis University, and beyond, as a man or woman of character. This course is only available to first year students.

DPT 110 - Student Development II (0-1)

This interactive course is designed to further assist in the transition to college for first year students. Much time will be spent on the choice of PT as a career and the types of PT practice and other health care career alternatives to physical therapy. Stress management will also be discussed.

DPT 208 - Student Development III (1)

This course is designed to move the student from thinking about the profession of physical therapy to thinking about him/herself as a future professional and a successful physical therapist. Students explore the Generic Abilities for Physical Therapists and practice self-evaluating using the Generic Abilities. The topics of time management and study skills are revisited. Students are introduced in more detail to the physical therapy faculty. The concept of the Jesuit Mission is expanded to include looking at the generic abilities and curriculum themes of the physical therapy program.

DPT 210 - Student Development IV (0-1)

This course furthers the development of the student by exploring the concepts of physical therapy core values and physical therapy as a vocation. Students are asked to examine the mission of Saint Louis University as it relates to the physical therapy core values. They are also asked to compare/contrast the physical therapy core values with the generic abilities for physical therapists. Practicing physical therapists will share their experiences of PT as a vocation.

DPT 393 - Junior Residency (0)

This registration shows that the student is in residence as a spring semester junior student in the Department of Physical Therapy.

DPT 401 - Fundamentals: Physical Therapy (1)

This course is designed for students with baccalaureate degrees entering the Program in Physical Therapy in the professional phase of the curriculum. The purpose of the course is to introduce these students to critical concepts from the Student Development and Interprofessional Education courses in the pre-professional phases of the curriculum as possible.

DPT 403 - Documentation (1)

The focus of this course is the development of competency in the use of documentation skills. Documentation assignments include practice writing SOAP notes and patient client management notes based on the Guide to Physical Therapist Practice and defensible documentation.

DPT 405 - Human Growth and Development (3)

This course provides students with a comprehensive approach to pediatric patients with congenital, developmental, and/or neurological conditions. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with children with developmental challenges are integral course components. This course includes a lab component.

DPT 411 - Kinesiology I (0-2)

This course extends the core principles of classical mechanics to human movement applications and covers the kinesiology of the shoulder and elbow. Upon completion of this course, the student will be prepared to describe and discuss human movement in biomechanical terms. In addition, students will be able to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion. This course includes a lab component.

DPT 412 - Kinesiology II (3)

Kinesiology II is intended to provide the student with the foundational knowledge necessary to analyze human motion and design appropriate intervention. Upon completion of this course, the student will be prepared to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion and will use the concept of normal motion as a reference point to understand the effect of pathology on motion. This course includes a lab component.

DPT 413 - Survey of Disease (3)

This course will present an overview of human diseases and the change in body tissues and organs that cause or are caused by disease. The pathogenesis of disease of all major systems, risk factors, clinical manifestations and implications of medical management is covered. The course offers merged lecture/ on-line learning format.

DPT 414 - Exercise Physiology (0-3)

This course examines types of exercise, muscle physiology and training regimens to improve muscle strength, power and endurance. Cardiovascular and pulmonary responses to exercise and training regimens will be included. Concepts of obesity and its management also will be covered.

DPT 415 - Therapeutic Exercise (2)

This course emphasizes laboratory experiences where various types of therapeutic exercises are analyzed and the psychomotor skills for performing these exercises are developed. Case discussions where the student has the opportunity to select appropriate therapeutic exercise intervention based on patient examination will be included. This course includes a lab component.

DPT 420 - Developmental Biology (3)

The focus of this course is basic science knowledge needed in physical therapy. Topics covered include histology, embryology, and genetic influences.

DPT 430 - Therapeutic Modalities (3)

This course covers the physical, physiological, and therapeutic aspects of the thermal physical agents used as adjunctive interventions in rehabilitation. This course also is concerned with the physical, biological, physiological and psychological rationale for treatment utilizing electrical and mechanical agents. The course covers the theoretical and practical knowledge of specific modalities and the integration of these treatment procedures into an overall rehabilitation plan.

DPT 455 - Basic Examination (3)

This course is designed to provide a basic knowledge of common physical therapy tests and measures. Essential concepts of measurement issues will be presented from a theoretical and practical viewpoint. Therapist-patient communication, therapist-patient safety, and respect for the cultural differences, values, and dignity of patients will be emphasized. This course includes a lab component.

DPT 460 - Clinical Research and Design (2)

This course examines how research is used to practice in an evidence based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of basic measurement skills like measurement of blood pressure.

DPT 470 - Basic Procedures (2)

The primary purpose of this course is to offer the senior physical therapy student an introduction to specific observation, examination and evaluation skills as well as designated treatment interventions in both a theoretical and practical application framework. It is expected that this material will act as part of the foundation on which the student will build throughout his/her professional career. Treatment interventions include therapeutic patient positioning, patient transfer and transport, gait with assistive devices and infection control. Basic nursing procedures, ie., IV's, catheters, O2 administration, and their significance to physical therapy treatment are presented. Also included will be practical application of monitoring of previously acquired knowledge of vital signs as a critical measure of patient response to treatment. Throughout this course there will be an emphasis on therapist-patient verbal and nonverbal communication skills as well as therapist-patient safety. This course includes a lab component.

DPT 480 - Evidence-Based Clinical Prac. (2)

This course examines how research is used to practice in an evidence based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of the basic measurement skills like measurement of blood pressure.

DPT 484 - Skills Practicum (0-1)

Skills practicum is the PT student's first opportunity to practice basic PT skills in a clinical setting under the supervision of a clinical instructor. It is comprised of two components. The didactic or classroom component consists of class session in preparation for and discussion of the clinical component of the course. The clinical component of the course involves student participation in clinical experiences one-half day per week for 12 weeks in a variety of facilities with close supervision. The student practices communication, examination and intervention skills.

DPT 494 - Senior Residency I (0)

This registration shows that the student is in residence as a fall semester senior student in the Department of Physical Therapy.

DPT 495 - Senior Residency II (0)

This registration shows that the student is in residence as a fall semester senior student in the Department of Physical Therapy.

DPT 496 - Professional Residency III (0)

This registration shows that the student is in residence as a fall semester senior student in the Department of Physical Therapy.

DPT 497 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

DPT 502 - Aspects of Nutrition in PT (2)

Role and relationship of nutrition in the treatment of specific populations treated by physical therapists; nutritional principles related to exercise. (Offered every Fall semester)

DPT 507 - Applied Neuroscience (2)

Motor control theory and applications, and motor learning principles are presented as they relate to healthy individuals and patient interventions. Principles of neuroanatomy and neurophysiology are reviewed and applied to patient case studies. This course includes a lab component.

DPT 508 - Professional Development I (1)

The focus of this course is the professional issues facing physical therapy presented in the context of the goals of the American Physical Therapy Association. The organization's structure, governance, priorities, and professional legal and ethical aspects are explored.

DPT 510 - Professional Development II (1)

The focus of this course is the development of expected professional behaviors. The student will participate in self-assessment and reflection in order to explore his/her beliefs about those professional behaviors and core values of the profession. Since the content is developmental in nature, the course will extend over three semesters (extending from the first semester of the first professional year through the summer).

DPT 512 - Professional Development III (1)

The focus of this on-line course is the development of expected professional behaviors. The student will participate in on-line discussions by using self-assessment and reflection. The student will identify his/her needs in his/her first job, including characteristics of a mentor. Among other current issues in the profession, the students will also discuss substance abuse by physical therapists and the implications to the profession.

DPT 512 - Professional Development IV (1)

The focus of this on-line course is the development of expected professional behaviors. The student will participate in on-line discussions by using self-assessment and reflection. The student will identify his/her needs in his/her first job, including characteristics of a mentor. Among other current issues in the profession, the students will also discuss substance abuse by physical therapists and the implications to the profession.

DPT 513 - Professional Development IV (1)

The focus of this on-line course is the development of expected professional behaviors. The student will participate in on-line discussions by using self-assessment and reflection. The student will identify his/her needs in his/her first job, including characteristics of a mentor. Among other current issues in the profession, the students will also discuss substance abuse by physical therapists and the implications to the profession.

DPT 514 - Physical Agents II (2)

Electrical and Mechanical Agents is concerned with the physical, biological, physiological and psychological rationale for treatment utilizing electrical and mechanical agents. Upon completion of this course, the student will have had the opportunity to acquire theoretical and practical knowledge of electrical and mechanical agents and also will have had the opportunity to begin planning an overall patient treatment care program for optimum goal achievement. This course includes a lab component.

DPT 519 - Biomechanical Interventions (3)

Biomechanical Interventions is focused on physical therapy management for patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathologies that require orthotic/prosthetic and/or soft tissue management. Students will study theoretical frameworks, practice examination techniques (history, systems review, and tests and measures), evaluate examination data, and design appropriate intervention through paper and patient cases. During the course, the student will be expected to recall and use the patient management principles, measurement concepts, and clinical reasoning framework that were introduced in previous classes in order to practice clinical decision making.

DPT 520 - Musculoskeletal Conditions I (2)

This course is a broad survey of medical management for patients with disorders which affect the musculoskeletal system. The student will be introduced to the pathology, etiology, and epidemiology/demographics of selected disorders. Medical differential diagnosis will be discussed, including clinical signs and symptoms, and the interpretation of laboratory and radiological data for ruling out or ruling in particular disorders. The student will use this information in a broader sense to formulate rudimentary knowledge and skills in medical screening and systems differential diagnosis to help prepare for their professional role as a first provider of care. Additionally, the medical management of selected disorders will be considered, including surgical, pharmacological, radiological, psychological intervention, and preventative care as applicable. The indications for physical therapy intervention from a medical perspective as well as the impact of specific types of medical care on physical therapy procedures will be discussed. The student will be introduced to the particulars of physical therapy management of patients with osteoporosis, arthritis, and connective tissue disorders. Please see the course schedule for a list of specific disorders covered. This course includes a lab component.

DPT 521 - Musculoskeletal Conditions II (3)

Musculoskeletal Conditions II is focused on physical therapy management for patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathology of the spine, pelvic girdle, or connective tissue system. Each regional unit includes examination (history, systems review, and tests and measures), evaluation of examination data, and designing appropriate intervention. Lectures will focus on the pathoanatomy and pathokinesiology of common conditions and will present the evidence to support examination and intervention decisions. Lab sessions will focus on learning the psychomotor aspects of examination and intervention as well as the opportunity to apply new information and skills to case situations using clinical reasoning strategies. This course includes a lab component.

DPT 522 - Musculoskeletal Conditions III (4)

Musculoskeletal Conditions III is focused on physical therapy management for patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathology of the TMJ or upper/lower extremity (excepting the hand). Each regional unit includes examination (history, systems review, and tests and measures), evaluation of examination data, and designing appropriate intervention. Lectures will focus on the pathoanatomy and pathokinesiology of common conditions and will present the evidence to support examination and intervention decisions. Lab sessions will focus on learning the psychomotor aspects of examination and intervention as well as the opportunity to apply new information and skills to care situations using clinical reasoning strategies. This course includes a lab component.

DPT 523 - Musculoskeletal Conditions IV (3)

Musculoskeletal Conditions IV is the terminal course in the musculoskeletal conditions series. It begins with the physical therapy management of patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathology of the wrist and hand. The course then shifts to industrial physical therapy including ergonomics and work hardening/conditioning. The challenge of treating patients with chronic pain syndromes is addressed with a focus on multidisciplinary care. Special consideration is given to physical therapy management of patients with hematologic disorders and post-polio syndrome. This course includes a lab component.

DPT 525 - Clinical Gait (2)

Clinical Gait is intended to provide the entry-level Doctor of Physical Therapy student with the foundational knowledge and practical skills necessary to analyze human gait, identify causes of pathologic gait, and begin to design appropriate intervention. Upon completion of this course, the student will be prepared to fully describe the characteristic gait pattern of a healthy adult and to identify abnormal (pathologic) gait patterns. In addition, students will be able to discuss potential causes of pathologic gait and begin to formulate treatment ideas to address these factors. Finally students will develop observational skills to accurately perform normal and pathologic gait assessment. This course includes a lab component.

DPT 526 - Neuropathology (2)

This course provides the student with current information on the medical diagnosis and management of disorders pertinent to the nervous system. This course is intended to be a companion to the physical therapy course on rehabilitation of neurological conditions.

DPT 527 - Neurological Conditions I (0-4)

This course provides students with a comprehensive approach to neurological conditions in primarily adult patients. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with adults with neurological conditions are integral course components. This course includes a lab component.

DPT 528 - Neurological Conditions II (2)

This course provides students with a comprehensive approach to pediatric patients with congenital, developmental, and/or neurological conditions. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with children with developmental challenges are integral course components. This course includes a lab component.

DPT 529 - Cardiopulmonary Conditions (3)

This course examines the pathogenesis and pathophysiology of cardiovascular and pulmonary disorders. Cardiopulmonary examination, goal setting and intervention methodologies are included. This course includes a lab component.

DPT 534 - Multi System Management (3)

This course is intended to present the student with a comprehensive approach to patients with medical and/or surgical conditions. Emphasis is placed on examination, evaluation and intervention strategies and the information that impacts the selection and implementation of these procedures. Students will develop skills in examination, evaluation, intervention, and pre-assessment, and will be able to provide principles and rationale for decisions. The course consists of various conditions, the therapeutic interventions, and the effect of these on the patient/client. The conditions include oncologic conditions, burn injuries, wounds, lymphedema, HIV, childbearing year musculoskeletal dysfunction, and incontinence. This course includes a lab component.

DPT 540 - Lab Studies & Imaging (2)

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

DPT 542 - Pharmacology (1)

This one hour lecture course will provide a basic overview of drugs commonly used by patients seen in physical therapy. The process of pharmacokinetics, pharmacodynamics and autonomic pharmacology will be reviewed with an emphasis on age differences. General drug categories, specific actions, and adverse reactions will be discussed. Dosage determinations, based on age and weight, will be introduced.

DPT 550 - Preventing Frailty in Older Adults (1)

This course explores the causes of frailty in older adults and the financial burden in the U.S. of obtaining healthcare for this population. The course then explores services available to help frail older adults maximize their physical and psychosocial independence within the community and within institutions. The course consists of lectures, interviews, and site visits in the St. Louis area.

DPT 552 - Sem in Adult Neurologic PT (1)

This seminar provides hands-on experience in the clinic for examinations and interventions for adult patients with neurological disorders/diseases. Students will have the opportunity to go to TRISTL and SSM Select and work in small groups with the therapist and her patient's. There are potentially other opportunities to go to the ALS clinic and work with pro bono patients. Additionally, students will have 2-4 sessions with the course coordinator to discuss their clinic experiences and relate their coursework from DPT527 to the patients seen in the clinic.

DPT 556 - Sports Physical Therapy (1)

This seminar is designed to give student the opportunity to further explore topics related to sports physical therapy. The perspective of the sports medicine team and the roles of the different professions in the care of athletes will be examined. The involvement of the physical therapist in the prevention and treatment of the injured athlete will be emphasized.

DPT 557 - Manual Therapy of the Spine and Extremities (1)

Manual therapy is an integral portion to any comprehensive plan of care. It is often a key intervention preceding prescriptive therapeutic exercise. This seminar will focus on the philosophy and psychomotor skills associated with manual therapy of the spine and extremities. Participants in this course are expected to attend and actively participate in each session both as a therapist, observer and as patient. Philosophies will include Kaltenborn (Norwegian), Maitland and Mulligan (Australian) and considerations in functional mobilization. Psychomotor skills will focus on therapist and patient positioning, identification of proper force and direction and indications/contraindications of use. Techniques will include mobilizations/manipulations. Assigned readings will assist the learner in the background of the philosophies and psychomotor practice outside of seminar time is expected to achieve a level of confidence and competency.

DPT 558 - Seminar in Physical Therapy - Pediatrics (1)

Seminar in pediatrics includes to interrelated components, group discussions and clinic participation. Each group discussion follows preparation of pre-class readings (basic review articles and current evidence-based research). Students review the pathophysiology associated with the selected neurological, congenital, developmental, and/or musculoskeletal disorders in pediatric patients. Medical, surgical, and pharmacological management strategies are considered. Videotapes or paper case studies may be incorporated to enhance discussion. The clinical component focuses on observation, examination, and evaluation of children with chronic disorders, primarily neurological or genetic in origin, and occurs at Southview School, Special School district, St. Louis County. While all students in Neurological Conditions I have labs at Southview School, seminar participants have additional small-group lab hours. Additionally, students complete one observation in the NICU at Cardinal Glennon Hospital.

DPT 560 - Department Administration (2)

This course covers the basic administrative, management, and leadership aspects of developing and operating a physical therapy service. Included are discussions of: the impact of the health care environment on physical therapy practice, values and motivations associated with the operation of a physical therapy practice, marketing, the organizational operation theories, structure, and processes. Students as a small group will develop a hypothetical new program using elements of a business plan.

DPT 561 - Applied Administration & Mgmt (2)

During this course the students will apply the concepts of management and administration to organization operations and interpersonal relationships. Students will be asked to refer to clinical environments familiar to them to serve as point of reference. Current literature will be reviewed. During the course the students will discuss recent trends in the health care delivery system and the implications for physical therapy services. The students will address legal issues that are relevant in management of physical therapy practice.

DPT 563 - Evidence Based Practice (2)

This course examines how research is used to practice in an evidence-based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of basic measurement skills like measurement of blood pressure.

DPT 564 - Communication Processes in Patient Care I (1)

This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communicating within the clinical environment.

DPT 565 - Effective Comm & Teaching (3)

This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communication within the clinical environment.

DPT 565 - Comm Process Patient Care II (2)

This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communication within the clinical environment.

DPT 566 - Communication Processes in Patient Care III (1)

This course introduces the students to several models of health beliefs as related to wellness. It covers adherence and models to improve adherence. The influence of spirituality on health and on healthcare is addressed.

DPT 570 - Patient Management I (0-3)

This course provides the opportunity to integrate the various dimensions of patient care into an organized problem-solving process in order to prepare the student for more advanced clinical rotations starting with Clinical Rotation II. This course will integrate content information from all previous and concurrent courses in the physical therapy curriculum. The clinical problem solving process will cover all aspects of patient management, from the gathering of subjective and objective data during the examination, through evaluation, diagnosis and prognosis phase, and into intervention planning and delivery. The primary focus of this course will be clinical decision-making for patients with orthopedic impairments through the life-span. Additionally, the identification and impact of critical issues related to medical status and patient safety through all aspects of patient care will be emphasized. Clinical reasoning for desired functional out-comes is reinforced as the student learns to form and communicate rationale which describes the relationship between identified impairments and desired functional outcomes. The student will have the opportunity to participate in interprofessional team case seminar.

DPT 570 - Patient Management I (2)

This course provides the opportunity to integrate the various dimensions of patient care into an organized problem-solving process in order to prepare the student for more advanced clinical rotations starting with Clinical Rotation II. This course will integrate content information from all previous and concurrent courses in the physical therapy curriculum. The clinical problem solving process will cover all aspects of patient management, from the gathering of subjective and objective data during the examination, through evaluation, diagnosis and prognosis phase, and into intervention planning and delivery. The primary focus of this course will be clinical decision-making for patients with orthopedic impairments through the life-span. Additionally, the identification and impact of critical issues related to medical status and patient safety through all aspects of patient care will be emphasized. Clinical reasoning for desired functional out-comes is reinforced as the student learns to form and communicate rationale which describes the relationship between identified impairments and desired functional outcomes. The student will have the opportunity to participate in interprofessional team case seminar.

DPT 571 - Patient Management II (1)

Because physical therapists are allowed to be the point of entry into health care in the vast majority of states, physical therapists have an expanding responsibility to perform medical screening examinations and evaluate whether a patient needs referral to other health care professionals. The emphasis of this course builds upon the student's knowledge about medical screening and the physical therapy differential diagnosis procedures taught in Patient Management I. The student will learn to perform advanced medical screening and P.T differential diagnosis from a regional perspective in order to promote the student's ability to create organizational schemes for examination which are clinically useful. Systems and organs that will be expanded upon for medical screening will include: cardiovascular, pulmonary, reproductive, breast, upper/lower urinary tract, esophagus, stomach, liver, gall bladder, bile duct, intestines, colon, appendix, pancreas, and to a lesser extent: endocrine, metabolic, hematologic, CNS, musculoskeletal and psychiatric disorders. Students will consider the epidemiology of these systems for key disorders (specifically, incidence and prevalence as it relates to the epidemiology of common medical disorders which can mimic musculoskeletal disorders.) Students will also learn referred symptom patterns of specific muscles, particularly those which produce symptoms in the head, neck, trunk, and proximal limbs, as they often mimic pain patterns produced by organs. Based on case findings, students will make appropriate recommendations whether P.T. intervention and/or referral to other medical professionals is appropriate and how such referrals should be made. The course also will consider the precedence in the legal literature and state licensure sanctions which address the boundaries of practice, especially in regards to the role of physical therapists vs. the role of the physician. This course includes a lab component

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DPT 572 - Patient Management III (2)

This course builds on the clinical problem-solving processes introduced in Patient Management I & II in order to further prepare the student for more advanced clinical rotations. While all skills learned in Patient Management I & II will continue to be reinforced and incorporated in this class using patient cases with a multi-system approach, Patient Management III adds the management of neurologic impairments to the clinical problem-solving process. The fabrication of intervention programs based on examination results and the modification of established intervention programs will be emphasized, including appropriate referrals to other health care providers. Additionally, patient management issues for the home health patient are discussed. The student will enhance his or her ability to critique and advance common exercise protocols given particular cases. The student also will have the opportunity to participate in an interdisciplinary team case seminar, and to improve visual kinematic evaluation skills through videotaped patient cases.

DPT 580 - Clinical Rotation IA (0-2)

Clinical Rotation I is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 4 weeks in an acute/subacute clinical setting with a clinical instructor. The students practice skills previously learned and use clinical reasoning skills with maximal supervision of the clinical instructor.

DPT 580 - Clinical Rotation I (2)

Clinical Rotation I is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 4 weeks in an acute/subacute clinical setting with a clinical instructor. The students practice skills previously learned and use clinical reasoning skills with maximal supervision of the clinical instructor.

DPT 581 - Clinical Rotation IB (0-2)

Clinical Rotation II is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an outpatient orthopedic clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

DPT 581 - Clinical Rotation II (0-2)

Clinical Rotation II is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an outpatient orthopedic clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

DPT 582 - Clinical Rotation (0-2)

Clinical Rotation III is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an adult inpatient or outpatient clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

DPT 582 - Clinical Rotation IIA (0-2)

Clinical Rotation III is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an adult inpatient or outpatient clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

DPT 583 - Clinical Rotation IV (4-7)

Clinical Rotation IV is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 18 weeks in two separate clinical settings (each 9 weeks in length) with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals for an entry-level caseload.

DPT 586 - Special Topics: Clin Rot I (0)

In this course students remediate didactic and or clinical work from Clinical Rotation I

DPT 587 - Special Topics: Clin Rot II (0)

In this course students remediate didactic and or clinical work from Clinical Rotation II

DPT 588 - Special Topics: Clin Rot III (0)

In this course students remediate didactic and or clinical work from Clinical Rotation III

DPT 589 - Special Topics: Clin Rot IV (0)

In this course students remediate didactic and or clinical work from Clinical Rotation IV

DPT 590 - Applied Evidence-Based Clinical Practice (2)

In this course clinical interns use principles of evidence-based clinical practice to answer clinical questions which arise during their internship experience.

DPT 591 - Professional Residency I (0)

This registration shows that the student is in residence as a student in the fall semester Professional Year I in the Department of Physical Therapy.

DPT 592 - Professional Residency II (0)

This registration shows that the student is in residence as a student in the spring semester Professional Year I in the Department of Physical Therapy.

DPT 592 - Professional Residency V (0)

This registration shows that the student is in residence as a student in the spring semester Professional Year I in the Department of Physical Therapy.

DPT 593 - Professional Residency III (0)

This registration shows that the student is in residence as a student in the summer semester Professional Year II in the Department of Physical Therapy.

DPT 594 - Professional Residency IV (0)

This registration shows that the student is in residence as a student in the fall semester Professional Year II in the Department of Physical Therapy.

DPT 595 - Professional Residency V (0)

This registration shows that the student is in residence as a student in the spring semester Professional Year II in the Department of Physical Therapy.

DPT 595 - Professional Residency VIII (0)

This registration shows that the student is in residence as a student in the spring semester Professional Year II in the Department of Physical Therapy.

DPT 596 - Special Topics: Clin Educ (0-3)

This registration shows that the student is in residence as a student in a semester after Professional Year II in the Department of Physical Therapy.

DPT 597 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

Health Informatics (HI)**HI 520 - Intro to Health Informatics (3)**

This course surveys the fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, telehealth, decision theory and decision support, human-computer interfaces, consumer health informatics, e-Health, and the personal health record. Department-specific applications are discussed.

HI 540 - Clinical Decision Making (3)

This course allows students to explore the history, evolution, and current applications of clinical decision support. The course emphasizes the unique challenges of clinical data representation and information retrieval techniques that are foundational to clinical decision support systems. Students will evaluate the value of clinical decision support systems in contrast with the complexities of implementation in the current medical, legal, financial, technological and cultural context.

HI 560 - Financial Resource Management (3)

This course addresses topics such as cost analysis, justification, capital purchasing, leasing strategies, risk-sharing models, purchase agreements, contracts, corporate compliance, charge master, prospective payment systems, healthcare organization revenue cycle, leveraging health care information to drive strategic decision making.

HI 590 - Applied Informatics Project I (3)

The goal of the applied informatics project I is to prepare students in the areas of inferential statistics, the research process, study/project design and outcome analysis.

HI 591 - Applied Informatics Project II (3)

The goal of the applied informatics project II is for the student to use the skills they acquired over the course of their studies in informatics to analyze, develop and implement research plans that produce a pilot project, a proof of concept or a prototype system that has the potential to impact and/or promote knowledge discovery and dissemination.

Health Information Mgmt (HIM)**HIM 220 - Computer Apps in Healthcare (1)**

This course encompasses the various types of software applications that will be required of entry-level HIM practitioners. Software applications include the 3-M Encoder, electronic medical record, presentation and spreadsheet applications and project management applications.

HIM 250 - HIM Professional Development (2)

The focus of this course will be on: understanding the evolution of the health information management profession. It will explore the current educational requirements, hot topics, affiliated associations, membership, governance, volunteer and service opportunities.

HIM 270 - Medical Terminology (3)

The basic language related to medical science and the allied health professions is covered including word analysis, construction, pronunciation, spelling, definition, and use of terms. Prerequisite: Keyboard Skills.

HIM 300 - Intro to Health Informatics (3)

The origin, uses, content and format of health records; accreditation, certification and licensure standards applicable to health records; the qualitative and quantitative analysis of health records; the content, format, maintenance requirements of the Master Patient Index (MPI), storage and retrieval systems security and control techniques for health records; and numbering and filing systems.

HIM 310 - Medico-Legal Aspects (3)

Legal terminology and procedures; the court system; liability of health care facilities and providers, health care legislation and regulation, including confidentiality, policies and procedures for the control and use of personal health information.

HIM 320 - Health Data Management (3)

Descriptive and vital statistics; reporting requirements; definitions and formulas for computing hospital and public health statistics; epidemiology concepts, data abstracting, and display techniques. Case mix classification and analysis; techniques of sampling and weighted averages.

HIM 330 - Classification Systems I (0-3)

This course focuses on the ICD-9-CM coding system and its use in the health care industry. Students will apply ICD-9-CM coding principles to exercises, assignments and health records in a classroom laboratory setting. An introduction to ICD-10-CM, ICD-10-PCS and how to transition to the new system will be addressed.

HIM 340 - Applied Health Informatics (3)

This course introduces the fundamental concepts of database analysis, design and implementation, information file structures and data management in a networked environment. The course will cover databases used in today's networked client-server health care society. Topics will include ANSI SQL, data normalization, tables, queries, security, replication, data layout, backup/recovery, security, data warehousing and XML.

HIM 350 - Management for the Health Care Professional (3)

This course examines management in the health care environment including a study of the theories and concepts of management including the history of management, managerial ethics, planning, organizing, decision making, directing, controlling, organizational structure, conflict management, leadership styles, communication, group process, team building, and organizational change.

HIM 360 - HIM Theory & Practice (0-3)

Introduction to health record administration. The origin, uses, content and format of health records; the qualitative and quantitative analysis of health records; the content, format, maintenance requirements of the Master patient Index (MPI), storage and retrieval systems and control techniques for health records; number and filing systems; exploration of other registries

HIM 370 - Medical Terminology (3)

The basic language related to medical science and the allied health professions is covered including word analysis, construction, pronunciation, spelling, definition, and use of terms. Prerequisite: Keyboard Skills.

HIM 375 - Fundamentals of Clinical Medicine (3)

The nature, cause, treatment, and management of clinical disease processes. Prerequisites: ANAT-100 and PY-254.

HIM 415 - Quality Improvement (3)

Process for reviewing, monitoring, and evaluating health care services; assessment through selection of quality indicators, monitoring opportunities for improvement, evaluation of effectiveness; risk management; utilization review; critical paths; tracking/profiling; tools of QI; JCAHO standards for performance improvement; Components of Six Sigma and Malcolm Baldrige Award Prerequisite: HIM-300

HIM 420 - Research Design, Critique (3)

This class serves as an introduction to research. One of the purposes of the course is to enable students to become informed consumers of research published in health care and give students the skills to conduct research in their future careers. Critical evaluation of published literature serves as a basis for developing one's own research proposal. The course will pursue the planning phase of a research project including, culminating in the development of an IRB proposal for the planned study of an oral presentation of the planned project.

HIM 430 - Classifications Systems II (0-3)

Introduction to nomenclatures and classification systems utilized in collecting, maintaining and retrieving specified clinical data in a variety of healthcare settings. Focus of course is using Current Procedural Terminology (CPT) and Health Care Finance Administration Common Procedure System (HCPCS) for coding hospital outpatient and physician office records. Ethical concerns in the application of coding and reimbursement principles will be emphasized. Management of Coding Services will be discussed. Format for the class in 2 hours lecture and 2 hours laboratory.

HIM 440 - Clinical Data Analytics (3)

This course allows students to formulate a problem statement and implement a research design using existing clinical and administrative data to discover patterns in the data (descriptive studies) or to verify or disprove existing models or theories (predictive studies). Students will work under the direction of a faculty advisor. Projects will result in a formal report and presentation at the end of the semester. Pre-requisite: HIM420. Majors only.

HIM 450 - Human Resource Management in Healthcare (3)

Focus on: job descriptions; staffing and scheduling; performance appraisals; counseling; training needs; wage and salary administration; interviewing techniques; retention; motivation; laws related to human resources; and labor organizations in health care; productivity standard development. Prerequisite: HIM-350 or consent of instructor.

HIM 451 - Health Care Financial Mgmt (3)

Cost categories, product costing, and cost allocation as it relates to health care; development and application of budget procedures and controls; third party billing and reimbursement; legislation related to reimbursement; interpretation of financial data and essentials of a compliance program. Prerequisite: HIM-300 or permission of advisor.

HIM 453 - Professional Practice (3)

An experience in approved health care facilities and/or related sites, projects are structured to process, design, implement, and evaluate patient-related information system needs and departmental or other operations and services.

HIM 461 - Electronic Health Systems Management (3)

This course will allow students to apply computer technology and information concepts to the decision making process in the health care environment. Acquisition of systems, systems analysis, design, implementation and evaluation will be explored along with issues relating to system security. Health information systems found in health information departments will be reviewed. Present problems, limitations and future trends will be discussed. Throughout the course, the role of the health information manager in the analysis, development and implementation of systems will be emphasized. Prerequisite: HIM-300.

HIM 498 - Senior Seminar (3)

This is the capstone course for HIM majors. The purpose of this course is to assist the student in synthesizing the knowledge and skills developed during their course of study through the use of case studies and project work. Students will prepare for the credentialing exam. Alternative career opportunities will be presented. Majors Only.

HIM 499 - Special Studies (1-3)

A concentrated area of study in the field of health information management as agreed upon by the student and advisor.

Health Sciences (HSCI)**HSCI 100 - Intro to Health Sciences (1)**

This course was developed to increase students' understanding of various health professions, especially those for which Saint Louis University offers a degree program. The goal is to better clarify the health professions to assist students in developing appropriate educational and career paths. Additionally the hope is for a better understanding of how the various professions work together and complement each other within the field of healthcare.

HSCI 200 - The U.S. Health Care System (3)

The purpose of this course is to introduce the U.S. Health Care System and identify the impact historical and current health care policies have had or may have on health care delivery. A variety of health care challenges are explored including, financial reimbursement, health care access, quality health care and the role of the health care professional.

HSCI 210 - Project Management (3)

This course will discuss project management from the standpoint of a manager who must organize, plan, implement, and control tasks to achieve an organization's schedule, budget, and performance objectives. Tools and concepts such as a project charter, scope statement, work breakdown structure, project estimating, and scheduling methodologies will be studied.

HSCI 250 - Human Dev Across Life Span (3)

Presentation of the developmental process throughout the life span including physical, motor, social, and some personality development. To develop an understanding of the theories of development and what factors influence a child and adult's development.

HSCI 301 - Medical Terminology (3)

The basic language related to medical science and the allied health professions is covered including word analysis, construction, pronunciation, spelling, definition, and use of terms. Prerequisite: Keyboard Skills.

HSCI 320 - Health Law and Policy (3)

This course will provide the student with a study of law and legal concepts as they apply to the practice of health. Emphasis on institution and physician liability; HIPAA Privacy/Rule regarding privacy and confidentiality; health record documentation standards; informed consent and release of information practices as impacted by HIPAA.

HSCI 330 - Anatomy and Physiology I (3)

This course presents a systemic approach to the study of the human body. It will begin with an introduction to anatomical terminology, basics of histology and medical imaging. Students are then introduced to the gross anatomy and physiology of the following systems: integumentary, skeletal, nervous, circulatory, respiratory, digestive, urinary and reproductive. Fall semester will cover integumentary, skeletal, muscular, nervous and endocrine. Students will be responsible for learning from the online laboratory, Anatomy & Physiology Revealed. This is a 3 hour course.

HSCI 331 - Anatomy & Physiology I Lab (1)

This course presents a systemic approach to the study of the human body. It will begin with an introduction to anatomical terminology, body orientation, and basic histology. Students are then introduced to the gross anatomy of the following systems: integumentary, skeletal, nervous, circulatory, respiratory, digestive urinary and reproductive. The course will cover the anatomy of the integumentary, skeletal, muscular and endocrine systems. Students will be responsible for learning from the online laboratory, Anatomy & Physiology Revealed and classroom lab. This is a 1 hour course.

HSCI 340 - Anatomy and Physiology II (3)

Emphasis in this course is on the gross and microscopic study of the human body; specifically on anatomical and physiological concepts, terminology, and correlation of structure and function. The major organ systems to be studied include the circulatory, cardiovascular, respiratory, digestive, lymphatic, endocrine, urinary and reproductive. The scientific process, histology and molecular basis of disease will also be explored. This course will utilize readings, Internet resources, multi-media presentations, group discussions, other assignments and aligned assessments to expand the topics.

HSCI 341 - Anatomy and Physiology II Lab (1)

The laboratory section will emphasize anatomical structure with on-line and in-class lab experience. The on-line tool used gives the student the ability to see the levels of each system and in-class will utilize models that will help the student with a hands on ability to see the issues. (See syllabus)

HSCI 350 - Healthcare Technology (3)

This course will discuss how a student can assist healthcare providers to choose, implement, train, and maintain an electronic health records system. Emphasis on the essential components of the electronic health record and health information exchange essentials; system selection and implementation; project management and fundamentals of change and human factors will be covered.

HSCI 370 - Research Methods (3)

This introductory course will define evidence-based practice and its importance for improving the health care of society. Working in interprofessional teams, students will perform literature searches using biomedical databases. Research topics will include nationally identified topics of concern in health care such as health disparities, health literacy, cultural sensitivity, patient/consumer education, and patient safety. Students will explore how health care questions may best be answered by looking in literature across professions and the value of collaboration for addressing challenges in improving health care.

HSCI 400 - Neuroscience in Daily Life (3)

Knowledge about neuroscience has exploded in recent years. Translation of this important body knowledge into how to understand our behavior and actions in daily life is the focus of this course. Broad applications for life decisions such as leisure activities, choice of spouse, design and use of space and drug and alcohol use will be explored. Additionally, the importance of understanding neuroscience when adverse life events occur such as stroke, premature birth, chronic disease or disability will also be explored and applied to life choices and options.

HSCI 450 - Hot Topics in Health Care (3)

This course will focus on examining key issues confronting health care today. The course will include seminars, lectures, and round table discussions reflecting on current issues and trends within the health care industry

HSCI 460 - Consumer Health Technology (3)

This course will help teach students how to bridge the gap between patients and health resources. It will review technologies focused on patients as the primary users of health information - remote monitoring, videoconferencing and telepresence. The students will determine what are the consumers' needs for health information to include health literacy issues surrounding the understanding of that information.

HSCI 470 - Health Care & Human Res Mgt (3)

This course focuses on job descriptions; staffing and scheduling; performance appraisals; counseling; training needs; wage and salary administration; interviewing techniques; retention; motivation; laws related to human resources; and labor organizations in health care; productivity standard development.

HSCI 490 - Fundamentals Healthy Living (3)

This course explores health living principles as they relate to wellness, nutrition, exercise, societal fads, culture and aging.

HSCI 500 - Science & Philosophy (3)

Students in this course will explore Science and Philosophy and the connection through language and technology to the activity of inquiry.

HSCI 505 - Foundations of US Health Care System (3)

This course directs students in the investigation of the unique history, structure and delivery systems that render the U.S. health care system different from that of any other developed nation. The financial, regulatory, scientific and financial elements that have shaped the system will be studied as well as the current and future impact of reforms.

HSCI 510 - Seminar I (1)

This course provides the tools for students to develop their skills in conducting literature searches and critically evaluating literature pertinent to their research project.

HSCI 515 - Seminar II (1)

The primary focus of this course is to develop effective presentation techniques by presenting research articles germane to student projects to their peers.

HSCI 520 - Seminar III (1)

This is a continuation of Seminar I & II in which students continue to advance their skills in the effective delivery of research studies to peers. Students will also have the opportunity to develop the skills necessary to complete their thesis presentation and defense required in Research III.

HSCI 525 - Qualitative Methods for Health Sciences Research

This course examines the traditions and methods, scientific issues and techniques of data collection, analysis and interpretation associated with qualitative research. Emphasis is given to determining appropriate research questions and the development and refining of skills necessary to conduct qualitative studies in health sciences research.

HSCI 530 - Research I (3)

This course provides an overview of research methodologies. In consultation with their research mentor, students will refine their research project topic and develop a project proposal and protocol, when appropriate. Student will also be required to complete IRB (as appropriate) and ethics training.

HSCI 535 - Research II (3)

In this course students work with their research mentors to conduct their research project. The student will be primarily responsible for the data collection and preliminary data analysis phases of their study.

HSCI 540 - Research III (3)

The focus of this course is completion of data analysis and project thesis. Furthermore, building on the foundations learned in the Research Seminar course sequence, students will be required to develop and deliver a verbal presentation on and defense of their research project.

HSCI 545 - Independent Study (1-3)

This contract course allows students to pursue topics relevant to the research project.

HSCI 550 - Advanced Consortium (3)

The health care industry is arguably the most dynamic of all, with changes coming quickly and often. The tremendous influence of external events related to policy, regulation, the economy, technology, ethics and law have a profound impact on the health care industry, those who access its services, and those who work within it. This course is designed to prepare students to identify these influences and changes, understand the best and most reliable information relative to them and where to find it, and to support them in becoming the most informed consumer and provider of health care services or information.

HSCI 555 - Intro Appl Epi-Biostats (3)

This course was developed by the Centers for Disease Control and Prevention (CDC) as a self-study course. This course covers basic epidemiology principles, concepts and procedures useful in the surveillance and investigation of health-related states or events. It is designed for federal, state, and local government health professionals and private sector health professionals who are responsible for disease surveillance or investigation.

HSCI 560 - Essential Concepts in Statistics & Research Design

This course will be a hands-on research design and data analysis course in which students will work with data sets in Excel, SAS and SPSS. Students will be taught how to think, capture, manipulate and analyze data using common statistical techniques. Emphasis will be on the technical aspects of research.

Athletic Training (MAT) (MAT)**MAT 100 - Intro to Athletic Training (1)**

This course introduces students to the athletic training profession and explores the specialties and opportunities for practice. The students participate in lectures and seminars by the athletic training faculty and practitioners across practice areas, including high school, collegiate professional, private and industrial settings. The historical foundations of athletic training and the evolution of the contemporary practice of athletic training are discussed.

MAT 200 - AT Student Development I (1)

This course is designed to move the student from thinking about the profession of athletic training to thinking about him/herself as a future professional and an athletic trainer. Students explore the Foundational Behaviors of Professional Practice in Athletic Training. The concept of the Jesuit Mission is expanded to include consideration of the integration of Foundational Behaviors of Professional Practice. Essentials of effective career development including communication skills, critical thinking, professional networking, cultural competence, and time and energy management are addressed.

MAT 300 - Athletic Training Student Development (2)

This course introduces the student to the cognitive, psychomotor and affective skills integral to athletic training. These abilities lay the foundation for the development of competency in clinical practice. They are also necessary for taping, bracing, injury prevention and emergency care.

MAT 414 - Exercise Physiology (0-3)

This course examines types of exercise, muscle physiology and training regimens to improve muscle strength, power and endurance. Cardiovascular and pulmonary responses to exercise and training regimens will be included. Concepts of obesity and its management also will be covered.

MAT 497 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

MAT 501 - Principles of Athletic Training (3)

This course establishes the role of the certified athletic trainer in the prevention, recognition and treatment of commonly encountered athletic injuries. Basic concepts of injury prevention, mechanisms of injury, injury evaluation, and acute injury management are covered. Laboratory sessions to demonstrate and practice taping and wrapping are included.

MAT 510 - Athletic Training Kinesiology (3)

This course applies the foundational sciences of physics, human anatomy and human physiology in developing and understanding of the kinetics and kinematics of human movement in sport. Emphasis is placed on the functional motions of running, jumping, and throwing (overhand and underhand).

MAT 516 - Bioenergetics Athletic Perform (3)

This course establishes the role energy, metabolism, energy costs, associated metabolic changes, gender influences on metabolism, resting metabolic rate, and the thermal effects of food. All of these factors will be addressed specifically as they are evident in athletic performance.

MAT 524 - Musculoskeletal Assessment & Management I (1)

This course explores the pathokinematics of selected pathologies within the upper quadrant of the human body, relevant examination techniques to assist in differential diagnosis, and subsequent intervention measures.

MAT 525 - Musculoskeletal Assessment and Management

This course covers the pathokinematics of selected pathologies within the lower quadrant and the examination, diagnosis and treatment of those conditions. Treatment procedures discussed and practiced include use of mobilization of bony and soft tissues, and other forms of active and passive exercise, both mechanical and non-mechanical, for a broad range of musculoskeletal conditions.

MAT 540 - Lab Studies and Imaging (2)

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

MAT 542 - Pharmacology in Athletic Train (2)

This course provides a basic overview of drugs commonly used in sports medicine. The processes of pharmacokinetics and pharmacodynamics and autonomic pharmacology will be reviewed. General drug categories, specific actions, and adverse reactions will be discussed.

MAT 550 - Rehabilitation in AT I (4)

This course provides a framework for the design and implementation of athletic rehabilitation programs. The emphasis in the course is the use of therapeutic exercise in the treatment of athletic injuries and post-surgical conditions. Rehabilitation programs are considered from early stage through terminal conditioning and functional return. Advanced high-level activities are reviewed including plyometrics and advanced proprioceptive activities.

MAT 555 - Rehabilitation in Athletic Training II (3)

This course provides an evidence-based approach to rehabilitation of injuries and conditions associated with athletic participation. The emphasis in the course is the development of rehabilitation protocols utilizing of therapeutic modalities and therapeutic exercise. Surgical and non-surgical approaches to conditions and injuries will be addressed.

MAT 560 - Athletic Training Administration (3)

This course is concerned with the organization and administration of athletic training services in high school, collegiate, and professional athletics, as well as non-traditional athletic training sites including industry and health clubs. Topics of emphasis include medicolegal liability, budgeting, facility design, documentation and record keeping, drug testing, professional ethics, pharmacology issues and components of pre-participation physicals. NCAA compliance issues will also be discussed.

MAT 562 - Psychology of Sport and Injury (3)

This course examines the effects of culture, motivation, personality, attitudes, competition and group dynamics on sport performance. In addition, the psychological effects of exercise and competition are discussed, including pathological conditions such as exercise addiction and disordered eating. This course also deals with psychological response to injury, treatment, rehabilitation and return to participation.

MAT 565 - Research in Athletic Training (2)

Change Course Description to: This course will introduce athletic training students to several types of clinical research designs including designs for group studies, epidemiological studies, survey research and qualitative studies. Review of literature, definition of problem and formatting design, reporting data and conclusions are presented. Interpretation of selected statistical methods will also be included.

MAT 570 - AT Clinical Practicum I (3)

This course is designed to provide the student with the first clinical experience in athletic training. Building on the basic knowledge acquired in MAT 501, the student will work in the training room under the supervision of an approved clinical instructor (ACI). The focus in this experience will be familiarization with the training room environment, developing competency in taping/wrapping, documentation and record-keeping, and practice/game preparation.

MAT 575 - AT Clinical Practicum II (3)

This is the second clinical course for the athletic training student. In this course, the student is assigned to an intercollegiate team for the semester and assists the ACI with pre-participation exams, daily preparation and coverage of practices and games (home and away) and injury management and rehabilitation. The student focuses on developing competency in the examination and treatment of upper and lower extremity injuries during this semester.

MAT 580 - Medical Conditions in Athletic Training (3)

This course is a review of responses of the body to exercise and sports with specific discussion of acute and chronic medical problems that can affect athletic performance. Medical conditions that are emphasized include asthma, diabetes, cardiac abnormalities, and viral diseases. In addition, this course covers dermatological conditions encountered in sport.

MAT 590 - AT Field Experience (2)

This is an internship with the athletic training staff of an outside agency affiliated with the program. Documentation will be kept in a portfolio format.

MAT 595 - AT Clinical Practicum III (4)

This is the third clinical course for the athletic training student. Expanding on their prior experience, students will be assigned for the semester as a senior student athletic trainer for one of the intercollegiate teams, and will also have additional training room coverage hours. Through the mentoring of the ACI and these expanded responsibilities, the student is expected to show development of the communication, time management and organizational skills necessary to succeed in a high volume athletic training setting. With an emphasis on problem solving and critical thinking skill development, the student will be expected to take a more active role when providing athletic health care to the injured athletes.

MAT 616 - Enhancing Athletic Performance (2-3)

This course is designed for students to use knowledge of anatomy, physiology, kinesiology, and coaching techniques in designing strength and conditioning programs for athletes. Consideration will be given to strategies for improving sports-specific agility, speed, power, strength, and cardiovascular/respiratory fitness.

MAT 670 - AT Capstone Project (2)

In this capstone course in the final semester, the student will select a study topic in athletic training. Each student selects a faculty advisor to provide guidance in planning, coordinating, conducting and presenting the project. The study can take several different forms including a literature review, a mentored research project with a faculty member, or a community service project in athletic training.

MAT 671 - AT Clinical Practicum IV (4)

In this final clinical experience, students will be assigned to an athletic training site for the semester under supervision and instruction from an ACI. The fieldwork will emphasize greater involvement in the day-to-day organization and administrative tasks and professional development and responsibilities.

MAT 680 - Seminar in Athletic Training (3)

In this course, students will fine-tune their clinical skills in preparation for the NATA certification examination. Advanced topics in Athletic Training will be presented by a variety of health care providers.

Masters in Health Informatics (MHI)**MHI 500 - Essentials in Med Terminology (2)**

This course prepares future health informaticians with the knowledge needed to be active participants in health care discussions with the care providers in developing health information systems that meet their needs. As health care embarks on becoming technologically astute with the electronic health record, it is imperative to health informaticians that can use and understand medical terminology.

MHI 510 - Medical Vocabularies and Classification System

The representation of clinical data through the use of medical vocabularies and clinical classification systems. Emphasis is on developing expertise in identifying appropriate clinical classification systems and medical vocabularies, identifying their appropriate uses and sources, and applying them within and among health information systems to promote effective communications and achieve full integration of its health information management system.

MHI 520 - Intro to Health Informatics (3)

This course surveys the fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, telehealth, decision theory and decision support, human-computer interfaces, consumer health informatics, e-Health, and the personal health record. Department-specific applications are discussed.

MHI 530 - Information Security (3)

This course addresses information security from a policy perspective. The components of information security, the need for security, and the legal, ethical, and social challenges of information privacy and security will be discussed. The regulatory environment, HIPAA, ARRA, privacy, security and accountability will be discussed.

MHI 540 - Clinical Decision Making (3)

This course allows students to explore the history, evolution, and current applications of clinical decision support. The course emphasizes the unique challenges of clinical data representation and information retrieval techniques that are foundational to clinical decision support systems. Students will evaluate the value of clinical decision support systems in contrast with the complexities of implementation in the current medical, legal, financial, technological and cultural context.

MHI 560 - Financial Resource Management (3)

This course addresses topics such as cost analysis, justification, capital purchasing, leasing strategies, risk-sharing models, purchase agreements, contracts, corporate compliance, charge master, prospective payment systems, healthcare organization revenue cycle, leveraging health care information to drive strategic decision making.

MHI 570 - Project Management for Health Informatics Prof

This course prepares future health informaticians with the knowledge needed to manage projects, add value and guide health care discussions and teams in a variety of project and most specifically the develop and implementation of information systems.

MHI 590 - Applied Informatics Project I (3)

The goal of the applied informatics project I is to prepare students in the areas of inferential statistics, the research process, study/project design and outcome analysis.

MHI 591 - Applied Informatics Project II (3)

The goal of the applied informatics project II is for the student to use the skills they acquired over the course of their studies in informatics to analyze, develop and implement research plans that produce a pilot project, a proof of concept or a prototype system that has the potential to impact and/or promote knowledge discovery and dissemination.

MHI 593 - CURRENT TOPICS HEALTH INFORMATICS (3)

This course will examine high profile current topics within the area of Health Informatics.

Molecular Imaging/Therapeutics (MIT)**MIT 511 - MRI Physical Principles (3)**

This class will cover the history of magnetic resonance imaging, magnetism, signal production, and the physics related to imaging. This will include, but is not limited to: tissue characterization; T1 and T2 relaxation; signal decay; K-space; Fourier transformation; spatial encoding; and image characteristics.

MIT 512 - MRI Cross Sectional Anatomy and Pathology (3)

Students will become familiar with cross-sectional anatomy and will learn how to view and to image the human body in multiple planes. The pathology of the various body regions (including neurological, visceral, musculoskeletal, soft tissue, and vasculature) will be discussed as it relates to MR imaging.

MIT 513 - MRI Instrumentation and Quality Analysis (3)

This class covers all components of MR imaging equipment including the magnet, the acquisition console, and all ancillary equipment. The various types of magnets, gradients, shims, radiofrequency coils, and magnetic and RF shielding will be covered, as well as maintenance, quality analysis and operational workflows.

MIT 514 - MRI Clinical and Image Production (5)

Students will learn the clinical aspects of MRI. This includes the imaging parameters for intrinsic image contrast characteristics; proper sequence selection; adjustments of imaging options; administration of contrast media; and use of post-processing applications.

MIT 515 - MRI Patient Care & Safety (3)

This class will cover the handling and care of patients, visitors, and staff in the MRI environment. This includes the proper education and screening of anyone or any equipment entering the magnetic field. Emergency procedures and their effect on patients, staff, and the public will also be discussed.

MIT 521 - Clinical MRI Practicum (9)

Students will perform a wide variety of magnetic resonance imaging procedures in multiple clinical setting under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics. Clinical experience will include venipuncture and the administration of contrast media.

MIT 522 - Advanced/Emerging Technologies (2)

An exploration of the emerging technologies and advances in MRI, including their impact on imaging and healthcare, will be presented. In addition, a correlation between MRI and other imaging modalities (Computed Tomography, Nuclear Medicine/PET, Ultrasound, etc.) will be discussed.

MIT 531 - XRT Radiation Physics (1)

This course is intended for those who may be interested in the fundamental concepts of physics that apply to the field of Nuclear Medicine and Radiation Therapy. During this course the student is introduced to the fundamental structure of the atom and its associated binding energies. The course includes a comprehensive coverage of the types and mathematics of radioactive decay. Interactions of charged particles and photons with matter are discussed to provide a basis for the understanding of radiation detectors. X-ray production as well as internal radiation dosimetry will be covered. (Pre-requisites: MATH 141, PHYS 122 & PHYS 124)

MIT 532 - XRT Radiation Therapy Practice I (3)

This course provides the student with an overview of the foundations in radiation therapy and practitioner's role. Principles of radiation, health safety, ethics and the professional responsibilities of the radiation therapist will be discussed and examined. Basic operational issues in radiation therapy will be examined. The role of the radiation therapist in the health care organization, the treatment prescription, the documentation of treatment parameters and delivery, emergency procedures and patient condition and education needs will be presented, discussed, and evaluated. The students are expected to observe and gain practical experience in the areas of patient care, patient safety, department operation, localization, treatment, dosimetry, and quality assurance as these are all components of the daily responsibilities of the radiation therapist.

MIT 533 - XRT Treatment Technique (3)

This course will introduce concepts and terminology of radiography and radiation therapy treatment set-ups. It will examine anatomy, positioning, immobilization, field boundaries, and standard beam arrangements for site-specific anatomical areas. Laboratory experiences include virtual simulation demonstrations and conventional/CT simulator practice with a phantom.

MIT 534 - XRT Treatment Planning (3)

Introduces concepts and terminology of radiation therapy treatment planning. Describes anatomical site-specific treatment planning, which incorporates imaging; target volume delineation and dose prescription; organs at risk delineation and respective dose limitations; beam arrangement, energy, modality, and modifiers; related calculations; and dose evaluation. Laboratory experiences include demonstrations and practice with computer treatment planning systems.

MIT 535 - XRT Clinical Practicum I (6)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated.

MIT 536 - XRT Emerging Technologies (2)

This course will introduce basic x-ray production and its uses plus advanced imaging technologies. A study of human anatomy as it relates to radiographic films and cross sectional human anatomy is also covered.

MIT 540 - XRT Radiation Oncology Patient Care and Quality

This course introduces the student to the roles and responsibility of the radiation therapist in meeting the general needs of the patient undergoing radiotherapy, including nursing, patient safety and quality management. The student will be provided with foundation concepts and competencies in assessment and evaluation of the patient for service delivery. Psychological and physical needs and factors affecting treatment outcomes will be presented and examined. Incorporated into patient care, the course reviews principles and guidelines of a quality management program in radiation, incorporating clinical process, equipment, and documentation that demonstrate patient care outcomes. Additionally, regulatory agencies and respective rules affecting the radiation oncology workplace, staff, and patients are emphasized. The role of the radiation therapist in patient care, safety and quality management is stressed.

MIT 541 - XRT Radiobiology and Radiation Protection (1)

The radiobiology course content is designed to present basic concepts and principals of radiation biology. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Discussion of the theories and principals of tolerance dose, time-dose relationships, fractionation schemes and relationship to the clinical practice of radiation therapy will be discussed, examined and evaluated. The radiation protection section of this course covers the basic concepts of radiation protection, types of radiation, personnel and facility radiation monitoring, environmental protection, the safe handling of radioactive materials, equipment use, quality control, and how these concepts relate to radiation protection. Radiation safety practices in radiation therapy departments, and regulations that govern the use of radioactive materials in the clinical setting will also be covered. The entirety of the course will provide the student with an understanding of the significance of protecting themselves and the patients that they serve.

MIT 544 - XRT Clinical Dosimetry (4)

Reviews basic concepts introduced in Treatment Planning, further examining factors that influence and govern dose determination and planning treatment for radiation therapy patients. Emphasizes clinical application of photon and electron beam characteristics, dose calculations, and related factors to safely and optimally treat the radiation therapy patient. Several laboratory sessions supplement the lectures. Some focus is directed on clinical dosimetry and treatment planning for radiation oncology special procedures.

MIT 545 - XRT Clinical Practicum II (0)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting simulation, treatment planning and administration of the prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during, and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Continuation of Clinical Practicum I.

MIT 551 - NMT Radiation Physics and Radiation Protection

This course is intended for those who may be interested in the fundamental concepts of physics that apply to the field of Nuclear Medicine and Radiation Therapy. During the physics portion of the course the student is introduced to the fundamental structure of the atom and its associated binding energies. The course includes a comprehensive coverage of the types of mathematics of radioactive decay. Interactions of charged particles and photons with matter are discussed to provide a basis for the understanding of radiation detectors. X-ray production as well as internal radiation dosimetry will be covered. The radiation biology section of this course covers the basic concepts of radiobiology, sources and types of radiation, and the effects of radiation exposure to humans. The radiation protection section covers the safe handling of radioactive materials, radiation safety practices in the nuclear medicine and radiation therapy departments, and regulations that govern the use of radioactive materials in the clinical setting. The entirety of the course will provide the student with an understanding of the significance of protecting themselves and the patients that they serve.

MIT 552 - NMT Radiochemistry (3)

This course will focus on the methods of production and compounding radiopharmaceuticals and their biodistribution in the human body. There will also be sections on general nomenclature of the radiopharmaceutical, aseptic technique and pertinent regulations.

MIT 553 - NMT Nuclear Medicine Instrumentation (2)

During the basis instrumentation part of the course the student is introduced to the principles and operation of various types of radiation detectors and imaging devices in nuclear medicine. The series of basic events by which the energy of a detected gamma or x-ray photon is transformed into electrical pulses will be discussed. The theory and operation of SPECT and PET/CT imaging instruments will be discussed. Quality control procedures will be emphasized through a series of instrumentation experiments, the students will have an opportunity to calibrate a single channel analyzer and identify the detection characteristics influencing the counting of radioactivity.

MIT 554 - NMT Clinical Nuclear Medicine (5)

This course is divided into four sections, which are taught simultaneously in units. These sections are imaging, nonimaging, patient care and administrative procedures. The imaging portion of the course includes a review of concepts in anatomy, physiology and pathology as they relate to clinical applications in nuclear medicine. Through a team teaching approach (physicians and technologists), indications for nuclear medicine exams, procedural techniques and analysis of laboratory data are presented. Students learn how basic image appearance and/or numerical data are altered by specific pathologic states. The nonimaging portion of the course includes an introduction to basic laboratory equipment, its proper operation and necessary quality control procedures. Principles of immunology are presented prior to discussing individual procedures. Lecture presentations are reinforced with companion clinical application experiments performed in the student laboratory.

MIT 555 - Nuclear Medicine Information Systems (3)

In this course the basic principles of computer design and operation will be presented. The student will gain an understanding of how these principles are applied to Nuclear Medicine computer applications.

MIT 561 - NMT Imaging Practicum (7)

During the imaging rotation the student is expected to have observed the following procedures and be capable of performing same under the supervision of the staff technologist. A record is kept as to the number of procedures a student has observed, participated in and performed.

MIT 562 - NMT Radiochemistry Practicum (3)

During the radiopharmacy rotation the student is expected to observe all procedures and be capable of performing same under the supervision of the radiopharmacist or the responsible individual. A record is kept as to the number of times each task has been observed, participated in and performed by the student.

MIT 563 - NMT Emerging Technologies (2)

The Advanced Imaging course is designed to provide students with a working knowledge of the contribution of Computed Tomography, Magnetic Resonance Imaging and PET/CT imaging.

MIT 598 - NMT Clinical Practicum (0)

This course follows the same content and objectives as NMT 561. It is offered during the summer semester to complete the 12 month program.

MIT 599 - Clinical MRI Practicum II (0)

Students will perform wide variety resonance imaging procedures in multiple clinical settings under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics. Clinical experience will include venipuncture and administration of contrast media. Continuation of Clinical Practicum I.

MIT 600 - Masters Seminar I (1)

This course is the first of three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both of their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 610 - Masters Seminar II (2)

This course is the second of the three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 620 - Masters Seminar III (3)

This course is the final course of three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 630 - MIT Independent Study (1-3)

This course is intended for MIT students who undertake a research project in which the complexity of the work extends the project beyond the traditional MIT schedule. The length of this course may not extend the entire semester and the course will end upon completion of the contracted work.

Medical Laboratory Science (MLS)**MLS 315 - Urinalysis & Immunology Laboratory (1)**

A laboratory course designed to provide hands-on laboratory experiences in the analysis of urine and other body fluids to include spinal fluid using real patient samples. Students will learn and perform the three phases of urine analysis to include the physical, chemical and microscopic evaluation of a urine sample. The principles of urinalysis testing will be discussed along with the clinical significance of the various procedures used in testing urine and their role in disease diagnosis. Physical analysis and cell counting procedures will be performed and discussed on various body fluids. Pre-requisite(s): BIOL 104 and CHEM 164; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): BLS 311

MLS 320 - Principles of Clinical Education (1)

Basic concepts of education theory and applications as it applies to medical laboratory practice are presented. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): MLS or MLS Categorical students; Permission of the instructor

MLS 330 - Clinical Laboratory Management (1)

Basic concepts of management theory and laboratory operations to include human resource management, financial management, quality assurance/improvement, and governmental regulations are presented. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): MLS, MLS Categorical, CYTO Senior or CYTO post-baccalaureate students; Permission of the instructor

MLS 415 - Analytical Chemistry Laboratory (2)

A laboratory course which provides an introduction to chemical reactions and analytical instrumentation as used in laboratory diagnosis. Topics include: pipetting techniques, solutions, lab math, basic concepts of instrument selection and evaluation, quality control, photometry, electrochemistry, and chromatography. Analysis of human body fluid specimens demonstrates selected principles. Pre-requisite(s): CHEM 343 & CHEM 345; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): BLS 411

MLS 416 - Molecular Biology Laboratory (2)

A laboratory course which presents concepts of molecular biology and hands-on laboratory experiences in a variety of molecular techniques to include the use of restriction enzymes, isolation of genomic DNA, evaluation of DNA purity, hybridization techniques (Southern, Northern & Western), amplification techniques (e.g. PCR & Real time PCR), gel electrophoresis, recombinant DNA techniques, microarray assays, and use of bioinformatics websites for sequence searching. Pre-requisite(s): BIOL 104 & CHEM 164; BIOL 302 recommended; MLS, MLS Categorical, CYTO Junior, or CYTO post-baccalaureate students; Permission of the instructor Co-requisite(s): BLS 413

MLS 425 - Hematology Laboratory (1)

Performance, interpretation, and troubleshooting of a variety of basic hematology procedures will be accomplished using clinical specimens. Cell counts and differentials (both manual and automated) and other Hematology procedures will be performed on blood. Principles and reactions involved in the testing procedure will be emphasized as well as the interpretation of results. Students will also receive an introduction to phlebotomy. Pre-requisite(s): BIOL 104 & CHEM 164; BIOL 302 recommended; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): BLS 421

MLS 435 - Immunohematology Lab (1)

Practice in routine testing procedures utilized in the blood bank such as blood typing, antibody identification, and crossmatching, including a review of theoretical principles. Tube and gel methods will be utilized. Pre-requisite(s): BLS 441; MLS or MLS Categorical students; Permission of the instructor Co-requisite: BLS 431

MLS 452 - Medical Bacteriology (2)

Content focuses on prokaryotic microbes of pathologic importance. Included are discussions on structure, molecular biology, molecular diagnostics, metabolism, growth, replication, current topics and emerging concerns. Pathogenicity, epidemiology, diagnosis and laboratory identification of important groups of human pathogenic bacteria are emphasized. Modes of action of selected antimicrobics and chemotherapeutic agents are also discussed. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 451; MLS, MLS Categorical, or CYTO students; Permission of the instructor

MLS 453 - Medical Mycology (1)

Course will focus on the clinically relevant fungi and the mycotic diseases of man. Terminology, taxonomy, pathogenesis, specimen processing and techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 451: MLS or MLS Categorical students; Permission of the instructor

MLS 454 - Medical Parasitology (1)

Course will focus on the clinically relevant parasites and the diseases they produce in man. Terminology, aspects of epidemiology, modes of transmission, pathogenesis, morphology, life cycles, specimen processing and techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): BLS 451; MLS or MLS Categorical students; Permission of the instructor

MLS 455 - Medical Bacteriology Laboratory (2)

Laboratory course designed to give the student experience in the isolation, identification and susceptibility testing of microorganisms, as well as an introduction to non-culture based procedures used in the diagnosis of infectious disease. Pre-requisite(s): BLS 451; MLS; MLS Categorical or CYTO students; Permission of the instructor Co-requisite: MLS 452

MLS 456 - Medical Mycology/Parasitology Laboratory (1)

A laboratory course involving the analysis of the clinically relevant fungi and parasites and the diseases they produce in man. Techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 453 & MLS 454

MLS 461 - Advanced Topics and Case Correlations (3)

Key content areas of laboratory medicine will be reviewed and advanced topics, molecular diagnostics and specialty areas in the clinical laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): MLS 470-482; Permission of instructor

MLS 461 - Advanced Topics and Case Correlations (2)

Key content areas of laboratory medicine will be reviewed and advanced topics, molecular diagnostics and specialty areas in the clinical laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): MLS 470-482; Permission of instructor

MLS 462 - Advanced Topics and Case Correlations-Clinica

Key content areas of clinical chemistry will be reviewed, advanced topics, molecular diagnostics and specialty areas in the clinical chemistry laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): Clinical Chemistry Categorical students; Permission of instructor

MLS 463 - Advanced Topics and Case Correlations - Hema

Key content areas in clinical hematology will be reviewed, advanced topics, molecular diagnostics and specialty areas in the clinical hematology laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): Clinical Hematology Categorical students; Permission of the instructor

MLS 464 - Advanced Topics and Case Correlations - Micro

Key content areas in clinical microbiology will be reviewed, advanced topics, molecular diagnostics and specialty areas in the clinical microbiology laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations.

Pre-requisite(s): Clinical Microbiology Categorical students; Permission of the instructor

MLS 470 - Clinical Chemistry Routine Testing Practicum (

Clinical rotation course focuses on clinical chemistry testing in a practicum setting. Concepts and techniques include: protein structure and function; enzyme kinetics; carbohydrate and lipid metabolism; hormonal regulation; pathophysiology of water, electrolyte, and acid-base balance. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 411, BLS 412, & MLS 415; MLS or MLS Categorical students; Permission of the instructor. Co-requisite(s): MLS 471

MLS 471 - Clinical Chemistry Routine Testing (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical chemistry practicum. Pre-requisite(s): BLS 411, BLS 412, & MLS 415; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 470

MLS 472 - Clinical Chemistry Special Testing Practicum (1

Clinical rotation course focuses on clinical chemistry testing in a practicum setting. Concepts and techniques include: therapeutic drug monitoring, electrophoresis & toxicology investigative techniques. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 411, BLS 412, & MLS 415; MLS or MLS Categorical students ; Permission of the instructor Co-requisite(s): MLS 473

MLS 473 - Clinical Chemistry Special Testing (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical chemistry practicum. Pre-requisite(s): BLS 411, BLS 412, & MLS 415; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 472

MLS 474 - Clinical Hematology Practicum (2)

Clinical rotation course focuses on the counting, identification and analysis of the cellular components of blood in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 421 & MLS 425; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 475

MLS 475 - Clinical Hematology (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical hematology practicum. Pre-requisite(s): BLS 421 & MLS 425; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 474

MLS 476 - Clinical Hemostasis Practicum (1)

Clinical rotation course involving specialized hemostasis testing in a practicum setting. Concepts and techniques include the evaluation of bleeding and thrombotic disorders. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 422; MLS or MLS Categorical students; Permission of the instructor

MLS 477 - Clinical Phlebotomy Practicum (1)

Clinical rotation course where experience is gained in the principles and procedures of blood collection. Professional and interpersonal communication with patients along with accurate selection and handling of equipment/collection are emphasized. Following OSHA and standard clinical safety guidelines in the collection and handling of blood is required.

Pre-requisite(s): MLS or MLS Categorical students; Permission of the instructor

MLS 478 - Clinical Immunohematology Prac (2)

Clinical rotation course providing laboratory experience in routine and specialized blood bank techniques such as antibody identification, crossmatching and component preparation. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 431 & MLS 435; MLS or MLS Categorical students; Permission of the instructor. Co-requisite(s): MLS 479

MLS 479 - Clinical Immunohematology (1)

Discussion, assignments and exams covering the theory, concepts and procedures used in the clinical immunohematology practicum. Pre-requisite(s): BLS 431 & MLS 435; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 478

MLS 480 - Clinical Microbiology Prac (3)

Clinical rotation course applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in a clinical setting. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 451, MLS 452 & MLS 455; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 481

MLS 481 - Clinical Microbiology (2)

Assignments and exams covering the theory, concepts and procedures used in the clinical microbiology practicum. Pre-requisite(s): BLS 451, MLS 452 & MLS 455; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 480

MLS 482 - Clinical Urinalysis Practicum (1)

Clinical rotation course focuses on the physical, chemical and cellular components of urine in a clinical laboratory setting. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Pre-requisite(s): BLS 311 & MLS 315; MLS or MLS Categorical students; Permission of the instructor

Occupational Therapy (MOT)**MOT 500 - Fundamentals of Occupational Science I (1)**

This course introduces post-baccalaureate students to basic concepts and terminology of occupation and occupational science. This inception and evolution of the scholarly discipline of occupational science, and its relationship to occupation therapy will be explored. Students will gain familiarity with the trends, findings, and leadership in the research. They will develop an understanding of the forms and functions of occupation through the life span, and the impact of occupational opportunity and expression on society and individuals. The impact of physical, economic, cultural, and other aspect of context on the expression of human occupation will be explored.

MOT 501 - Fundamentals of Occupational Science II (1)

The Professional Development Seminar is a progressive series of seminars beginning the student's junior year and continuing through the fifth professional year. This seminar will introduce students to the necessary preparatory prerequisites for participation in Level II Fieldwork including progression policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Fieldwork Coordinator.

MOT 502 - Professional Development I (1)

This seminar will introduce students to the necessary preparatory prerequisites for participation in Level II Fieldwork including progression policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Fieldwork Coordinator.

MOT 515 - Kinesiology (0-3)

Students learn biomechanical and occupation based approaches across a range of musculoskeletal conditions. Assessment and intervention approaches are applied to congenital and acquired conditions encountered in person of middle age through older adulthood. Lab Required.

MOT 517 - Neuroscience in OT (4)

This course will address the neuroanatomical and neurophysiological bases of sensory perception, emotion, cognition and learning, and movement that are foundational to occupation performance. Disorders that affect the nervous system resulting in impaired functional ability will also be discussed, including management and evaluation techniques utilized by occupational therapy. Pre-requisites: BIOL 110, ANAT 100, CHEM 153, PPY 254.

MOT 520 - Clinical Conditions & Phenomen (0-3)

This course will address how disability from traumatic or chronic illness disrupts occupational patterns and the role of occupational therapy in returning individuals to quality of life experiences

MOT 525 - Policy & Administration (2)

An introduction to the principles of management and organizational leadership, professional and personal development, and entrepreneurialism in traditional and non-traditional settings.

MOT 526 - Professional Reasoning and Development (2)

This course involves a combination of weekly large group lecture-discussions and biweekly small group seminars. Small groups of students will work closely with a faculty facilitator in a problem-based learning approach to developing clinical reasoning, teamwork, and professional communication skills. Cases will allow participants to explore personal, environmental, occupational, and ethical issues through the life span, and to apply a variety of frames of reference to evaluation and intervention. Students will be encouraged to explore and evaluate their knowledge and attitudes relative to a variety of clinical, social, and policy issues. An emphasis on independent, lifelong learning and generating solutions to complex problems will be evident throughout the course. Full-group sessions will provide didactic and interactive experiences to promote professional communication, complete prerequisites for participation in level I and level II fieldwork, understand fieldwork progression policies and procedures, and understand the expectations of students for professional behaviors during fieldwork. Lab required.

MOT 530 - Fundamentals of OT Practice (0-3)

This course introduces the learner to fundamental, contemporary foundations of occupation therapy practice, with a continuous focus on meaningful occupation as both a means and an outcome of therapy. The history of the profession and its evolution through a succession of paradigm shifts is explored. The general and specific meanings of what it is to become a professional are explored. Professionalism within occupation therapy is emphasized, including ethical Standards of Practice, the domain and process of occupational therapy, and the therapeutic use of self. Professional language and documentation are introduced and practiced. Basic skills in analyzing, selecting, modifying, and using activities therapeutically are introduced and applied.

MOT 535 - Theoretical Foundations of Occupational Thera

Students in this course will understand the nature and components of a scientific theory, and how theories relate to clinical application as frames of reference, and ways to evaluate the worth of any theory. A variety of theories that inform contemporary occupational therapy practice and paradigm will be reviewed and applied through beginning clinical reasoning. Students will understand the fundamental concepts and language of each theory reviewed, the population and practice settings typically addressed, examples of evaluation and intervention approaches supported by each theory, and examples of research that has tested aspects of each theory.

MOT 540 - OT in Rehabilitation I (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences

MOT 541 - OT In Mental Health I (0-3)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab included

MOT 545 - Occupational Performance & Assessment of Inf

From a developmental perspective, this course will address how environment, activities, tasks, and roles of a client are used as meaningful occupations in planning interventions. This course will address child/adolescent meaningful occupations.

MOT 546 - OT with Older Adults (0-2)

This course addresses occupational therapy services with older adults living in the community. Learning experiences include a range of applied primary, secondary, and tertiary interventions with elders and their families. Lab required.

MOT 549 - Applied Research I (1)

This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students' exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

MOT 550 - Applied OT Research II (1-3)

This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students' exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

MOT 555 - OT in Rehabilitation II (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to neurological and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 556 - OT in Mental Health II: Intervention & Group Sk

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to psychosocial and psychiatric dysfunction will be explored through case studies and community experiences. Lab work included in course.

MOT 560 - Occup Thrpy w/Infnts & Childrn (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for child/adolescent client conditions. Compensatory and adaptive approaches to psychosocial, psychiatric, and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 565 - Applied Research III (1-2)

Building upon the foundation established in the OT Applied Research I course, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner's appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master's project, which is related to their faculty mentor's scholarship.

MOT 566 - Applied Research IV (1-6)

Building upon the foundation established in the previous Applied Research courses, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner's appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master's project, which is related to their faculty mentor's scholarship.

MOT 570 - Advanced Field Work I (6)

This course provides students with a supervised 12-week practicum required to develop entry-level skills in occupational therapy.

MOT 585 - Independent Study (1-6)

This course is the final of three applied research courses in which the student's master's project is completed under the continuing guidance of their faculty mentor

Physical Therapy (MPT) (MPT)**MPT 101 - Introduction to PT I (3)**

This course explores the specialties and opportunities for practice in the field of physical therapy. The students participate in laboratory sessions which expose them to very basic skills of physical therapy patient care. The historical foundations of physical therapy and participation on a health care team are discussed. Medical terminology is learned in order to orient the student to future studies.

MPT 102 - Introduction to PT II (1)

The focus of this course is on laying a foundation for the psychosocial, cultural, attitudinal and communication aspects involved in interacting with patients and families.

MPT 105 - Intro to Sports Medicine (3)

This course is an introduction to the disciplines within the field of Sports Medicine, and includes an overview of the historical background, legal issues, professional associations, and career opportunities. This course also focuses on the prevention, recognition, and treatment of common sports injuries. Laboratory sessions are designed to demonstrate and practice common wrapping, taping, and injury management skills.

MPT 108 - Student Development I (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 110 - Student Development II (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 208 - Student Development III (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 210 - Student Development IV (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 308 - Student Development V (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 310 - Student Development VI (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 401 - Fundamentals of PT I (1)

This course explores the historical foundations of physical therapy and the therapist role as a member of a health care team. Medical terminology is learned/reviewed to prepare the student for future studies.

MPT 402 - Fundamentals of PT II (1)

The focus of this course is laying a foundation for the psychosocial, cultural, attitudinal, and communication aspects involved in interaction with patients, families, and other healthcare workers.

MPT 408 - Concepts of Motor Learning (1)

This course will introduce basic concepts of motor learning as they relate to healthy individuals.

MPT 409 - Student Development VII (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 410 - Biomechanics (0-2)

This course covers basic mechanical concepts as they apply to living tissues and biomechanical systems. Included are descriptions of movement and equilibrium as well as the forces involved. The effects of the various forces on the human musculoskeletal system will be discussed and analyzed. Clinical applications will be made throughout.

MPT 412 - Student Development VIII (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 483 - Skills Practicum I (0)

Skills Practicum I is the clinical component of Clinical Seminar I. This course involves the students participating in clinicals one-half day over 12 weeks in the fall semester of the senior year. The students are assigned to a variety of facility types and receive close supervision from physical therapists. The student practices verbal and non-verbal communication, assessment and intervention skills. Skills Practicum I is a Pass/Fail course. The clinicals are within 60 miles of the University.

MPT 491 - Scientific Inquiry (2)

This course introduces the process and foundation of clinical research stressing traditional group research designs. There is emphasis on measurement theory and techniques, data analysis, and discussion of scientific professional literature.

MPT 508 - Student Development IX (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 510 - Student Development X (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 511 - Student Development XI (0)

Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The courses is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 520 - Musculoskeletal Pathology (2)

This course is a broad survey of the medical management for patients with primary musculoskeletal disorders and/or medical disorders which effect the musculoskeletal system. The student will be introduced to the pathology, etiology, and incidence of specific disorders.

MPT 525 - Orthopedic Conditions II (0-4)

This course explores the pathokinematics of selected pathologies of the upper quadrant. Students will become familiar with tests and measures to assist in differential diagnosis and appropriate interventions.

MPT 526 - Neuropathology (2)

This course is a broad survey of the neurologic pathologies. It includes discussion of the etiology, pathology, symptomology, sequelae, medical management and treatment approaches for selected neuropathological conditions.

MPT 541 - Lab Studies for Phys Therapist (1)

This course focuses on the purpose, normal values/results, and side-effects of certain diagnostic procedures to assist the physical therapist in understanding the patients medical condition.

MPT 542 - Pharmacology for Phy Therapist (1)

This course provides a basic overview of drugs commonly used by patients seen in physical therapy. The processes of pharmacokinetics, pharmacodynamics and autonomic pharmacology will be reviewed with an emphasis on age differences. General drug categories, specific actions, adverse reactions, dosage, and PDR use will be discussed.

MPT 552 - Seminar: Clinical Instruction (1)

This course allows the participant to apply the principles of teaching and learning to clinical education. Topics include psychosocial aspects of working with students, models of supervision in clinical education, student performance evaluation, planning for students in the clinic, structuring learning experiences in the clinic, adult learning, setting objectives for students in the clinic, the art and science of questioning and dealing with challenging situations in the clinic.

MPT 560 - Departmental Administration (2)

The course covers the basic administrative and management aspects of developing and operating a physical therapy service. Included are discussions of corporate organization; planning and decision making; personnel, fiscal and operations management; marketing; and quality improvement.

MPT 562 - Professional Issues in PT (1)

This course presents issues faced by physical therapists in various clinical settings. These issues include ethical dilemmas, interactions with other health professionals, legal aspects of practice, and current professional issues influencing physical therapy practice.

MPT 573 - Clinical Rotation I (0)

Clinical Rotation I is the clinical component of Patient Management I. The first semester professional year student will spend four weeks in a clinical situation with moderate to close supervision and assistance as needed. Students will perform all phases of assessment, treatment planning, goal setting, treatment interventions and implementation as well as progression and discharge for several patients. Clinical Rotation I is a Pass/Fail course. Students may be assigned anywhere in the country depending on which sites have offered slots any given semester.

MPT 574 - Clinical Rotation II (0)

Clinical Rotation II is the clinical component of Patient Management II. The first semester professional year student will spend four weeks in a clinical situation with moderate to close supervision and assistance as needed. Students will perform all phases of assessment, treatment planning, goal setting, treatment interventions and implementation as well as progression and discharge for several patients. Clinical Rotation I is a Pass/Fail course. Students may be assigned anywhere in the country depending on which sites have offered slots any given semester.

MPT 590 - Methods of Clinical Research (1)

This course introduces the student to the components of scientific writing for case reports. All students will write a literature review and case report. In addition, the course will provide an overview of the various types of research that are pertinent to the field of physical therapy.

MPT 620 - PT as First Provider (2)

PT as First Provider. The focus on this course is screening for medical disease. Epidemiology is reviewed and discussed. Tissue repair and pathology are discussed as related to culture and nutrition. Additional topics include the effect of physical therapy on drug absorption and the effect of certain medications on exercise tolerance. The contributions of all health care professionals in clinical science and issue of referral are discussed.

Magnetic Resonance Imaging (MRI)**MRI 431 - Physical Principles (3)**

This class will cover the history of magnetic resonance imaging, magnetism, signal production, and the physics related to imaging. This will include, but is not limited to: tissue characterization; T1 and T2 relaxation; signal decay; K-space; Fourier transformation; spatial encoding; and image characteristics.

MRI 432 - Cross Sectional Anatomy and Pathology (3)

Students will become familiar with cross-sectional anatomy and will learn how to view and to image the human body in multiple planes. The pathology of the various body regions (including neurological, visceral, musculoskeletal, soft tissue, and vasculature) will be discussed as it relates to MR imaging.

MRI 433 - Instrumentation and Quality Analysis (3)

This class covers all components of MR imaging equipment including the magnet, the acquisition console, and all ancillary equipment. The various types of magnets, gradients, shims, radiofrequency coils, and magnetic and RF shielding will be covered, as well as maintenance, quality analysis and operational workflows.

MRI 434 - Clinical MRI and Image Production (5)

Students will learn the clinical aspects of MRI. This includes the imaging parameters for intrinsic image contrast characteristics; proper sequence selection; adjustment of imaging options; administration of contrast media; and use of post-processing applications.

MRI 435 - Patient Care and MRI Safety (3)

This class will cover the handling and care of patients, visitors, and staff in the MRI environment. This includes the proper education and screening of anyone or any equipment entering the magnetic field. Emergency procedures and their effect on patients, staff, and the public will also be discussed.

MRI 441 - Clinical MRI Practicum (9)

Students will perform a wide variety of magnetic resonance imaging procedures in multiple clinical settings under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics. Clinical experience will include venipuncture and the administration of contrast media.

MRI 442 - Advanced / Emerging Technologies (2)

An exploration of the emerging technologies and advances in MRI, including their impact on imaging and healthcare, will be presented. In addition, a correlation between MRI and other imaging modalities (Computed Tomography, Nuclear Medicine/PET, Ultrasound, etc.) will be discussed.

MRI 498 - Capstone in MRI (1-3)

Independent Study

MRI 499 - Clinical Practicum (0)

This course will allow the student the opportunity to apply the skills necessary for patient and personnel safety, the opportunity to practice skills necessary to obtain high quality MR images regarding the various body systems, to objectively alter protocols based on patient anatomy and pathology or physical condition, and to identify image quality and equipment problems and to make appropriate corrections. Clinical education is conducted at a clinical facility. Activities include demonstration and observation, after which the student assists in performing the activity.

Nuclear Medicine Technology (NMT)**NMT 431 - Rad Physics & Rad Prot (4)**

A study of atomic structure, radioactive decay modes, x-ray production, mathematics of decay, and interaction of radiation with matter. Radiation units, regulations regarding maximum permissible exposures to radiation, radiation monitoring and surveying, and principles of radiation protection. Concepts in radiobiology and dosimetry are covered.

NMT 432 - Radiochemistry/Radiopharmacy (3)

A study of basic radiopharmaceutical principles, generators, chemistry of radionuclides and their associated compounds, dosage forms, quality control and regulations. This course will include demonstrations and lab exercises in the radiopharmacy.

NMT 433 - Nuclear Med Instrumentation (3)

Use of these principles will be applied to understanding the theory of radiation detection with application to current imaging instruments. Students will be introduced to tomographic imaging cameras, including SPECT and PET/CT, with their necessary quality control. This course will include demonstrations and lab exercises to reinforce concepts explained in the classroom.

NMT 434 - Clinical Nuclear Medicine (5)

Applications of radiopharmaceuticals used in diagnosis and therapy, different techniques and procedures utilized including indications for studies and correlation with various disease states. This course will also include concepts and applications dealing with patient care, the health care delivery systems, CPR, and health related agencies.

NMT 435 - Nuclear Medicine Information Systems (3)

An introduction to basic hardware and software components of a computer system. Emphasis will be given to understanding basic computer principles with application to data acquisition and processing in nuclear medicine.

NMT 441 - Imaging Clinical Practicum (7)

Students will perform in a wide variety of nuclear medicine procedures, including in vivo, diagnostic and therapeutic treatments in multiple clinical settings under the direct supervision of qualified medical professionals.

NMT 442 - Radiopharmacy Clin. Practicum (3)

Students will prepare radiopharmaceuticals, perform associated quality control, dispense drugs and perform record keeping under the direct supervision of qualified medical professionals in a radiopharmacy setting.

NMT 443 - Emerging Technologies (2)

This course is designed to introduce students to advanced imaging technologies and techniques. The course will include a study of cross sectional human anatomy.

NMT 499 - Clinical Practicum (0)

Continuation of NMT 341.

Occupational Science (OCS)**OCS 100 - Seminar in OT Practice (2)**

This course is uniquely designed for the traditional freshman student, incorporating concepts learned in EDHI 100 Enhancing First Year Success, as well as, introduces those interested in the profession as a career to the realm of occupational therapy practice.

OCS 101 - Intro to Occup. Sci & Therapy (2)

The purpose of this course is to introduce freshman and sophomore students to the concept of occupation, the academic discipline of Occupational Science (OS), and the health care discipline of Occupational Therapy. Learners are encouraged to be reflective of the evolving process of their personal and professional development and their choice of occupational therapy as a career.

OCS 200 - Concepts in OS and OT (2)

This course lays the conceptual foundations for the ongoing development of students throughout the Bachelor of Science in Occupational Science and masters in Occupational Therapy program.

OCS 243 - Human Growth & Development Across the Lifespan

This online course is a preparatory or foundation course for the occupational science courses to follow. It is intended to be an introduction to the physical, emotional, psychological, intellectual, and social development throughout the lifespan, including later adulthood. Students will examine developmental norms and sequences. The theories that explain development at different stages of life and the transitions we make between childhood, adolescence, adulthood, and old age will be reviewed, including exploring the wider social factors which influence human growth and development. Finally student test theoretical concepts against their own experience and intuitions. A vertical-horizontal approach will be taken so that at each stage of lifespan, all aspects of the vertical domains will be explored.

OCS 301 - Professional Development Sem. (1)

The Professional Development Seminar is a progressive series of seminars beginning the student's junior year and continuing through the fifth professional year. This seminar will introduce students to the method of developing fieldwork education centers and the role of the academic institution in that process. This seminar will provide students with an introduction to the prerequisites for participation in level I fieldwork beginning fall semester senior year.

OCS 305 - Applied Terminology I (2)

This course is a competency based guided self-study to teach the roots, prefixes and suffixes associated with clinical conditions and organ systems.

OCS 306 - Applied Terminology II (1)

This course is a competency based guided self-study to teach the roots, prefixes, and suffixes associated with the musculoskeletal system.

OCS 312 - The Study of Occupation (3)

This course is an introduction to occupational therapy. It focuses on the individual meaning of occupation, the construction of self through human action, reconstruction of the self following disruption of activity patterns due to trauma or disability, and design of therapeutic occupations. Patterns of occupation are examined, as well as subjective dimensions of occupational experience. Reflection and insight regarding the occupational patterns of the individual student are studies.

OCS 322 - Contexts of Occupation (3)

This course is an overview of the temporal, spatial, and socio-cultural contexts of occupation as a basis for design of the therapeutic contexts of intervention. Topics in regards to temporal context of occupation including the impact of industrialization on daily patterns of activity and the social construction of the meaning of time. The spatial context of occupations will include topics such as visual experience and cognitive mapping, and the social construction of public and private space. The socio-cultural dimension of occupational context will include the concepts of culture, community, ritual, symbol, institutions, relationships, gender, and diversity, with a focus on ethnic groups in the St. Louis area.

OCS 332 - Development of Humans as Occupational Beings

This course explores the development of human occupation across the lifespan from an occupational science perspective. The course begins by outlining the domains of occupational science and occupational therapy to provide a foundation for the semester's work.

OCS 352 - Occupational Health & Wellness (3)

This course presents an overview of health and wellness from the medical, community, public health and quality of life perspectives. A framework is created for understanding the relationship as a medium for change.

OCS 362 - Lived Exp: Disab & Chron Cond (3)

Students will develop an understanding of the experience of living with a disability and chronic illness through study of first person accounts and ethnographies that address how disability and chronic illness disrupts occupational patterns in infancy through aging. This course includes both traumatic and chronic psychiatric, orthopedic, developmental and neurological conditions.

OCS 372 - Critical Perspectives of Culture, Occupation, & Society

This course extends the knowledge of humans as occupational beings by introducing concepts of culture, globalization, and marginalization. Themes of occupational justice and political occupational therapy run throughout the course as dominant American practices and perspectives, local and global conditions for occupation, and moral responsibility to understand "others" in a service role are critically analyzed.

OCS 417 - Neuroscience in OT (4)

This course will address the neuroanatomical and neurophysiological bases of sensory perception, emotion, cognition and learning, and movement that are foundational to occupation performance. Disorders that affect the nervous system resulting in impaired functional ability will also be discussed, including management and evaluation techniques utilized by occupational therapy. Pre-requisites: BIOL 110, ANAT 100, CHEM 153, PPY 254.

OCS 425 - Prof. Development & Leadership (4)

An introduction to the principles of management and organizational leadership, professional, and personal development, and entrepreneurialism in traditional and non-traditional settings.

OCS 440 - OT in Rehabilitation I (0-3)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, biomechanical and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab required

OCS 441 - OT in Mental Health I: Theory, Evaluations & Treatment

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab included

OCS 445 - Occupational Performance & Assessment of Infants

From a developmental perspective, this course will address how environment, activities, tasks, and roles of a client are used as meaningful occupations in planning interventions. This course will address child/adolescent meaningful occupations. Lab required.

OCS 449 - Applied Research I (1)

This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students' exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

OCS 450 - Applied OT Research II (1-3)

This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students' exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

OCS 462 - Clinical Conditions & Phenomena (0-3)

This course will address how disability from traumatic or chronic illness disrupts occupational patterns and the role of occupational therapy in returning individuals to quality of life experiences

OCS 472 - Fundamentals of OT Practice (0-3)

This course introduces the learner to fundamental, contemporary foundations of occupation therapy practice, with a continuous focus on meaningful occupation as both a means and an outcome of therapy. The history of the profession and its evolution through a succession of paradigm shifts is explored. The general and specific meanings of what it is to become a professional are explored. Professionalism within occupation therapy is emphasized, including ethical Standards of Practice, the domain and process of occupational therapy, and the therapeutic use of self. Professional language and documentation are introduced and practiced. Basic skills in analyzing, selecting, modifying, and using activities therapeutically are introduced and applied.

OCS 482 - Theoretical Foundations of Occupational Thera

Students in this course will understand the nature and components of a scientific theory, and how theories relate to clinical application as frames of reference, and ways to evaluate the worth of any theory. A variety of theories that inform contemporary occupational therapy practice and paradigm will be reviewed and applied through beginning clinical reasoning. Students will understand the fundamental concepts and language of each theory reviewed, the population and practice settings typically addressed, examples of evaluation and intervention approaches supported by each theory, and examples of research that has tested aspects of each theory.

Occupational Therapy (OCT)**OCT 432 - Specialty Practice (3)**

This course explores advanced treatment techniques in occupational therapy across a range of physical and developmental conditions.

OCT 438 - OT Theory & Prac: Neuro Assmt (5)

A continuum of OCT-H336 covering occupational therapy assessments and interventions pertinent to a variety of neurologic conditions and settings.

OCT 442 - Senior Inq & Research in OT (4)

Overview of research design, methodologies, and statistics applicable to occupational therapy. Students will apply this knowledge to an original research question relevant to occupational therapy.

OCT 450 - Admin, Sprvis, & Pub Pol in OT (5)

An introduction to the principles of managing a department of occupational therapy in traditional and non-traditional settings (quality assurance, personnel management, budgeting, documentation, program planning, program evaluation, legal and ethical issues) and analysis of service delivery systems relative to occupational therapy.

OCT 451 - Clinical Fieldwork (4-6)

An optional 2-3 month full-time, supervised clinical experience in a psychosocial practice setting. Designed for the student who seeks clinical experience in a specialty area.

OCT 454 - Clinical Fieldwork (6)

Supervised 12 week clinical experience required to develop entry level skills in occupational therapy.

OCT 456 - Clinical Fieldwork (6)

Supervised 12 week clinical experience required to develop entry level skills in occupational therapy.

Physician Assistant Educ (PAED)**PAED 304 - Psychosocial Dynamics: Hlth Cr (3)**

This course introduces the student to the psychological, social, and family context of health, illness, and health care. A major premise of this course is that to adequately meet the needs of the patient, the PA must consider not only disease factors, but also psychosocial factors, which affect the disease and are affected by it as well. Topics include personality, development from infancy through old age, the family's role in health care, sex and sexuality, death and dying, and health care ethics.

PAED 400 - PA Seminar (1)

This multifaceted course spans the entire professional curriculum. It includes sessions on PA employment and professional issues, health promotion and disease prevention, alternative medicine and clinical problem solving. In this course students participate in an interprofessional case seminar and are instructed in the use of technology in PA education, research and clinical practice.

PAED 404 - Physiology (4)

This is a comprehensive course that covers all major systems of the human body. Special emphasis is placed on the clinical application of this knowledge to patient management. It is designed specifically for PA students as they prepare for courses in pathophysiology and clinical medicine.

PAED 499 - Independent Study (0-3)

This course is designed for Program graduates working on degree requirements.

PAED 500 - Psychosocial Dynamic Hlthcare (2)

This course introduces the student to the psychological, social and family context of health, illness and health care. A major premise of this course is that to adequately meet the needs of the patient, the PA must consider not only disease factors, but also psychosocial factors, which affect the disease and are affected by it as well. Topics include personality, development from infancy through old age, the family's role in health care, sex and sexuality, death and dying.

PAED 501 - Professional & Psychosocial Issues of Physici

This course explores through lecture and discussion the factors affecting the development of the profession and role socialization with emphasis on standards of quality assurance, credentialing of continued competence, as well as ethical and legal issues governing clinical responsibilities and practice on a health care team.

PAED 504 - Physiology (4)

This is a comprehensive course that covers all major systems of the human body. Special emphasis is placed on the clinical application of this knowledge. The course is designed specifically for PA students as they prepare for courses in pathophysiology and clinical medicine. Previous physiology or combined anatomy/physiology is a prerequisite.

PAED 505 - P.A. Seminar (1)

Instruction in the history and role of the PA; accessing, reading and interpreting the medical literature; health promotion and disease prevention; patient education; and clinical correlation case studies.

PAED 507 - Prin of the Medical Interview (2)

This course focuses on the medical interview as a clinical skill. The various components of the medical history are presented along with techniques for effective medical interviewing. Students apply these skills while obtaining histories from selected patients. Guidance is provided with respect to communicating with patients of all cultural backgrounds, ages and personalities. A self-guided medical terminology course is also included.

PAED 508 - Medical Documentation (2)

This course focuses on how to record a complete medical history and physical exam in the appropriate format using the problem orientated medical record system. Students learn to integrate history and physical exam data as they perform histories and physicals on selected patients and then document their findings in the complete write up.

PAED 509 - Medical Genetics (2)

This course explores basic concepts and practical application of genetics and the role it plays in health and disease. Students learn to integrate this information into diagnosis, treatment and prevention of common diseases and to provide fundamental guidance in genetics to various patient populations.

PAED 510 - Foundations in Clinical Med (6)

The essentials of human pathophysiology and their relationship to clinical signs and symptoms elicited in the medical history and physical examination are presented. The etiology, epidemiology, pathophysiology, clinical manifestations and diagnostic aspects of the common diseases within each organ system are discussed and correlated. General approaches to medical management of selected problems are also presented. Although an organ-systems approach is utilized, the systems are integrated for discussion of multi-system pathology.

PAED 511 - Intro Systems App & Integument (2)

Initial component of this course will introduce the student to the general approach to the patient. The Dermatology course provides an integrated approach to understanding the pathophysiologic basis of dermatologic disorders as well as the pharmacological rationale for their therapy. Material is introduced in a stepwise fashion beginning with normal organ-specific anatomy, progressing to the pathophysiology, clinical features and treatment of representative disorders. Emphasis will be placed on an understanding of the basic functions of these organ systems, manifestation of disease both local and systemic, evaluation, diagnosis and treatment.

PAED 512 - Prin & Pract of Hematology (2)

This course examines the physical manifestation, evaluation of laboratory and clinical data, differential diagnosis and treatment of major disorders of the hematologic system. Included in this course are common laboratory tests used in the evaluation of other anatomic systems including the significance of abnormal findings.

PAED 513 - Prin & Pract. Otorh & Opthmlgy (2)

This course explores all aspects of diseases of the head, ears, eyes, nose and throat, including the physical manifestation of disease, examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies. Cases are used throughout the course to support student integration of content into a unified approach to the patient.

PAED 515 - Clinical Pharmacology I (2)

Principles of pharmacology and physiology essential to appropriate medical therapy are presented, with emphasis on the action, absorption, metabolism, excretion, and toxicity of the major groups of drugs used in medicine. Pharmacotherapy for common medical problems is emphasized and reviewed in clinical case discussions.

PAED 517 - Surgical Skills Patient Care (2)

Basic surgical principles and techniques are presented, including asepsis fundamentals, O.R. procedure and conduct, wound care and healing, closure, debridement and dressings. Laboratory sessions include minor surgical techniques and other procedures. Surgical instruments, anesthesia, pre-and post-operative care, common surgical procedures and surgical complications are discussed. ACLS training is included in this course.

PAED 520 - Clinical Pharmacology II (2)

This course is a continuation of PAE-H 420, Clinical Pharmacology, with increased emphasis on clinical therapeutic applications and more intensive review of selected major drug categories.

PAED 521 - Prin & Pract of Pulmonology (3)

Signs and symptoms, evaluation methods including arterial blood gases, diagnosis, management and treatment of pulmonary disorders will be examined with attention focused on acute and chronic respiratory disturbances. Students will utilize clinical cases to integrate theory into practical management processes.

PAED 522 - Prin & Pract of Cardiovascular (4)

This course explores all aspects of cardiovascular medicine including the examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies including a directed approach to understanding the principles of electrocardiography and its applications to clinical practice.

PAED 523 - Prin/Pract of Gastroenterology (3)

The Gastrointestinal/Nutrition (GIN) course provides an integrated approach to understanding the pathophysiologic basis of gastrointestinal, hepatic and nutritional disorders as well as the pharmacological rationale for their therapy. At the same time, students are introduced to the clinical approach to these disorders, including physical examination, clinical, laboratory, and radiographic findings.

PAED 524 - Prin/Pract of Nephro & Genitou (3)

Renal and genitourinary disease are examined in this course including the physical manifestation of disease, examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies including acid-base balance. Cases are used throughout the course to support student integration of content into a unified approach to the

PAED 525 - Prin & Pract of Endocrinology (2)

Manifestations, evaluation methods, diagnosis, management and treatment of endocrinologic disorders. Major topics of the course include normal and abnormal sexual development, normal and abnormal growth and pubertal development, reproductive endocrinology, infertility, glucose homeostasis, diabetes, pituitary disorders, thyroid physiology and disease, adrenal disorders, endocrine hypertension, and disorders of mineral metabolism. Students will utilize clinical cases to integrate theory into practical management processes.

PAED 530 - Evidence Based Medicine (2)

This course introduces the concepts of evidence-based medicine using a patient oriented approach. Students learn how to conduct an on-line medical database search using reputable resources such as the Cochrane Database of Systematic Reviews. Learning exercises designed to critically review the relevance and validity including the statistical significance of results are focused in articles about therapy, diagnostics, systematic reviews, and practice guidelines.

PAED 531 - Princ/Prctc: Orthpocs & Rheumtl (3)

This course explores all aspects of diseases of the bones and joints including the examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies.

PAED 532 - Prin/Prctcs of Neurology (3)

The neurology course provides an integrated approach to understanding the pathophysiologic basis of disorders of the central and peripheral nervous system as well as the pharmacological rationale for their therapy. At the same time, students are introduced to the clinical approach to these disorders, including physical examination, clinical, laboratory, and radiographic findings and various management methods.

PAED 533 - Essentials of Surgery (2)

The fundamentals of surgical disease are explored with discussions on the etiology, pathophysiology, clinical manifestations and appropriate management of major and minor surgical conditions and care of the acutely injured and critically ill patient. Topics are discussed with emphasis on clinical presentation and pre- and post-operative management. Laboratory sessions are used to familiarize the student with aseptic technique and basic surgical procedures such as airway control, various catheter placements, surgical bleeding control and wound management.

PAED 534 - Essentls of Emerg. Medicine (2)

This course introduces the principles of life support technique as well as the initial identification and management of acute medical and traumatic conditions.

PAED 535 - Specialty Lecture Series (3)

This lecture-based course is designed to prepare students for upcoming clinical rotations in Orthopedic Surgery, Emergency Medicine, Pediatrics, Family Medicine, Women's Health and Psychiatry/Behavioral Medicine. Instructors emphasize the assessment, treatment, management and referral of various medical conditions commonly seen in these specialty practices.

PAED 536 - Essentials of Pediatrics (2)

This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.

PAED 537 - Essentials of Behavioral Medicine (2)

Basic psychiatric manifestations and how to work with both patients and families exhibiting psychological problems are examined. Topics include psychiatric diagnosis, the effect of society on behavior, the basis of drug and alcohol abuse, and basic intervention and treatment modalities.

PAED 538 - Essentials of OB & Gynecology (2)

This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.

PAED 540 - Internal Medicine (4)

Six weeks. Students actively participate in all aspects of direct patient care in inpatient and/or outpatient adult medicine. This fundamental clinical experience places emphasis on patient evaluation and assessment, oral and written case presentations, understanding the complexities and interrelationships of disease processes and diagnostic and therapeutic collaboration.

PAED 542 - Family Medicine (4)

Six weeks. Practicum provides the second-year student with an opportunity to gain experience in a primary care setting. This experience exposes the student to a wide range of common ambulatory care problems.

PAED 545 - Internal Medicine II (3)

Four weeks. As an adjunct to PAE-H440, the direct patient care fundamentals of outpatient and/or inpatient adult medicine are continued in this clinical experience.

PAED 551 - General Surgery (4)

Six weeks. This clinical experience provides exposure to concepts and principles that characterize the practice of general surgery. Students participate in the pre-operative, operative and post-operative care of patients admitted to a variety of surgical services in both inpatient and outpatient settings.

PAED 560 - Pediatrics (4)

Six weeks. Practical experience in the recognition and management of common pediatric problems is provided, including assessment of the newborn, well baby care, preventive pediatrics and parent counseling.

PAED 570 - Psychiatry & Behavioral Med (2)

This clinical rotation provides experience working with patients in a psychiatric/behavioral medicine setting. Emphasis is placed on the clinical presentation, diagnostic work-up, treatment and management of these patients in both inpatient and outpatient settings.

PAED 575 - Women's Health (2)

Six weeks. This clinical experience encompasses the fundamentals of women's health. Emphasis is on the medical history, physical examination, diagnosis and treatment involved with pre-natal, post-natal and general gynecologic care.

PAED 580 - Emergency Medicine (4)

Six weeks. This clinical experience includes the management of acute medical and surgical problems with an emphasis on the importance of precise diagnosis as well as the principles of emergency therapy.

PAED 585 - Orthopedic Surgery (4)

Four weeks. Clinically based experience provides opportunities in orthopedic surgery and outpatient sites at the VA Medical Center or in private settings.

PAED 586 - EBM Clerkship (4)

Six weeks. As an adjunct to PAED-530, students critically review one area of the medical literature based on a clinical question of interest and develop a comprehensive project that includes concepts of evidence-based medicine and Healthy People 2010 components.

PAED 590 - Preceptorship (6)

This clinical experience integrates previous studies. Preceptorship sites are chosen by the student in most cases.

PAED 593 - Clinical Elective (4)

Six weeks. Many options are available for this elective experience. Specific clinical disciplines may be chosen based upon special interests of the student or upon what he or she determines would best augment existing clinical knowledge and skills.

PAED 600 - Senior Seminar (1)

This is the capstone experience for the physician assistant program. The purpose is two-fold: to ascertain if the student has both the broad and specific knowledge expected of someone holding a master's degree. Second, to determine whether the student has been able to integrate knowledge obtained from individual courses into unified concepts which link the students' own specialization to other fields of study. The student is given an oral exam, a written examination and a clinical skills examination in the form of an Objective Score of Clinical Evaluation (OSCE).

Physical Therapy (PT)**PT 460 - Clin Research and Design (2)**

This course will introduce students to several types of clinical research designs including designs for group studies, epidemiological studies, survey research and qualitative studies. Interpretation selected statistical methods will also be included.

PT 510 - Professional Development III (1)

The student is expected to attend all lectures, read articles on E-reserve and participate in on-line and classroom discussions, participate in a mock House of Delegates, and explore the implications of substance abuse on the profession using written reflections, application of concepts to case studies, discussions and small group consensus.

PT 540 - Lab Studies & Imaging (2)

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

PT 561 - Appl Administration & Mgmt (3)

During this course the students will apply the concepts of management and administration to organization operations and interpersonal relationships. Students will be asked to refer to clinical environments familiar to them to serve as point of reference. Current literature will be reviewed. During the course the students will discuss recent trends in the health care delivery system and the implications for physical therapy services. The students will address legal issues that are relevant in management of physical therapy practice.

PT 572 - Patient Management III (2)

This course builds on the clinical problem-solving processes introduced in Patient Management I & II in order to further prepare the student for more advanced clinical rotations. While all skills learned in Patient Management I & II will continue to be reinforced and incorporated in this class using patient cases with a multisystem approach, Patient Management III adds the management of neurologic impairments to the clinical problem-solving process. The fabrication of intervention programs based on examination results and the modification of established intervention programs will be emphasized, including appropriate referrals to other health care providers. Additionally, patient management issues for the home health patient are discussed. The student will enhance his or her ability to critique and advance common exercise protocols given particular cases. The student also will have the opportunity to participate in an interdisciplinary team case seminar, and to improve visual kinematic evaluation skills through videotaped patient cases.

PT 575 - Health Promotion & Wellness (2)

This course will identify national health indicators as based on Healthy People 2010 (U.S. Department of Health and Human Services) and discuss specific health policies that are promoting health and wellness programs for defined populations. Students will identify cultural differences that impact health promotion and will discuss motivational concepts that help facilitate long-term adherence to wellness. Students will value health promotion as part of physical therapy services that require an inter-professional effort. Students will have the opportunity to work with students from other professions to implement a health promotion project for a targeted group within the community.

PT 579 - Sem in Clinical Instruction (1)

This course covers the interpersonal and technical components of clinical education. Establishing a positive environment for learning, principles of student supervision, student assessment, and alternative models of clinical education are covered. Application of educational set, body, closure, and planning are covered. The Meyers-Briggs Type Indicator is used as a model for personality, teaching, and learning styles. Educational objectives for clinical education, questioning, adult learning, and a model for working through Challenging Student situations are discussed.

PT 582 - Clinical Rotation III (2)

Clinical Rotation III is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an adult inpatient or outpatient clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

Radiation Therapy (XRT)**XRT 343 - Emerging Technologies (2)**

The supervised use of radionuclides for positron emission computed tomography (PET) and other modalities.

XRT 399 - Clinical Practicum III (0)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Continuation of Clinical Practicum II. 0 credit hour Prerequisites: Clinical Practicum II, Principles of Radiation Therapy Practice II

XRT 431 - Radiation Physics (2)

A study of atomic structure, radioactive decay modes, mathematics of decay, and interaction of radiation with matter. Use of these principles will be applied to understanding the theory of radiation detection with application to current imaging instruments. Students will be introduced to tomographic imaging cameras, including SPECT and PET, with their necessary quality control.

XRT 432 - Radiation Therapy Practice I (3)

This course provides the student with an overview of the foundations in radiation therapy and the practitioner's role. Principles of radiation, health safety, ethics and the professional responsibilities of the radiation therapist will be discussed and examined. Basic operational issues in radiation therapy will be examined. The role of the radiation therapist in the health care organization, the treatment prescription, the documentation of treatment parameters and delivery, emergency procedures and patient condition and education needs will be presented, discussed, and evaluated. The students are expected to observe and gain practical experience in the areas of patient care, patient safety, department operation, localization, treatment, dosimetry, and quality assurance as these are all components of the daily responsibilities of the radiation therapist. 2 credit hours (2 didactic/0 practicum) Prerequisites: ANAT200 Human Anatomy, AHP 412 Survey of Diseases Introduction to Radiation Therapy Practicum Co-requisite: Clinical Practicum I, Treatment Technique

XRT 433 - Treatment Techniques (3)

This course will introduce concepts and terminology of radiography and radiation therapy treatment set-ups. It will examine anatomy, positioning, immobilization, field boundaries, and standard beam arrangements for site-specific anatomical areas. Laboratory experiences include virtual simulation demonstrations and conventional/CT simulator practice with phantom.

XRT 434 - Treatment Planning (3)

Introduces concepts and terminology of radiation therapy treatment planning. Describes anatomical site-specific treatment planning, which incorporates imaging; target volume delineation and dose prescription; organs at risk delineation and respective dose limitations; beam arrangement, energy, modality, and modifiers; related calculations; and dose evaluation. Laboratory experiences include demonstrations and practice with computer treatment planning systems. 3 credit hours (2 didactic/1 lab) Prerequisites: ANAT 200 Human Anatomy Co-requisites: Principles of Radiation Therapy Practice I

XRT 435 - Clinical Practicum I (2-6)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. 2 credit hours (0 didactic/2 practicum) Prerequisites: Introduction to Radiation Therapy Practicum

Co-requisite: Principles of Radiation Therapy Practice I, Treatment Technique

XRT 436 - Emerging Technologies (2)

This course will introduce basic x-ray production and its uses plus advanced imaging technologies. A study of human anatomy as it relates to radiographic films and cross sectional human anatomy is also covered.

XRT 442 - Radiation Therapy Practice II (3)

This course is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease will be presented and discussed. 3 credit hours (3 didactic/0 practicum) Prerequisites: RX-4200, RX-4300, RX-4450 Co-requisite: RX-4650, RX-4550

XRT 444 - Clinical Dosimetry (4)

Reviews basic concepts introduced in Treatment Planning, further examining factors that influence and govern dose determination and planning treatment for radiation therapy patients. Emphasizes clinical application of photon and electron beam characteristics, dose calculations, and related factors to safely and optimally treat the radiation therapy patient. Several laboratory sessions supplement the lectures. Some focus is directed on clinical dosimetry and treatment planning for radiation oncology special procedures. 4 credit hours (4 didactic/0 practicum) Prerequisites: NMT Radiation Physics and Protection, Treatment Planning Co-requisite: Principles of Radiation Therapy Practice II

XRT 445 - Clinical Practicum II (0-2)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Continuation of Clinical Practicum I. 2 credit hours (0 didactic/2 practicum) Prerequisites: Clinical Practicum I Co-requisite: Clinical Dosimetry, Principles of Radiation Therapy Practice II

XRT 450 - Rad Onc Pat. Care & Qual Manag (3)

This course introduces the student to the roles and responsibilities of the radiation therapist in meeting the general needs of the patient undergoing radiotherapy, including nursing, patient safety and quality management. The student will be provided with foundation concepts and competencies in assessment and evaluation of the patient for service delivery. Psychological and physical needs and factors affecting treatment outcomes will be presented and examined. Incorporated into patient care, the course reviews principles and guidelines of a quality management program in radiation oncology, incorporating clinical process, equipment, and documentation that demonstrate patient care outcomes. Additionally, regulatory agencies and respective rules affecting the radiation oncology workplace, staff, and patients are emphasized. The role of the radiation therapist in patient care, safety and quality management is stressed. 3 credit hours (3 didactic/0 practicum) Prerequisites: Principles of Radiation Therapy Practice I, HIM 415 Quality Improvement Co-requisite: Principles of Radiation Therapy Practice II, Clinical Practicum I

XRT 451 - Radiobiology/Rad Protection (2)

Course content is designed to present basic concepts and principles of radiation biology. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Discussion of the theories and principles of tolerance dose, time-dose relationships, fractionation schemes and the relationship to the clinical practice of radiation therapy will be discussed, examined and evaluated.

1 credit hour (1 didactic/0 practicum) Prerequisites: NMT Radiation Physics and Protection

XRT 498 - Capstone in Radiation Therapy (0-3)

This course integrates previous knowledge and skills with significant, relevant issues and subjects in professional practice. Emphasizes professional role development of the new graduate and preparation for the national credentialing board exam. 1 credit hour (1 didactic/0 practicum) Prerequisites: All required radiation therapy courses

XRT 598 - Radiation Therapy Independent Study (1-3)

This course will be a contracted course for the Radiation Therapy Program. Radiation therapy students must have the approval of the program director and clinical coordinator prior to enrolling in this course.

Upon meeting with the faculty, a learning contract will be drafted and signed by the student and faculty, outlining the details of the requirements for successful completion of this independent study course. The contract will also include the meeting time, location, textbooks or references, evaluation methods, outcomes, and expected completion date of the course. Students will be allowed to enroll in this course ONLY ONE TIME. If the course work required is not completed during the contracted semester, graduation requirements of the radiation therapy program will not have been met and the degree will not be awarded.

Nursing (NURS)**NURS 140 - Introduction to Nursing (1)**

This course introduces the student to nursing as a profession. Various roles and functions of the nurse are explored. Emphasis is placed on the organization and education of nursing, nursing systems in various settings, and recipients of nursing care. Exploration of the conceptual and philosophical basis of nursing and the role of critical thinking in the nursing process will be examined. The structure. Open to non-nursing majors.

NURS 243 - Human Dev Thru Life Span (3)

Human Development is a theoretical course designed for any student interested in increasing insight into the developing person, including the self. Basic theories and principles of development, influences on the developing person, and norms of development from birth through old age, including physical, mental, emotional, social, moral-spiritual characteristics, and adaptive mechanisms are discussed. Concepts of death in the child, adolescent and adult of various ages, and issues faced by the age group, are also discussed. Family development tasks and family interaction, as they influence the individual throughout the life span, are considered in each developmental era.

NURS 249 - Health Promotion Across the Lifespan (2)

The role of the nurse in promoting health and reducing risk behaviors of individuals and families across the lifespan is the focus of this course. Exemplars of nutrition, physical activity and stress management will be examined with an emphasis on the impact of genetics, values, lifestyle, and cultural influences.

NURS 250 - Clin Concepts Nursing Practice (3)

This course introduces the student to foundational clinical concepts in nursing. The social, legal, ethical, cultural and interprofessional context of nursing practice is presented. The use of the therapeutic relationship as a basis for nursing care is emphasized. Consideration is given to developing students' self-awareness, the importance of reflective practice, and the ability to use one's self as a therapeutic tool. The nursing process is introduced and its use in promoting patient safety in an interprofessional health care environment is discussed.

NURS 251 - Hlth Promotion Across Lifespan (3)

The role of the nurse in promoting health and reducing risk behaviors of individuals and families across the lifespan is the focus of this course. Exemplars of nutrition, physical activity and stress management will be examined with an emphasis on the impact of genetics, values, lifestyle, and cultural influences. Patient teaching as an essential function of the nurse is emphasized. In the clinical practicum, the student will facilitate his/her understanding of factors that enhance health promotion and risk reduction through the development of a long term relationship with a patient and family

NURS 252 - Foundations in Nursing Care (0-3)

This course focuses on the use of clinical judgment in the application of evidence based therapeutic interventions and technologies in providing direct care to patients across the lifespan. Building therapeutic relationships, patient safety and the provision of quality care in an inter-professional setting are emphasized. Students gain experience in developing communication skills and implementing the nursing process in simulated and actual patient settings.

NURS 330 - Pharmacotherapeutics for Nursing Care (3)

This course develops the students knowledge of the nurses role and responsibilities in drug therapy based on application of concepts from nursing and pharmacology sciences. Legal, ethical, and life span considerations will be presented as they apply to the nurse role in drug therapy. The student will have the opportunity to study groups of drugs using a structured, systematic approach that includes general principles of drug activity, major actions, therapeutic effects, and adverse reactions. The student will learn to apply the nursing process to the care of the patient receiving drugs in a variety of clinical situations. Prerequisites: ANAT 100, CHEM 153 to 164 (one course), PPY 254 and NURS 243, as well as the following NURS courses, which may be taken concurrently: 250, 252, 360 and 370.

NURS 360 - Pathophysiology (4)

Lecture 4 hours per week. The focus of the course is on the physiology of altered health states as a dynamic science that has application for both well and ill populations of all age groups. The focus is on the physiological responses to altered health states. This course content is based on the health-illness continuum, including pathophysiological alteration, and system or organ failure. Considerations are given to selected pathological alterations and their effects on physiological and psychological functions. A life span approach is utilized.

NURS 370 - Health Assessment (0-3)

This course focuses on the assessment component of the nursing process in the health care of individuals and families across the lifespan. The course integrates assessments of physical health, functional capacity, growth and development, and psychological, sociocultural and spiritual health of individuals, families, and immediate communities. The university laboratory experience provides for learning a systematic method of performing health assessments and development of assessment skills.

NURS 377 - Essentials of Therapeutic Nutrition: A Nursing

This course builds on concepts from previous courses to focus on therapeutic nursing interventions to promote patient nutrition during illness with considerations for age and culture. Regulatory process for fluid and electrolyte balance, conditions that alter fluid balance and interventions to prevent body fluid and electrolyte disturbances are emphasized.

NURS 378 - ESSENTIALS OF THERAPEUTIC NUTRITION:

This course builds on concepts from previous courses to focus on therapeutic nursing interventions to promote patient nutrition during illness with considerations for age and culture. Regulatory process for fluid and electrolyte balance, conditions that alter fluid balance and interventions to prevent body fluid and electrolyte disturbances are emphasized.

NURS 380 - Conceptual Framwk for Prac (3)

Lecture 3 hours per week. This course introduces the Registered Nurse Option student to the Conceptual Framework, nursing theories and the research process as a scientific basis for practice. Health promotion concepts will be incorporated. Students will be assisted in reconstructing and expanding their own theory base for the practice of nursing.

NURS 404 - Critical Issues in Evidence Based Nursing (2)

Building on fundamental knowledge gained in previous courses, this course examines how research is used in evidence based practice. Critical issues in interprofessional health care and their effect on health care quality, access and cost will be examined. Nursing interventions that promote patient adaptation and safety will be investigated. Critical appraisal of evidence and the use of evidence in practice will be emphasized.

NURS 406 - Critical Issues in Evidence Based Nursing (2)

Building on fundamental knowledge gained in previous courses, this course examines how research is used in evidence based practice. Critical issues in interprofessional health care and their effect on health care quality, access and cost will be examined. Nursing interventions that promote patient adaptation and safety will be investigated. Critical appraisal of evidence and the use of evidence in practice will be emphasized.

NURS 418 - Conceptual Approaches to Patient Care 1: Adu

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care.

NURS 427 - Psych/Mental Hlth Nursing (4)

The concepts of adaptation serves s the basis for the promotion, maintenance, and restoration of health in clients across the life span. Emphasis is placed on individuals, families, and groups experiencing alterations in mental health status. The focus of this course is on the application of the nursing process to implement professional relationships, based on principles of therapeutic communication and knowledge of psychopathology. As a member of the interdisciplinary health care team, the student will care for psychiatric mental health clients in a variety of settings.

NURS 428 - Public Health Nursing I (2)

This course introduces the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups in the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined.

NURS 429 - Community / Public Health Nursing (4)

This course introduces the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups in the community. The nursing process is applied to the care of individuals, families, and groups in the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined. Limited to Accelerated Option. Prerequisites: NURS-335, NURS-360, NURS-370, NURS-401, NURS-402, NURS-421, & NURS-423.

NURS 431 - Psych/Mental Hlth Nrs Thy/Clin (0-4)

The concept of adaptation serves as the basis for the promotion, maintenance, and restoration of health in clients across the life span. Emphasis is placed on individuals, families and groups to implement professional relationships, based on principles of therapeutic communication and knowledge of psychopathology. As a member of the interdisciplinary health care team, the student will care for psychiatric mental health clients in a variety of settings.

NURS 432 - Community / Public Health Nursing (0-4)

The focus of this course is the introduction of the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups within the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, and referral by home visiting and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health care are examined. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-

NURS 433 - Maternal-Child Hlth Nur Theory (4)

This course uses a family-centered approach to the study of the health care needs of women, infants, children, and adolescents. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to significant health care issues within these populations. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-370.

NURS 434 - Nursing Care of Child-bearing Families (3)

This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected women, infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-370. Prerequisite or Co-requisite: NURS-433.

NURS 435 - Nursing Care of Children (3)

This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings. focuses on nursing care

NURS 436 - Nursing Care of Adults and Older Adults (4)

This course focuses on nursing care of adults and older adults experiencing alterations in health status. The Adaptation Framework is used to analyze the multidimensional impact of acute and chronic alterations on clients. The nursing process issued to organize the care of clients to promote adaptation across the continuum of care. The course includes legal and ethical issues which affect the delivery of care.

NURS 437 - Nursing Care of Adults (3)

This course focuses on providing nursing care for adults and older adults in both acute care and community-based settings. The student applies knowledge of adaptation, functional approach, and specific health alterations to the nursing process for assigned clients. The student will have opportunities to work collaboratively with members of a health care team.

NURS 438 - Nursing Care of Older Adults (3)

This course focuses on providing nursing care for older adults in acute care settings. The student applies knowledge of specific health alterations to the nursing process for assigned clients. The student will have opportunities to work collaboratively with members of a health care team. University Laboratory will provide the student with simulation experiences to develop skills related to geriatric assessment and participation in the Aging Game. Prerequisites: NURS 330, NURS 333, NURS 360, NURS 370. Prerequisites or co-requisites: NURS 436.

NURS 441 - Care of Client Thru Lfe Spn IV (4)

Building on concepts learned in previous courses, this course uses a lifespan approach in the study of the care of clients experiencing alterations in immune function, perception, coordination, and mobility. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote adaptation of the individual and family. The student applies theoretical knowledge in the care of clients in acute care and community settings.

NURS 446 - Nursing Care of the Adult (4)

This course uses a patient-centered, culturally sensitive approach to the health care needs of acutely ill adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the safe delivery of care.

NURS 447 - Nursing Care of the Older Adult (4)

The theory portion of the course uses a patient-centered, culturally sensitive approach to the health care needs of the older adult. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to the discussion of chronic health conditions, geriatric syndromes, and frailty.

NURS 448 - Nursing Care of the Childbearing Family (4)

This course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of women in the childbearing cycle and their newborns. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Consideration is also given to common complications occurring in the childbearing cycle.

NURS 449 - Nursing Care of the Childrearing Family (4)

The theory portion of this course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of infants, children, and adolescents. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to discussion of significant health care issues within these populations.

NURS 451 - Conceptual Approaches to Patient Care 3: Chi

This course uses a culturally sensitive, person and family-centered approach to the health care needs of women in the childbearing cycle as well as infants, children and adolescents. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health to this population. Consideration is also given to common complications occurring in the childbearing cycle as well as significant health care issues of the pediatric population. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care to this population. Additionally, a family-centered approach is used for the basis of the nursing process and nursing care.

NURS 452 - Conceptual Approaches to Patient Care 3: Chi

This practicum provides an opportunity for students to apply theoretical knowledge and evidence-based practice in the care of childbearing women, infants, children, and adolescents. Nursing care is provided within the context of patient and family culture, preferences, and needs. Helping patients to adapt to changes in function, providing emotional support, and educating patient and families to promote wellness are emphasized. Skills related to enhancing communication, information management, and collaboration as a member of an interprofessional team is further developed. Learning experiences are provided in a variety of settings, as well as, laboratory simulation.

NURS 455 - Leadership and Management (3)

See NURS456 for Course Description.

NURS 456 - Leadership and Management (2-3)

This course introduces management, leadership, and organizational theories in the context of nursing and health care. Emphasis is placed on the integration of theoretical constructs into the role socialization of the baccalaureate prepared nurse. Also explored is how nurses can influence policy within the health care setting and health care system. Prerequisites: NURS-431, NURS-432, NURS-433, NURS-434, NURS 435, NURS-436, NURS-437, NURS 438. Senior Standing.

NURS 460 - Pharmacology in Nursing (3)

This course develops the student's knowledge of the nurse's role and responsibilities in drug therapy based on application of concepts from nursing and pharmacology sciences. Legal, ethical, and life span considerations will be presented as they apply to the nurse's role in drug therapy. The student will have the opportunity to study groups of drugs using a structured, systematic approach that includes general principles of drug activity, major actions, therapeutic effects, and adverse reactions. The student will learn to apply the nursing process to the care of the patient receiving drugs in a variety of clinical situations.

NURS 479 - Synthesis of Nursing Concepts (1)

This course provides the student with the opportunity to integrate and synthesize nursing concepts in preparation for taking the NCLEX-RN exam. The NCLEX blueprint is described, key content is reviewed and test taking strategies are presented. Students have the opportunity to apply learning by taking standardized exit exams.

NURS 480 - Comprehensive Nursing Practice (4)

This clinical course focuses on the analysis of health care needs of clients and the application of organizational and management theories. Students are expected to demonstrate increased competence in a variety of nursing roles, including care giver, teacher, advocate, and collaborator. Students will manage the nursing care of individuals, families, and groups at various points on the health-illness continuum. Prerequisites: NURS-431, NURS-432, NURS-433, NURS-434, NURS 435, NURS-436, & NURS-437, NURS 438. Co-requisite: NURS-456.

NURS 481 - Conceptual Approaches to Patient Care 4: Co

The course builds on nursing courses and focuses on complex acute and chronic conditions, some of which may result in death. An evidence based focus is used to support assessments, clinical judgment and effective, efficient nursing interventions. Life span and developmental factors, cultural variables, and legal aspects of care frame the ethical decision-making employed in patient choices for treatment or palliative care within the acute care setting.

NURS 482 - Complex Multi-System Nursing Theory (2)

The course builds on nursing courses and focuses on complex acute and chronic conditions, some of which may result in death. An evidence based focus is used to support assessments, clinical judgment and effective, efficient nursing interventions. Life span and developmental factors, cultural variables, and legal aspects of care frame the ethical decision-making employed in patient choices for treatment or palliative care within the acute care setting.

NURS 483 - Complex Multi-System Nursing Practicum (4)

This course builds on previous nursing courses to provide the student with a practicum experience in managing complex patients and environments. This precepted adult clinical experience focuses on clinical judgment in complex patient situations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 484 - Conceptual Approaches to Patient Care 4: Co

This course builds on previous nursing courses to provide the student with a practicum experience in managing complex patients and environments. This precepted adult clinical experience focuses on clinical judgment in complex patient situations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 485 - Comprehensive Nursing Practice (4)

See Course Description for NURS480.

NURS 486 - Nursing Immersion Practicum (4)

This course builds on prior nursing courses and provides the student with a practicum experience in managing patients and environments in selected specialty settings. This precepted clinical experience focuses on assessments, interventions, and outcomes unique to these populations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 488 - Healthcare Policy, Finance and Regulatory En

This course provides students with an overview of the major functional areas of health care management and shows their relevance to the safe delivery of health care services in a turbulent and very complex interprofessional environment. The focus on how patient care services are organized and financed, how reimbursement is structured and the role of regulatory agencies.

NURS 489 - Leadership and Management (2)

This course focuses on the development of the nurse as a leader at the microsystem level. The concepts of delegation, motivation, negotiation, and problem-solving are addressed within an organizational context. The use of evidence in process improvement for quality care is emphasized. Interprofessional teamwork and health information technology are further explored as mechanisms to promote cost-effective, quality outcomes.

NURS 492 - Community Project (1-2)

This course is designed to provide the student with an experience of planning with the community to meet its needs. Working from the knowledge and competencies gained in Public Health Nursing and in collaboration with members of the community, students will provide a service to an agency or population group based on community assessment data. Seminars will provide opportunities for students to discuss and reflect on how service activities express the health nurses responsibility for planning and evaluating population-based services in collaboration with others.

NURS 493 - Healthcare Policy, Finance and Regulatory En

This course provides students with an overview of the major functional areas of health care management and shows their relevance to the safe delivery of health care services in a turbulent and very complex interprofessional environment. The focus on how patient care services are organized and financed, how reimbursement is structured and the role of regulatory agencies.

NURS 494 - Leadership and Management (2)

This course focuses on the development of the nurse as a leader at the microsystem level. The concepts of delegation, motivation, negotiation, and problem-solving are addressed within an organizational context. The use of evidence in process improvement for quality care is emphasized. Interprofessional teamwork and health information technology are further explored as mechanisms to promote cost-effective, quality outcomes.

NURS 496 - Integrative Seminar (2)

This course focuses on the transition of senior nursing students to professional nursing practice as new baccalaureate graduates. The course assists students to synthesize knowledge and skills required of new graduates including refinement of clinical judgement, problem solving and priority setting. Students identify strategies for resolving ethical and legal dilemmas and conflicts related to diversity in the work force. Issues related to licensure, career development, and professional satisfaction are discussed.

NURS 501 - Nursing Strategies for Health Promotion (6)

This course introduces the advanced generalist student to nursing and the role of nurses in promoting the health of individuals, families and communities. The social, legal, ethical, cultural and interprofessional context of clinical decision making in nursing is discussed. The nursing process is presented; clinical decision-making to promote health is emphasized. Nursing interventions to promote health will be introduced and practiced in the laboratory setting. The determinants of health in individuals, families and communities will be explored. Health promotion in special populations will be investigated in classroom and field experiences.

NURS 502 - Advanced Health Assessment for the Generalist

This course focuses on the assessment & diagnostic reasoning component of the nursing process in the health care of individuals and families across the life span. The course integrates advanced assessment within the dimensions of the adaptation framework including advanced assessments of physical health, growth and development and psychological, socio-cultural and spiritual health of individuals within their families. Emphasis is placed on the performance of comprehensive health assessments and the development of advanced assessment skills. Students have the opportunity to practice assessment skills in a simulated client setting.

NURS 505 - Theor Foundations Nrs Prac (3)

Theories and models relevant to advanced nursing practice are analyzed. Innovation, change and decision-making theories/models are explored in the context of a systems perspective as applied to nursing and the management of resources. Selected nursing, learning, and role theories will also be explored.

NURS 506 - Care Systems: Decision Making (2)

Innovation, change, chaos, and decision making theories/models are explored within the context of systems and contingency theories as applied to nursing and patient care systems. Focus is given to planning models for strategically managing human and fiscal resources. Computer-supported decision-making for advanced nursing practice also is emphasized.

NURS 507 - Case Mgmt/Managed Care (2)

Managed Care is explored as a patient care delivery and health care reimbursement system with health policy implications. Nursing case management models are examined within an interdisciplinary framework across the continuum of care. In addition, this course introduces the evaluation of patient care outcomes within the context of continuous quality improvement.

NURS 508 - Advanced Pharmacology (3)

The course focuses on concepts, principles, and application of pharmacotherapeutics used by a nurse practitioner in the management of health problems encountered in primary care. Emphasis is placed on the action, absorption, metabolism, excretion, and toxicity of the major classes of drugs used in clinical practice. Lifespan considerations that affect management are included.

NURS 510 - Nursing Strategies in Physiological Health Alt

Building on concepts learned in previous courses, this course uses a lifespan approach in the study of clients experiencing alterations in health. Emphasis is placed on theoretical and evidence based knowledge as the basis for nursing strategies to promote adaptation of the individual and family. The student applies theoretical knowledge in the care of clients in simulated client settings. Field experiences provide the student with the opportunity to interact with clients in actual patient care settings.

NURS 511 - Advanced Assessment and Clinical Decision

This course focuses on the assessment and diagnostic reasoning component of the nursing process in the health care of individuals and families across the life span. The course integrates advanced assessment within the dimensions of the adaptation framework including advanced assessments of physical health, growth and development and psychological, socio-cultural and spiritual health of individuals within their families of performing comprehensive health assessments and development of advanced assessment skills.

NURS 513 - Clinical & Diagnostic Reasoning (2)

Concepts of diagnostic reasoning and clinical decision-making are presented as integral components of the advanced health assessment of individuals and families across the life span. During supervised clinical practicum experiences, students apply theoretical knowledge and advanced practice nursing skills to perform health assessments on clients/patients. The synthesis and application of anatomical-physiological, psychosocial, cultural, spiritual health concepts, growth and development, aging process, and ethical practice are emphasized to achieve competence in comprehensive health assessment as an advanced practice nurse.

NURS 514 - Health Promotion (3)

Selected models, mid-range theories, and tools are used to understand behavior and to identify risks to health. Evidence-based clinical prevention activities are analyzed for their use to improve the health of individuals, families, and populations. Methods for providing leadership in the conceptualization and implementation of clinical prevention and population health for individuals and populations are explored. The impact of lifestyle, cultural and environmental factors on health and/or health disparity are discussed. Students will implement and evaluate health promotion/disease prevention interventions with individuals and/or groups.

NURS 516 - Principles of Practice Management (3)

This course explores the professional and business aspects of advanced practice nursing. Concepts explored include: legal aspects of practice, cost containment, reimbursement, coding, case management, and outcomes management. Principles of advanced practice nursing management and balancing productivity with quality of care are examined. Mentoring others in practice and the importance of being active in professional organizations are discussed.

NURS 517 - Advanced Pathophysiology (3)

Provides an in-depth study of the physiological changes and responses to altered health states and their impact on the functional status of patients. Lifespan and vulnerable population considerations are integrated throughout.

NURS 521 - Evidence-Based Practice for the Advanced Ge

In this course research is introduced as a method of inquiry and as a foundation for evidence based clinical decisions. Fundamentals of research methodology will be presented. Developing, evaluating, and applying an evidence-base to address nursing care issues will be considered. The theoretical basis for research utilization, the contributions of the evidence-based practice movement, and practical instances of their application in nursing will be examined. Barriers to implementation of evidence based practice and strategies to address those barriers will be considered from an individual and an organizational perspective. Opportunities will be provided for students to gain experience in finding and applying evidence based knowledge

NURS 524 - Advanced Clinical Studies I: Adolescents and

Relevant Theories are applied in the nursing management of clients with primary health care needs and/or acute or chronic illnesses. By using research and evidence based practice guidelines students implement strategies in the physiological, psychosocial, cultural, and spiritual dimensions in caring for clients and their families. The practicum component provides for integration of the nurse practitioner role in the primary care setting.

NURS 525 - Advanced Clinical Studies II: Adult & Older Ad

This course focuses on the theoretical and scientific basis for advanced nursing management of adult and older adult clients with primary health care needs and/or acute or chronic illnesses. Geriatric Syndromes and complex co-morbidity management will be addressed. By using nursing research, practice guidelines and standards students implement strategies in the psychosocial, cultural, and spiritual dimensions in caring for elderly patients and their families. The practicum component provides for the application and integration of the advanced practice nursing in the primary care setting.

NURS 526 - Advanced Clinical Studies I: The Acute Care S

This course addresses short-term goal including minimizing or preventing complications, attending to co-morbidities, and promoting physical and psychological well-being. Discussion will relate to palliative care, end-of-life care and evaluation of risk factors to address maximizing health outcomes. Specific skill sets for the Acute Care Nurse Practitioner are developed dependent on the patient population and specialty-based area of practice. The practicum component of this course provides the nurse practitioner student the opportunity to master and apply the theory, knowledge and skills in a variety of acute care settings.

NURS 527 - Advanced Clinical Studies II: The Acute Care

Specific concepts in this course that will be addressed are the management of adult clients with complex acute and unstable conditions in the hospital setting. Discussion will relate to the utilization of invasive interventions and procedures that promote physiologic stability in acute and life threatening conditions. In caring for patients and their families strategies in the physiological, psychological, sociocultural and spiritual dimensions will be implemented. The practicum component of this course provides the nurse practitioner student the opportunity to master and apply the knowledge and skills in a variety of hospital subspecialties.

NURS 527 - Advanced Clinical Studies II: The Acute Care

Specific concepts in this course that will be addressed are the management of adult clients with complex acute and unstable conditions in the hospital setting. Discussion will relate to the utilization of invasive interventions and procedures that promote physiologic stability in acute and life threatening conditions. In caring for patients and their families strategies in the physiological, psychological, sociocultural and spiritual dimensions will be implemented. The practicum component of this course provides the nurse practitioner student the opportunity to master and apply the knowledge and skills in a variety of hospital subspecialties.

NURS 528 - Adv Cln I:Adlt & older Adlt (5)

Relevant Theories are applied in the nursing management of clients with primary health care needs and/or acute or chronic illnesses. By using research and evidence based practice guidelines students implement strategies in the physiological, psychosocial, cultural, and spiritual dimensions in caring for clients and their families. The practicum component provides for integration of the nurse practitioner role in the primary care setting.

NURS 529 - Advanced Clinical Studies II: Women and Chil

This course focuses on the theoretical and scientific bases for health promotion, maintenance, and management in the primary care of women, expectant families, and children (ages 0-21 years). Well woman care, family planning, and reproductive tract disorders commonly seen in primary care will be studied. Care of children with minor acute and selected stable chronic health problems also will be addressed. Trends in health care, ethical issues and the socioeconomic and political environment of women, expectant families, and children are analyzed to optimize the management of care. A practicum component is required. This course is designed for the family nurse practitioner role in the primary care setting.

NURS 530 - Health Care Systems & Policy (3)

This course examines the environment in which nursing and health care is provided. Health care delivery systems and the organizational theories and behaviors involved in those systems will be introduced. The effect of health care policy in determining accessibility, accountability and affordability will be investigated. Financing of health care will be discussed and basic business principles will be introduced. The role of the advanced generalist nurse in the provision of quality cost-effective care in a variety of health care systems will be emphasized.

NURS 531 - Critical Appraisal of Technology: Acute Care (

This course evaluates technologies utilized in the acute care setting in providing comprehensive assessment data or stabilizing physiologic conditions. Contents include critical appraisal of available technology and selection of appropriate patient populations. Strengths and limitations and implications for further research and development will be explored.

NURS 532 - Advanced Clinical Studies I: Nursing of Childr

This course provides the student with the opportunity to apply knowledge and skills in the clinical management of children who are health or who are experiencing selected health problems. Emphasis is placed on using models and theories that guide advanced nursing practice. The focus is on the assessment and diagnosis of health risks and health problems. Therapeutic interventions will be designed to promote health for well child care and to restore health for children who have common childhood illnesses.

NURS 533 - Advanced Clinical Studies II: Nursing of Child

This course provides the student with the opportunity to apply knowledge and skills in the clinical management of children who are experiencing selected acute and chronic health problems. Emphasis is placed on using models and theories that guide advanced nursing practice. The focus is on the assessment, diagnosis and therapeutic interventions for children with acute and chronic illness and their families.

NURS 534 - Advanced Clinical Studies I: Psychiatric Ment

This course focuses on behaviors pertinent to the role of the advanced practice nurse as a psychotherapeutic agent in holistically treating clients with acute and chronic mental health needs/problems. Selected counseling and psychotherapy theories, biopsychosocial theories, and psychiatric mental health-related concepts, issues, problems, and disorders are examined. Clinically, students use research findings, evidence-based clinical practice guidelines, practical knowledge and skills, and theories. Self-initiated academic and personal discoveries are expected. Emphasis is given to active and ongoing collaboration with clients, their families and/or significant others, and the interprofessional team.

NURS 535 - Advanced Clinical Studies II: Psychiatric Ment

This course focuses on the use of pertinent theories, research, evidence-based findings, practice guidelines and standards, and interdisciplinary collaboration to holistically assess and manage complex health and mental health care needs/problems of groups and individuals across the continuum of care. Group theories and processes to effectively design, conduct, and evaluate strategies for a structured group therapy product is stressed. The performance of comprehensive psychiatric assessments/evaluations and analysis of client data to formulate differential diagnoses based on appropriate classification systems are emphasized. Students tailor their use of holistic psychotherapy modalities and intervention strategies for clients of selected populations.

NURS 537 - Clinical Studies I (4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to develop a beginning understanding of how patient-centered care and interprofessional collaboration can result in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be discussed.

NURS 538 - Clinical Studies II (4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to further their understanding of how patient-centered care and interprofessional collaboration results in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be examined.

NURS 539 - Clinical Studies III (4)

Integrating theoretical and evidence based knowledge gained in previous course work, the student will use the nursing process to design care for patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to promote patient-centered care, interprofessional collaboration and positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be emphasized.

NURS 540 - Ecological Approach to Human Behavior (3)

This course focuses on content that facilitates the development of the psychotherapist role of a psychiatric mental health advanced practice nurse of the counseling role of advanced practice nurses in other specialties when taken as elective. Psychological theories, models, therapies, and treatment strategies that address the requisite knowledge and skills needed to foster therapeutic advanced practice nurse-client relationships are examined with emphasis on target populations. Analyses of treatment/intervention strategies within various theories and models that may be used with particular clients are explored. Personal and professional orientations, values, and behavioral insights are examined throughout the course to promote increasing depth and breadth of understanding of using oneself as a therapeutic tool.

NURS 543 - Psychopharmacology (2)

This course focuses on concepts, principles, and application of psychopharmacotherapeutics used in the management of individuals across the lifespan at risk for developing and/or having mental health needs/problems or diagnoses of psychiatric disorders. Emphasis is placed on the proposed mechanism of action, metabolism, excretion, and adverse reactions of the major classes of psychopharmacological agents used in a wide range of clinical settings.

NURS 549 - Advanced Clinical Studies (4)

This course focuses on the application of evidence-based nursing care to promote safety and quality care outcomes in a specific clinical population. Particular emphasis will be placed on the assessment of risk and the development of risk reduction strategies in the selected patient population. Key issues in the management of acute and chronic illness and the promotion of health will be explored.

NURS 550 - Informatics and Quality Improvement (3)

This course examines the process for reviewing, monitoring, improving and evaluating health care services. Health services accreditation standards will be explored. The role of information technology in providing data for the documentation and evaluation of client outcomes will be emphasized. Basic principles of epidemiology will be introduced. Quality improvement models will be described. The role of the advanced generalist nurse in developing and implementing performance improvement plans will be examined.

NURS 555 - Family and Child Development (3)

Advanced study of families during the childbearing and childrearing years. Includes consideration of normative patterns of physical and psychosocial development and factors that challenge these normative processes. Emphasizes analysis of theories and research concerning families and children.

NURS 557 - Curriculum Dev Nrs Education (2-3)

Course focuses on program development and curriculum design in nursing. Theories of education and cognitive development, as a foundation for program preparation, will be presented. Use of mission and philosophy statements as bases of curriculum development will be explored. Students will participate in the curriculum-design process. Issues affecting curriculum design and development of curriculum outcomes will be analyzed. The evaluation process and its impact on curriculum development and implementation will be considered.

NURS 558 - Instr Strat and Eval Nrs Educ (2)

Students will gain experience in the development and critique of selected instructional methods for course and lesson development. Teaching-learning principles will be incorporated in the application of educational strategies relevant to clients, staff, and nursing students. Various evaluation methods will be examined. Issues in the selection of instructional strategies and evaluation methods will be discussed.

NURS 559 - Practicum in Nursing Education (2)

Course facilitates the graduate student's integration of educational theory and nursing knowledge. The student will participate in a teaching practicum under the guidance of an experienced nurse educator. Concurrent seminars will address topics promoting the student's role-socialization as an educator.

NURS 560 - Clinical Nursing Leadership for Advanced Gen

This course examines the theory and application of leadership strategies in the health care setting. Change theory and the process of making changes at the individual, unit and organizational level are examined. Leadership roles for the advanced generalist will be explored.

NURS 561 - Practicum in Clinical Leadership (6)

The student will design, implement and evaluate care during an immersion experience in a designated health care setting. The experience will foster leadership and role acquisition with emphasis on quality improvement, interprofessional team care, patient-centered care, evidence-based practice and utilization of informatics and technology. The culmination of the experience will be a professional paper and presentation in which students communicate their project design and results.

NURS 563 - Dynamics of Family Nursing Practice (3)

This course provides the theoretical foundations for the nursing care of families within a community context. The course will emphasize analysis of theories and research concerning families. Family functioning and roles in family health care, using family assessment tools and other nursing strategies with respect to advanced nursing practice are appraised. Family dynamics that impact family well-being and contemporary governmental, corporate and agency policies and resources that affect family functioning are examined.

NURS 565 - Adol Sex/Chldbearing/Chldrear (2-3)

Examines current trends in adolescent sexuality, fertility, and childrearing and their social context. Explores related factors within the framework of adolescent development. Describes public health and social consequences of adolescent childbearing; analyzes creative models for prevention of pregnancy and for providing comprehensive services. Examines ethical issues surrounding such programs.

NURS 566 - Evidence-Based Approaches for the Nurse Ed

This course is designed to help students develop an evidence-based approach for the roles of the nurse educator in a variety of practice settings. The evidence on selected educational topics is examined and students create instructional materials based on existing evidence. Students utilize skills in locating, analyzing, integrating and presenting evidence to demonstrate teaching approaches in a selected nurse educator role. Reflective practice is highlighted and students plan for continuing professional development in the areas of discovery, integration, application, and teaching.

NURS 569 - Adv Nrs Prac for Gynol Issues (2)

Course will focus on gynecologic health-care issues for advanced nursing practice. Health promotion, disease prevention, and management of common disorders seen in gynecologic and primary-care settings will be examined. By using nursing research and practice standards, students will analyze strategies in the physiological, psychological, sociological, and spiritual dimensions in caring for women. Trends in health-care ethical issues and the sociopolitical environment of women will be analyzed to optimize care management.

NURS 575 - Care/Elderly Interdisc Approach (2-3)

Designed to focus on an integrated approach for health care delivery to the elderly. Emphasis is on the physiological, psychological, socio-cultural, spiritual, ethical, and political/legal theoretical basis for care of the elderly. Opportunities are provided to acquire a knowledge about the elderly from the various disciplines in relation to practice, education, and research.

NURS 576 - Multisystem Disorders (3)

The focus of this course is the management of chronic complex health issues in the adult and older adult. This course will cover the management of multi-system disorders including the selection and interpretation of cardiovascular and pulmonary diagnostics: diabetic therapies, sleep disorders, movement disorders; HIV and the newest approaches to complex cancer care.

NURS 581 - Advanced Practice Nursing Clinical Practicum

This course is the first of two courses that provides the student with a practicum experience as an advanced practice nurse. The student spends concentrated time practicing in the role of an advanced practice nurse under the supervision of an approved and qualified preceptor. The student assumes increasing independence in assessing, planning, implementing and evaluating health care. This course includes seminar discussions exploring the implementation of the role and functions of the advanced practice nurse.

NURS 582 - Nursing Informatics Concepts (3)

This course explores the methods and technology of information handling in nursing. It examines language, database, and information systems which support the discovery, utilization, or dissemination of nursing knowledge. Through interaction with computer systems, students will increase their technical and analytical competencies in managing and processing nursing data and information.

NURS 589 - Adv Prac Nrs: Sem/Practicum (0-5)

Provides opportunities to develop competencies as an advanced practice nurse. The selection of practice areas and experiences are based on the educational and career goals of the student. Emphasis is placed on decision making and active participation in interdisciplinary delivery of health care. Seminar allows students to discuss role issues.

NURS 600 - Theory Development in Nursing (3)

Study of theory development in nursing from historical and philosophical perspectives. Analysis of the process of theory construction, including current approaches to organizing and building nursing knowledge. Evaluation of selected theoretical models in terms of their relevance for practice and research.

NURS 601 - Research Issues in Health Promotion, Disease

Examines social/behavioral and health science research on promoting the state of health and risk factors associated with vulnerability to health impairment. Includes research which addresses protection of vulnerable populations from health problems and limitations of disability. Analysis of research addresses conceptual, theoretical, methodological, and nursing practice issues.

NURS 602 - Measurement of Nursing Var (3)

Analysis of selected mid-range theories and related research in nursing concerned with individual and family responses to health conditions. Includes study of measurement theory, quantitative methods and designs, and instrument construction and evaluation.

NURS 603 - Nursing Issues and Leadership (2)

Examines the influence of historical events and nursing leaders on contemporary issues that are relevant to the development of nursing in the United States. Analysis of health-related policy issues and leadership strategies, including research, to address problems related to nursing and health care.

NURS 604 - Care Acute/Chronically Ill Pop (3)

This course focuses on advanced study of evidence-based practice related to physiological and behavioral responses to acute and chronic illness. Students analyze current research to promote effective nursing care of acutely and chronically ill populations. Emphasis is on knowledge development to advance nursing as a discipline.

NURS 609 - Quantitative Mthds Nrs Rsch (3)

This course examines the selection and use of quantitative methods and approaches in nursing research. It focuses on nursing research design, analysis, and knowledge generation from a quantitative perspective. Emphasis is given to writing nursing research proposals, grant applications, and the role of peer review in the research process.

NURS 610 - Qualitative Mthds Nrsng Rsch (3)

Examines the philosophical and theoretical foundations of qualitative research. Study of methods, designs, ethical and scientific issues, and techniques of data collection, analysis, and interpretation.

NURS 612 - Iss Sci Integrity in Nrs/Hlth (1)

This course discusses the historical development of principles of research ethics with particular focus on their evolution in nursing and health research. Students explore issues associated with intellectual responsibility for and avoidance of misconduct in individual work. They also explore issues of mentoring, intellectual property, and conflict of interest associated with joint work. The course augments the consideration of issues associated with research on human subjects with illustrative case studies in nursing.

NURS 613 - Knowledge Dev in Nursing (3)

This course will examine the development of nursing knowledge from diverse philosophical perspectives and traditions. Different conceptions of truth, knowledge, rationality, personhood, the body, and the moral good will be examined as a foundation for understanding and investigating nursing phenomena.

NURS 614 - Interpretive Phenomenology: Research Metho

The course will examine phenomenology as a methodology for understanding human actions and for conducting research into human practices. The hermeneutic turn for developing knowledge for practice disciplines (e.g., education, psychology, family therapy, nursing, social work, public administration, and medicine) will be addressed together with issues and skills in conducting interpretive research. Post-modern conceptions of validity for evaluating interpretive research will also be examined.

NURS 650 - Multivariate / Multivariable Statistics in Nursin

This course uses a general linear models approach to data analysis with multivariate/multivariable techniques, including ANOVA/MANOVA methods for repeated measures, multiple regression, logistic regression, factor analysis, and introduction to model fitting techniques. Emphasis is given to interpretative principles of research design, statistical modeling, and analysis methods applied to nursing and clinical research rather than on specific mathematical details.

NURS 660 - Reserach Issues in Nursing Education (3)

This course presents specific approaches to conducting nursing education research in academic/classroom, clinical, and simulation/skills laboratory settings. Methods of examining learning processes and outcomes from traditional and innovative pedagogies and use of emerging technologies by nurse educators are explored. Emphasis is given to the ethical issues and analytical strategies related to conducting nursing research.

NURS 700 - DNP Forum (0)

This forum provides the student with a mechanism for the discussion of ideas and issues related to the DNP program and capstone project.

NURS 710 - Health Care Policy & the APN (3)

Provides an overview of health care policy and policy models. Factors impacting policy development and policy making processes are explored. The influence of advanced practice nurses on policy in health care delivery, outcomes and nursing as well as skills to analyze policy processes and politically competent actions are emphasized.

NURS 711 - Health Care Delivery Systems (3)

This course focuses on the assessment of the health care delivery system and the organizational theories and behaviors involved in those systems. Systems processes are examined to reduce health disparities and promote patient safety. Trends in health care delivery models will be explored. Innovative health care delivery models will be envisioned.

NURS 713 - Interprofessional Collaboration (3)

This course utilizes an interprofessional framework to guide the exploration of complex patient-centered care of individuals, families, communities, and vulnerable populations. Course topics include: the history of interprofessional practice, its philosophic principles, terminology, current research, team competencies, and frameworks of practice.

NURS 714 - Leadership in Health Care (3)

This course analyzes leadership theories and spheres of influence of the advanced practice nurse in health care delivery. Change theory and the process of making change at an organizational/system level are examined. The focus is on the assessment and enhancement of leadership skills.

NURS 715 - Clinical Informatics (2)

Explores information literacy and the use of computers in health care. Students learn processes for selection and evaluation of information systems. Patient care technology is studied and used to analyze outcomes and examine patterns. Information systems/decision supports and clinical tools are discussed to support and improve patient care.

NURS 716 - Evidence Based Practice (3)

Developing, evaluating, and applying an evidence-base to address nursing-care issues will be considered. The theoretical basis for research utilization, the contributions of the evidence-based practice movement, and practical instances of their application in nursing will be examined. Barriers to research implementation and strategies to address those barriers will be considered from an individual and an organizational perspective, using both model-based and practical considerations. Opportunities will be provided to develop and evaluate a research utilization plan to address a clinical area of practice.

NURS 717 - Evidence Based Practice II (3)

This course builds on student's understanding of scholarly inquiry, research designs, methods, and research translation as best practices in health care. Topics include theoretical underpinnings for translational research design, needs assessment, program planning and evaluation, and application of quantitative and qualitative methods in the study of practice related phenomena. Cultural, political, and ethical issues related to translational research are addressed are consistent with Jesuit values.

NURS 718 - Capstone Project Management (1-2)

This course is designed to assist the student in refining the Capstone project in regard to the clinical research question, statistical analysis, writing the interpretation and discussion of results. The course is offered as variable credit.

NURS 789 - DNP Clinical and Capstone Project (0-4)

This course includes 1 credit hour of seminar and 3 credit hours of clinical. The clinical requirement includes 210 hours of experience culminating in a publishable paper. This clinical experience will provide the student with the opportunity to integrate and synthesize knowledge gained throughout the program. The student's project will focus on a practice change initiative in risk reduction. Examples include: a program evaluation, a quality improvement project, evaluation of a new practice model, a consulting project, or a pilot study.

Outcomes Research (ORES)

ORES 230 - Survey of Epidemiology in Health Services Re

This course introduces methods and interpretations of measures of frequency, association, error, bias and health impact. Epidemiological methods are presented within the context of assessing cost, quality, and access of the health care system. Employing mix of lecture, discussion, and computer-based laboratory assignments, students will explore the relationships between policy, medical care practices, and scientific understanding via epidemiology.

ORES 231 - Introduction to Clinical Medicine (3)

This course addresses the fundamentals of diagnosis and treatment related to the practice of medicine for leading diseases. Students will be introduced to the basic science concepts of medicine, including anatomy, physiology, microbiology, and genetics in the context of evidence-based screening and treatment guidelines used by medical subspecialties. Class sessions, taught by medical school faculty, employ a mix of lecture, discussion, hands-on demonstrations, and care simulation. Student assignments include analysis of diagnostic criteria and treatment options available to clinicians and development of patient-directed communications about medication use.

ORES 232 - Interprofess Health Outcomes (2)

In this course, students will use skills in effective and efficient searching for evidence-based health-care focusing on outcomes of collaborative practice for improving health status. Students will identify outcome variables to be measured and methods used in conducting outcomes research. Students will learn how to search and critically evaluate the literature and develop a plan for evaluating an interprofessional collaboration on health outcome.

ORES 501 - Introduction to Biostatistics for Health Outco

This course is designed to introduce basic principles of descriptive and inferential statistics. The course will cover fundamental concepts and techniques of descriptive and inferential statistics with application to health outcomes research. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 510 - Research Methods in Health & Medicine (3)

This online course is designed to provide an introduction to the techniques, methods, and tools used for research in the health sciences. Students will obtain an understanding of the research process and scientific method, specific study designs, methods for data collection and analysis. This is a very applied and hands-on course and is focused entirely on the unique aspects of research in the health sciences. This course will utilize Blackboard for all lectures, online discussions, assignment submission, and examinations.

ORES 515 - Multivariate Analysis for Health Outcomes Re

This course will cover multivariate statistical methods commonly utilized in health outcomes research. The course is designed for health outcomes research masters students and doctoral level students in public health. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 516 - Data Management (3)

This course will cover the basic skills necessary for maintaining databases as well as ensuring data quality and manipulating data. The course will also introduce an experiential component in data base design and management. The course is designed for health outcomes research masters students and doctoral level students in public health. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 521 - Foundations of Medical Diagnosis and Treatm

Taught by medical school faculty, this course in an introduction to clinical medicine for graduate students. Basic science concepts include anatomy, physiology, microbiology/hematology, infectious diseases, genetics, immunology, endocrinology and metabolic pathways. Primary organ systems and their associated diseases will also be covered, with special emphasis on their diagnosis and treatment.

ORES 526 - Pharmacoepidemiology (3)

This course is an introduction to pharmacoepidemiology - the use and effects of drugs in human populations. It provides an overview of the principles of pharmacoepidemiology, sources of pharmacoepidemiology data, and special issues in pharmacoepidemiology methodology. It reviews commonly used study designs, special topics and advanced methodologies for pharmacoepidemiologic studies.

ORES 530 - Foundations of Outcomes Research I (3)

This course will assist students in understanding outcomes research and provide a background in the basic tools used in outcomes studies. The course will enable students to 1) conceptually define the meaning and purpose of outcomes research, 2) understand the role of epidemiology, biostatistics, health economics, and database and information technology in conducting outcomes research, 3) evaluate the usefulness and utility of outcomes measures, 4) recognize the different types of measures used in outcomes research, including clinical, health status, quality-of-life, health care utilization, and patient satisfaction, 5) obtain a basic appreciation of statistical analyses appropriate for outcomes research, and 6) interpret the results of health outcomes research.

ORES 531 - Foundations of Outcomes Research II (3)

This course is a continuation of Foundations of Outcomes Research. This course provides a more in-depth look at study designs pertinent to the field of outcomes research including: comparative effectiveness research, cost-effectiveness research, and the skill-set surrounding risk-adjustment in outcomes research. The course also includes an experiential component in database design and management. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 532 - Scientific Writing&Communicatn (2)

This course is designed to provide students with the tools necessary to effectively communicate to scientific and lay audiences. The primary emphases of the course are the scientific manuscript and the oral presentation; however, grant and proposal writing, preparing poster presentations, and writing for lay audiences will also be discussed. The course will emphasize both the structure of a scientific paper as well as grammar and sentence structure, cohesion and coherence, and developing concise and simple messages.

ORES 533 - Research Ethics (1)

This course provides students with an understanding of the principles of ethics in scientific research. Students will gain an understanding of responsible conduct of research including the importance of ethical decision-making and identification of rules, responsibilities, and resources for responsible conduct. Topics include the four principles and their justifications, research misconduct, policies in human subjects research, data management and data sharing, and dealing with conflicts of interest.

ORES 540 - Pharmacoconomics (3)

Pharmacoconomics is one of the cornerstones of Health Outcomes Research. This course is designed to teach clinicians and new researchers how to incorporate pharmacoconomics into study design and data analysis. Participants will learn how to collect and calculate the costs of different alternatives, determine the economic impact of clinical outcomes, and how to identify, track and assign costs to different types of health care resources used. This is a required course for the MS in Outcomes Research and Evaluation Sciences but may also be of interest to students in Public Health and Health Administration. This course contributes to the First Dimension by providing students with advanced skills in highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communication complex information.

ORES 541 - Evaluation Sciences (3)

This course will examine methods for evaluation of health programs in both organizational and community contexts. Topics include formative research, process evaluation, impact assessment, cost analysis, monitoring outcomes, and evaluation implementation. Strengths and weaknesses of evaluation designs will be discussed. This is a required course for the MS in Outcomes Research and Evaluation Sciences Program but may also be of interest to students in Public Health, Health Administration, and Allied Health. This course contributes to the First Dimension by providing students with advanced skills in the evaluation sciences and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 542 - Clinical Trials Design and Analysis (3)

This course is designed to provide students with an understanding of the main concepts and issues in clinical trial design and interpretation. The course will concentrate on the design, conduct, analysis, interpretation, and dissemination of results in clinical trials research. Topics include power analysis, randomization (individual and group), study design, outcomes selection, generalizability, data monitoring, and federal regulations. This course is an elective in the MS in Outcomes Research & Evaluation Sciences program, but may also be of interest to masters and doctoral level Public Health students as well as student in Medicine and Allied Health. This course contributes to the First Dimension by providing students with advanced skills in highly valued research area and contributes to the Second Dimension by developing students ability to effectively communicate complex statistical information.

ORES 543 - Health Outcomes Measurement (3)

This course is designed to introduce students to the principles of health outcomes measurement. Specifically, students will be introduced to the most common measures seen in health outcomes and health services research as well as measure development and assessment of psychometric properties. Topics will include generic vs. disease specific measures, instrument design, scaling, reliability and validity, addressing measurement error, Classical Test Theory, and Item Response Theory. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 544 - Comparative Effectiveness Research (3)

This course is designed to introduce students to the principles of comparative effectiveness research. Specifically, students will be introduced to the concept of comparative effectiveness research, common research methods and statistical analyses, and translation and dissemination. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 545 - Biomedical Informatics (3)

This course provides students with an understanding of the fundamental concepts and activities in biomedical informatics. Topics include clinical classification systems, electronic health records, genomics, decision theory, e-Health, and clinical decision-making. The relationship between health information technology and clinical and outcomes research is emphasized.

ORES 546 - Drug and Device Development (3)

This course provides an overview of the drug and device development process from the laboratory through post-marketing studies. Practical aspects of the drug and device development process as well as regulatory policies and procedures will be discussed. Topics include the steps for gaining approval for a new drug in humans, clinical phases in the development process, use of biotechnology in drug development, preparing investigational new drug applications, and pharmacoeconomic principles for evaluating new treatments.

ORES 555 - SAS Programming I (3)

In the era of big data and outcomes research, skilled scientists can organize, manipulate, and analyze using many different tools. Programming in SAS is an essential skill. This course introduces the SAS environment and programming language. Students will learn data management, descriptive analysis, and statistical inference testing using a hands-on approach. By the end of the course, students will be able to import, organize, and analyze data as well as interpret the results.

ORES 590 - Health Outcomes Research Capstone (3)

This course is designed to allow students to integrate the knowledge and skills developed over the course of the MS in Health Outcomes Research and Evaluation Sciences Program. Students will design and complete an outcomes study or program evaluation over the course of the semester culminating in a formal presentation of the study and results. The overarching goal is to incorporate and utilize research skills in a real-world setting. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

Theological Studies (THEO)

THEO 110 - Liturgy & Sacraments I (2)

This course is offered for Philosophy and Letters students only.

THEO 111 - Liturgy & Sacraments II (2)

This course is offered for Philosophy and Letters students only.

THEO 120 - Catholic Doctrine (2)

This course is offered for Philosophy and Letters students only.

THEO 121 - Catholic Morality (2)

This course is offered for Philosophy and Letters students only.

THEO 130 - Catholic Doctrine I (2)

This course is offered for Philosophy and Letters students only.

THEO 131 - Catholic Doctrine II (2)

This course is offered for Philosophy and Letters students only.

Applied Analytics (AA)**AA 500 - Foundations of Analytics (3)**

This course is an introduction to the field of Analytics, with an emphasis on its applications in different domains of business and organizational operations. Concepts covered include Data; Information; Knowledge; Big Data and Analytics; Data Governance; Information Visualization and Representation; Evidence-Based Decision-Making; Information Retrieval; and Legal, Ethical and Privacy-related issues associated with Analytics.

AA 505 - Programming & Problem Solving (3)

A survey of the computer programming concepts used to solve problems within the study of informatics. The course will emphasize logical problem analysis, program development techniques, data organization and user interface concepts used to develop informatics applications.

AA 510 - Information Retrieval (3)

This course provides a foundation in retrieval of information from different types of data sources, such as Relational Database Management Systems (RDBMS); Key-Value Data Stores; and Semi-Structured and Unstructured Text. Students develop the key competencies necessary for designing data structures associated with each of the above mentioned data sources and in accessing data stored in those sources. The primary areas of emphasis will be RDBMS and Structured Query Language. Key-value data stores and data stores for storing unstructured data will be introduced and the problem areas where they are applicable will be explained and contrasted with those involving RDBMS.

AA 515 - Evidence-Based Decision Making (3)

This course provides the essential foundation of how one uses data to change the organization through and evidence-based decision making process. Students will have the opportunity to learn about and practice critical evaluation of data across a variety of disciplines. Topics will include logic models, decision making models, cybernetic systems, project/program evaluation, and ways to promote learning and innovation. Prerequisite: IF 510.

AA 520 - Visualization, Feedback and Dissemination (3)

This course will expose students to visualization and presentation techniques designed for the interpretation of data, improved comprehension, communication, and decision making. Students will use current software tools to analyze data, design interfaces and create interactive visualization and presentation applications. Topics will include data and image models, design and evaluation of reporting structures, maps and mapping, document collections, object interaction, feedback processes, and scientific and business simulations. Prerequisite: IF 515.

AA 525 - Project Management (3)

This course introduces students to the processes involved with managing a corporate level project from its beginning through implementation and ongoing maintenance. The course will cover current project management methodologies and processes, which include plan assessment, strategy formulation, implementation, quality control, and administration. In addition, the student will develop and review project plans from a corporate level project. The goal of the class is for the student to be able to understand and communicate the basics of managing projects, as well as the competitive advantage these projects bring within the business and industry. Prerequisite: IF 500.

AA 530 - Advanced Analytics (3)

This course covers several commonly-used advanced analytical methods involving statistical learning. Applications of these methods on datasets drawn from several fields will be emphasized, alongside a coverage of visualizations of data and results. Students will also learn how to automate tasks in various phases statistical analyses, and in creating useful visualizations of data and results. Prerequisite: ORLD 503 or equivalent. Offered annually as needed.

AA 575 - Contemp Issues in Analytics (3)

This course is a survey of recent technological advances in the area of Analytics. Theoretical foundations of the concepts and their applications in specific business and organizational domains are emphasized. Students will be introduced to specific Analytics techniques that are used currently by practitioners: Predictive Modeling; Data Mining; Marketing Analytics; Web Analytics; Risk Analytics; Text Analytics; and Academic and Learning Analytics.

AA 590 - Applied Analytics Project I (3)

The goal of the Applied Analytics Project I is to prepare students in the design of an applied research project within an organizational setting. Students will revisit competencies emphasized in the Applied Analytics program and reflect on the ways in which they have developed themselves within those competency areas. Specific attention will be paid to strengths and weaknesses of the student and to opportunities for programmatic improvement.

AA 595 - Applied Analytics Project II (3)

The goal of the Applied Analytics Project II is for students to use the skills they acquired during the Applied Analytics program to analyze and implement the plan for an applied research project that they have proposed in IF 590. The outcome of this course will be a pilot project, a proof-of-concept, or prototype that has the potential to affect and/or promote knowledge discovery and dissemination in an organizational context.

Adlt Contemporary Spirituality (ACSP)**ACSP 361 - Spirituality:Work and Vocation (3)**

This course will examine the lifelong process of discernment that leads to the identification of one's vocation or calling in life, as well as the meaning and spirituality of work. The course will involve personal reflection and internalization of the spiritual dimension of the student's life experience.

ACSP 460 - Spirituality Peace and Justice (3)

This course will introduce the student to the Catholic social teaching tradition regarding peace and justice. It will also explore the dynamic relationship between the work of peace and justice in contemporary society and the spiritual life.

ACSP 461 - Spirituality:Ethics/Leadership (3)

This course will explore the theological meaning of ethical work, and the spiritual dimension of leadership. Students will be introduced to the basic theories and concepts of ethics as applied to professional settings. Spiritual-based leadership styles will be studied. Students will use case studies to analyze ethical dilemmas that arise in one or more areas of leadership and professional life.

ACSP 462 - Contemporary Adlt Spirit Conf (1)

This capstone experience will pull together the spirituality theme grounded in each foundation course. Student course papers will be presented, interdisciplinary discussion panels and plenary sessions will be held and a keynote address from one of the course text authors will be given. Students will also write a final reflection from the event for CAS certification.

Adult Study Abroad (ASA)**ASA 341 - Con. of Eco. & Env. Costa Rica (3)**

This course is an introduction to the science of ecology. It gives students the opportunity to learn theory and field methods of environmental ecology in a unique tropical setting. Study of general theories, models and problems in population, community and ecosystems will prepare students for application of these principals to various political, cultural and conservation issues. The first seven weeks of the course are taught online; the last week of the course is offered at Carara National Park (CNP), on the Pacific coast of Costa Rica. The location and unique ecosystems of the park makes it ideal to study a number of current conservation issues, particularly impacting the rainforest.

ASA 393 - Faith, Art & Culture in Spain (3)

Spanish culture, art and faith traditions will be explored in this interdisciplinary course. Students will explore the geography, history, art, music, and literature of Spain in the classroom and first hand in the city of Madrid. The rich history and grandeur of Spain offers an appealing backdrop to this course. The one-week immersion in the country offers many opportunities to visit churches, mosques, museums and art galleries teaming with the memories of classic Spanish heroes and artists, such as St. Ignatius Loyola, St. Teresa of Avila, El Greco, Goya, Granados, Velazquez, Picasso, Dali, Miro, etc.

Aviation Management (AVM)**AVM 100 - Helicopter Ground I (2)**

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Private Pilot Certificate. Students will also be introduced to the training aircraft with practical application problems. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director. Offered annually as needed.

AVM 150 - Helicopter Flight Operations I (2)

This is the first in the sequence of flight training courses. This course will include all operations and procedures required for the Private Pilot Certificate with a Helicopter rating. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director.

AVM 200 - Helicopter Ground II (2)

Federal Aviation Regulations and flight procedures as outlined in the Aeronautical Information Manual; aircraft engine operation, aircraft/engine performance; flight instrumentation and systems; aircraft operations. The student is prepared to take the FAA commercial pilot knowledge test upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 100 and Permission of Program Director. Offered annually as needed.

AVM 250 - Helicopter Flight Operations II (2)

This course is the second in the flight training sequence. Instruction is provided to introduce Commercial Pilot operations and standards. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 150 and Permission of Program Director. Offered annually as needed.

AVM 300 - Helicopter Ground III (2)

Attitude instrument flying, parts 61 and 91 of the Federal Aviation Regulations along with the Instrument Flight Procedure set forth in the Aeronautical Information Manual; introduction to IFR charts and approach plates; theory and operation of flight instruments; radio navigation; theory and analysis of weather reports, forecasts and weather charts. The student is prepared to take the FAA instrument knowledge test upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 200 and Permission of Program Director. Offered annually as needed.

AVM 350 - Helicopter Flight Operations III (2)

This course is the third in the flight training sequence. Instruction is provided to complete helicopter Commercial Pilot certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 250 and Permission of Program Director. Offered annually as needed.

AVM 375 - Helicopter Flight Operations IV (2)

This course is the fourth course in the flight sequence. Instruction is provided to complete the Instrument Rating. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 350 and Permission of Program Director. Offered annually as needed.

AVM 400 - Principles of Flight Instruction I (2)

Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 300 and Permission of Program Director. Offered annually as needed.

AVM 425 - Helicopter Flight Operations V (2)

Instruction leading to flight instructor certificate with Helicopter rating. Prerequisite: commercial pilot certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 375 and Commercial Pilot Certificate with Instrument Rating and Permission of Program Director. Offered annually as needed.

AVM 450 - Principles of Flight Instruction II (2)

This course will provide the appropriate knowledge to understand the elements of teaching instrument and multiengine flight. The student will prepare lesson plans and practice various methodologies appropriate for advanced flight instruction. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): Possession of the Certified Flight Instructor Airplane Certificate and Permission of Program Director.

Offered annually as needed.

AVM 475 - Helicopter Flight Operations VI (2)

Instruction leading to the addition of an instrument rating to a flight instructor certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 425 and Commercial Flight Instructor Certificate and Permission of Program Director. Offered annually as needed.

AVM 4800 - Peer-Mediated Instruction (0-6)

This course provides upper level students with supervised opportunities to integrate theory and practice by working with teachers in classrooms or other field settings to mentor beginning level students within the discipline of helicopter ground and flight operations. Peer-mediated Instruction and Support will emphasize the development and application of teaching skills that can influence critical thinking and applied hands-on learning. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director required. Offered annually as needed.

General Studies (BGS)**BGS 480 - Capstone Course (3)**

This course will constitute a synthesis of the general studies major courses. The course will address such questions as what is the foundational role of the arts, culture, communication, social science, physical science and inquiry in the personal and professional development of an individual living and working in a global society. The student will complete the BGS Program Portfolio as one requirement of the course. Registration Restriction: Senior Status

Biology (BIOL)**BIOL 137 - Introduction to Cellular Biology (0-3)**

This course explores the basic concepts of cellular biology and genetics, stressing molecular structure, cellular interactions, energy metabolism, and heredity. These principles will be introduced through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method can be applied to future academic course work and in professional settings.

BIOL 138 - Introduction to Ecology and Evolution (3)

This course explores the basic concepts of ecology and evolution, through phylogenetic relationships, organismal form and function, biological interactions and conversation biology. These principles will be introduced through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method can be applied to future academic course work and in professional settings.

BIOL 320 - Microbiology (3)

This course is a general introduction to the diversity, ecology, growth and genetics of microorganisms, including topics of medical microbiology.

BIOL 330 - The Biology of Plants and Animals (3)

This course explores the concepts of plant and animal biological interactions in the context of conservation and biodiversity, while emphasizing the functions of evolution and ecology. In addition, students will learn how to read, analyze and interpret scientific research and data. They will also learn how to design ecological experiments and make predictions about how scientific research affects conservation efforts. The knowledge and analytic skills that may be gained from this course can be applied to future academic course work as well as in professional settings

Computer Information Systems (CIS)**CIS 115 - Concepts & Applications of Technology (0-3)**

This course prepares students to function successfully in today's knowledge society. It engages students through hands-on experiences with many emerging technologies used in online, interactive, and media-rich environments. It covers software applications, social and business networking platforms, content and learning management tools, web conferencing, immersive environments, and other technologies. Critical thinking is emphasized in solving organizational problems through the choice and application of appropriate technological solutions.

CIS 130 - Information Systems and Technology (0-3)

This course introduces how information systems and computer technology interrelate to collect, manipulate, and disseminate data and information within the context of business and industry. Students examine the main concepts of computer hardware and software, the survey of methodologies employed by business firms to harness the power of information technology for strategic purposes, the fundamental information systems design and development processes, and the impact of information systems on the individual, organization, and society.

CIS 160 - Introduction to Programming (0-3)

This course introduces students to the foundational concepts of computer programming. Students learn the steps involved in creating computer programs using the Java programming language and its associated tools. Through exercises, assignments and exams, students are guided in learning the key programming concepts that are drawn primarily from the object-oriented programming paradigm.

CIS 270 - Discrete Methods and Models (0-3)

After successfully completing this course the student will be able to: Examine the practical aspects of using discrete methods for understanding, modeling, and interpreting data within industry. Topics presented in this course are directed toward employing statistical and discrete methods for problem solving.

CIS 275 - Healthcare Information Systems Terminology (0-3)

Information technology professionals working in a healthcare setting utilize specialized terminology for effective communication. The goal of this course is to teach basic language related to medical science and allied health professions; word analysis, construction, pronunciation, spelling, definition, and use of terms pertaining to anatomy, pathology, abbreviations, and medical procedures.

CIS 295 - Principles of Data Analysis (0-3)

This course examines the concepts, techniques and methods used in the description and analysis of data and in statistical inference. Topics presented in this course are directed towards the analysis of experimental and survey data. Microsoft Excel software will be used as a tool to collect, organize, and process data.

CIS 300 - Software Engineering (0-3)

This course provides a business-oriented approach to the analysis and design of computer information systems. Exercises in the analysis, design, implementation, testing and maintenance of a modular application will provide the student with the foundation knowledge needed in today's computer technology field. Topics include software engineering goals, object-oriented methodologies, human interface design, and organizational issues.

CIS 310 - Principles of Object Oriented Programming (0-3)

This course builds on foundational principals of object-oriented programming students learn in CIS 160. The course emphasizes good software engineering principals and programming skills in the context of a language that supports the object-oriented paradigm. Topics include abstraction, objects, classes, methods, parameter passing, encapsulation, inheritance, polymorphism, and object-oriented considerations for software design and reuse.

CIS 315 - Computing in Society (0-3)

A survey of the impact that computers and information technology has on society. It examines the roles and responsibilities that computer and information technology professionals have in directing current and emerging technologies.

CIS 330 - Database Analysis and Design (0-3)

A detailed overview of the fundamental concepts of database analysis, design, and implementation with emphasis on the relational model. The course will cover databases used in today's networked client-server applications. Topics include ANNSI SQL, data normalization, tables, queries, reports, forms, security, replication, data layout, and backup/recovery.

CIS 360 - Networking and Telecommunications I (0-3)

A survey of computer networks and telecommunications for today's computer information technology professional. This course will cover basic network terminology, the different types of networks, and the components that comprise a network. Specific topics include the OSI model, network protocols, network operating system, network hardware, and network topologies. Additionally, this course will examine telecommunications and the role it plays in information exchange.

CIS 370 - Web Application Development (0-3)

This course presents the structure, implementation, and theoretical underpinnings of web development and the applications that have been enabled by that technology. This course will include topics in principles of web technologies and web engineering, support tools for web-site creation and web, management, database-driven web sites, web security issues, and enterprise-wide web-based applications.

CIS 380 - Technology Integration Field Experience in Elem

This course provides access to a variety of audiences and technologies to explore and exchange ideas. Students will observe, document, and reflect upon the manner in which effective teachers use technology to augment processes of instruction, assessment, and learning. The field experiences may take many forms to include classroom observation, individual tutoring, as well as before- or after-school programs.

CIS 390 - Information Organization and Representation (0-3)

A project based course that provides the opportunity for students to apply information technologies used to collect, organize, analyze, present, and manage data used in decision making processes. Students will learn to join together the technical aspects of application development with human dimensions to aid an organization in answering complex questions.

CIS 405 - Project Management (0-3)

This course introduces students to the processes involved with managing a corporate computer/information technology project from its initial beginning through implementation and ongoing maintenance. The course will cover current project management methodologies and process which include plan assessment, strategy formulation, implementation, quality control, and administration. In addition, the student will develop and review action plans for re-engineering the computer/information technology project with the goal of building, sustaining, and expanding a competitive advantage within the business industry.

CIS 410 - Enterprise Architecture (0-3)

The alignment of business and IT technology models is key in supporting the strategic of an organization. This course explores the analysis, design, implementation, evaluation, and management of enterprise IT solutions. Topics include functional modeling, physical architecture design, security planning and recovery issues, project management, emerging technologies, and financial and global considerations.

CIS 415 - Data Governance (0-3)

Data governance considers data as enterprise asset. This course issues related to data storage and governance in an organizational context. Topics will include the policies, standards, processes, and regulations that are associated with management of data.

CIS 430 - The Fundamentals of Computer Forensics (0-3)

The course offers computer forensics theory and methodology. The course explores how to find traces of illegal or illicit activities left on a disk with computer forensic tools and manual techniques. The student will learn about the elements of an effective computer crime policy. It is a study of the investigations of computer crime from both a legal and technical perspective.

CIS 440 - Information Systems in Healthcare Organization

Modern day healthcare organizations rely heavily on information systems for their day-to-day operations. This course will first provide an overview of the organizational structures, types of governance, administration, and facilities used in the delivery of health care. Secondly, it will examine the applications of information systems specifically used to support and drive the health care industry.

CIS 455 - Social and Organizational Computing (0-3)

Social and organizational computing is the use of online communication for collaboration. This course will examine how organizations can leverage social computing through the use of blogs, wikis, social networking, crowd-sourcing, and other related technology-enabled processes for achieving organizational goals. This course has CIS370 as a prerequisite.

CIS 460 - Information Assurance and Security (0-3)

Information assurance and security is the protection and securing of organizational data and information infrastructure and assets. This course covers topics such as access control, disaster recovery and business continuity, security models and evaluations, networks and system security, physical security, and best practices with them.

CIS 465 - Current Topics in Web Technologies (0-3)

Web technologies continue to evolve multidimensionally. This course presents a survey of current web technologies with an emphasis on societal implications. Technologies covered: social networking, virtual communities, video sharing, social bookmarking, and recommendation systems.

CIS 470 - Advanced Database Systems (0-3)

This course provides advanced study in how to develop and implement a business oriented, data-driven information system. Students will design, construct, test, and install a database system using fourth generation event-driven languages and/or other data access tools.

CIS 472 - Enterprise Application Development (0-3)

Enterprise Application Development focuses on applying object-oriented techniques in the design and development of software systems for enterprise applications. The emphasis of the course will be on developing real-world business and scientific applications that are effective, reliable, scalable, and secure.

CIS 475 - Data Mining (0-3)

Data mining is the process of turning a large amount of data into useful information. This course presents the concepts, techniques, and applications of data mining in an organizational context. Topics covered will include data selection and cleansing, predictive analytics, classification, associative rule mining, clustering, and visualization.

CIS 490 - Capstone Experience (1-3)

The capstone experience course provides student with a service-learning opportunity where they work with an organization of their choice to identify and define a problem that is of importance to the organization, design and implement a solution that is deemed satisfactory by the organization, within the various constraints of associated with the implementation. Students are required to have one faculty member and one member of the sponsoring organization as supervisors and guides who help them in completing their project successfully. During this course, students are expected to demonstrate a synthesis and application of the knowledge and Jesuit ideals learned during their coursework. The course can only be taken in the last two terms of their senior year of coursework. This course has senior status as a prerequisite.

Criminal Justice (PS) (CJST)**CJST 300 - Intro to Criminal Justice (3)**

Survey of the criminal justice systems with particular emphasis on the interrelationship of the components of the system (police, courts, corrections, legal profession) to each other and to society.

CJST 310 - Constitutional Criminal Procedure and Issues (3)

An examination of the historical development of the U.S. criminal justice system and the impact of the Supreme Court rulings on that development, including the growing impact of the victim rights movement. As a result of the course, students will be able to examine and analyze modern day events and changes within the criminal justice system in light of historical and constitutional developments.

CJST 350 - Org Admin in Law Enforcement (3)

Overview of municipal police management; alternatives available in organizing, structuring, and deploying law enforcement personnel; sociological dynamics of police organization and management.

CJST 355 - Juvenile Justice System (0-3)

Intensive analysis of the social administration of juvenile justice within the U.S. Particular emphasis will be placed on the decision-making process of police, court and probation officials regarding apprehension and processing of juveniles. Recent Supreme Court decisions, assessment of effort at prevention, control, and rehabilitation will be discussed in light of theoretical perspectives.

CJST 365 - White Collar Crime (3)

This course will take an intensive look at white collar crime. Students will be introduced to the nature of white collar crime and will be advised as to the many different ways that non violent crime can be accomplished, the people that commit these crimes and the motivation for their actions.

CJST 370 - The Death Penalty (3)

This course is designed to be an intensive investigation into the death penalty. The investigation will include a brief review of the history of the death penalty, both in America and internationally. The investigation will continue into a review of how and why the death penalty is being used as a means of punishment in current times.

CJST 375 - Introduction to Corrections (3)

Overview of the corrections field; courts, detention, sentencing, adult institutions, probation, parole, and staffing and personnel issues.

CJST 380 - Deviance and Social Control (3)

Social and psychological theories leading to punishment vs. rehabilitation debate; suggestions of workable alternatives based on behavior modification and defensible space; scientific method, system analysis, creative problem solving.

CJST 385 - Hate Crimes (3)

This course provides the student with a basic understanding of hate and bias crimes in the United States, their history, the types and reasons for such crime, and the response of law enforcement, courts and legislatures. The course identifies the major types of hate groups active in the United States, their goals and philosophies, as well as the history of such kinds of organizations and movements in American history and the manner in which they interact with and impact American society

CJST 390 - Introduction to Terrorism (3)

This course will review the nature of domestic and international terrorism and the ways in which it affects the United States and its criminal justice system. It will consider various roots and causes of terrorism, methods of terrorism, ideologies associated with terrorism, and the response of the American criminal justice system.

CJST 414 - Drugs and Behavior (3)

This course gives the student a basic understanding of the common drugs used and abused in American society today by focusing on the history of drug use in the United States, the identification of legal and illegal drugs, the manner in which drugs affect the human body, and governmental policy in regard to drug use in the United States and its social implications.

CJST 420 - Fund Computer Forensic (0-3)

The course offers computer forensics theory and methodology. The course explores how to find traces of illegal or illicit activities left on a disk with computer forensic tools and manual techniques. The student will learn about the elements of an effective computer crime policy. It is a study of the investigations of computer crime from both a legal and technical perspective.

CJST 465 - Justice Administration (3)

Principles of organization and management theories applicable to law enforcement agencies will be discussed. Aspects of concept planning, basic components and objectives of the planning process, and organizational development programs related to law enforcement will be reviewed.

CJST 475 - Criminal Justice and Security Management Ca

This course will constitute a synthesis of the Criminal Justice and Security Management (CJSM) major courses. The course will address what you have learned from all your undergraduate coursework including courses in the core, electives, and the CJSM program.

CJST 485 - CJO Portfolio Pro-Seminar (1)

Taken the last term of senior year in the CJST major. A seminar course in which each student assembles and presents a degree program portfolio. The portfolio will consist of designated course projects that were completed throughout the CJST degree program. The seminar will allow students to reflect on their personal and professional development and create a formal display of their knowledge and skills. The content and presentation of the portfolio will be evaluated by faculty according to established performance criteria. A pass/no pass grade will be given upon completion of the portfolio seminar.

CJST 491 - Criminal Justice Internship (1-3)

Requires permission from the Program Director, and junior status. This course elective allows students to acquire relevant work experience with local corporate or not-for-profit organizations, courts, or governmental agencies. Students will have the opportunity to put knowledge and skills into practice under the direction of both a faculty sponsor and a practitioner from the organization. The arrangements for the working relationship and elective credit must be established prior to the start of the internship.

Communication (PS) (CMMK)**CMMK 100 - Intro to Human Communication (3)**

This course offers comprehensive coverage of the fundamentals of human communication including perception, listening, self, and verbal and nonverbal messages; interpersonal and intercultural communication; small group communication, including interviewing; and mass communication. Research and theory in classical and contemporary approaches will be covered. The knowledge and skills learned will be applied across the entire curriculum.

CMMK 121 - Public Speaking in Org. Life (3)

This course promotes principles of effective public speaking and provides opportunities for the development of speaking skills. The course will examine: standards for evaluating personal performance and the performances of others; speeches and presentations required in modern organizations; speaking clearly and persuasively; and effective audience interaction. Students will become familiar with presentation technologies. The knowledge and skills learned will be applied across the entire curriculum.

CMMK 201 - Principles of Effective Communication (3)

This course surveys major concepts, theories, and research approaches in the study of human communication(s). Students will examine the ways communication(s) shapes our experience of the world, the role of communication(s) in shaping personal identities, and establishing and maintaining interpersonal relationships in professional settings and organizations. The course covers basic human communication processes in the contexts of relationships, groups, organizations, culture, as well as the interface of human and mediated interaction(s), with an emphasis on communication (ie. communication technology, mass media and society, visual type communications, etc.) instead of just human communication.

CMMK 301 - Integrated Corporate Communication (0-3)

In this course, students will plan and implement online communication strategies designed to meet an organization's goals. This course will take a strategic approach, in which students define the organization's objectives, analyze audiences, select appropriate digital communication channels, create and launch digital content, and evaluate the effectiveness of their efforts. Students will learn basic principles of audience-focused web writing and website content organization, discuss the importance of engaging organizational stakeholders, and gain practical experience with digital media and tools. Pre-requisites: CMMK 121, ENGL 190, CST 115

CMMK 323 - Business & Prof. Communication (3)

Practical instruction and experience in developing professional communication skills for conferences, reports, sales, media and other professional speaking situations will be covered. Students will be required to demonstrate presentational skills in a variety of business and professional presentations including crisis briefings, proposals, sales, and technical presentations.

CMMK 325 - Strategic Communication Across Professiona

This course addressed the role of integrated corporate communication in achieving an organization's strategic goals. Students will explore internal and external corporate communication functions, formulate communication strategy, choose appropriate communication channels and tactics, and assess the effectiveness of corporate communication. Students will refine communication skills by delivering business and professional presentations appropriate to specific corporate communication functions and settings.

CMMK 350 - Ethics in Professional Communication (3)

This course is an overture of classical and contemporary approaches to communication ethics. The course will closely examine and apply ethical practice in specific professional and organizational situations. Upon completion of the course, students will have a clear comprehension of theoretical and practical methods with which to develop and apply personal guidelines for making ethical decisions in business, corporate and organizational world. Pre-requisites : CMMK 121 and ENGL 190.

CMMK 360 - Public Relations Princ & Pract (3)

This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will attain knowledge and understanding of the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Learning will be reinforced through case study analysis and development, written papers, interactive discussions, and oral presentations.

CMMK 365 - Professional Communication Between Cultur

This course explores the role of communication in understanding, accepting and appreciating cultural differences in professional settings. Students will learn that culture can include not only issues of nationality, ethnicity and race, but also gender, socioeconomic status, age, disability, and many other factors. Students will discuss the many facets of culture, explore the relationship between culture and communication, and apply intercultural communication principles in order to communicate with confidence, empathy, and integrity in professional contexts within a global society. Pre-requisites: CMMK 121 and ENGL 190.

CMMK 370 - Advertising Princp & Practices (3)

This course explores the numerous dimensions of advertising - as a business, a creative communication process, a social phenomenon, and a fundamental ingredient of the free enterprise system. Students will have the opportunity to analyze advertising perspectives; develop marketing and advertising strategies; integrate advertising with other elements of the communications mix; and create advertisements and commercials. Ethics and social responsibility will be emphasized throughout the course. Learning will be facilitated through interactive discussions, case analysis, written assignments, oral presentations, and the critical analysis of an advertising campaign.

CMMK 409 - Theories of Persuasion (3)

This course provides an overview of the study of persuasion. In addition to the traditional study of public persuasion, students will gain a solid grounding in the principles of social influence and compliance gaining as they apply to daily interpersonal interaction. Students will become familiar with theory and research in the field and apply strategies and techniques of persuasion across communication contexts. Learning will be demonstrated through interactive discussions, research papers, group projects and professional presentations.

CMMK 415 - Public Relations Principles and Practices (3)

This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will learn about the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Pre-requisites: CMMK 121 and ENGL 400.

CMMK 420 - Communicating in Small Groups (3)

Groups are an important and present aspect of our personal and professional lives. Each day we interact with small groups of people – family members, work teams, student groups; the ways in which we interact in groups has an impact on our professional, personal and community experiences. Group communication is complex and it is increasingly become more so in a globalized world. As our workplaces, families, and cultural institutions become more diverse, we are being asked to work in groups with members of communities different than our own. Whether individuals are of a different race/ethnicity, religion, gender, sexual orientation, age group, or level of ability, it is imperative that we learn to effectively communicate in the group setting. Learning the principles and processes of small group communication will enable you to function as a team member and/or leader in group setting. This course focuses on the theories, concepts, and practices of small group communication, with an emphasis on group development and roles, problem solving, and decision-making processes, leadership and conflict management in multicultural settings.

CMMK 427 - Advertising Principles and Practices (3)

This course explores the numerous dimensions of advertising – as a business, a creative communication process, a social phenomenon, and a fundamental ingredient of the free enterprise system. Students will have the opportunity to analyze advertising perspectives, develop marketing and advertising strategies, integrate advertising with other elements of the communications mix, and create advertisements and commercials. Ethics and social responsibility will emphasize throughout the course. Pre-requisites: CMMK 121 and ENGL 400.

CMMK 450 - Persuasion in Professional Communication (3)

This course explores the theory and practice of persuasion. In addition to the traditional study of public persuasion, students will gain a solid grounding in the principles of social influence and compliance gaining as they apply to interpersonal interaction in professional settings. Students will survey theory and research in the field and apply strategies and techniques of persuasion across professional communication contexts. Pre-requisites: CMMK 121 and ENGL 400.

Computer Science Tech (CST)**CST 115 - Concepts & Applications of Technology (0-3)**

Concepts & Applications of Technology prepares student to successfully interact in today's knowledge society. This course engages students through hands on experiences with many emerging technologies used in today's online, interactive and media rich environments. It covers various software applications, social and business networking platforms, content and learning management tools, web conferencing, immersive environments and other trends in technology and computing. The foundations concept for the course will be critically thinking about technology within a variety of settings and organizations focusing on applied theory, practical application and self-development.

CST 130 - Information System & Technology (0-3)

This course introduces how information systems and computer technology interrelate to collect, manipulate and disseminate data and information within the context of business and industry. Students examine the main concepts of computer hardware and software, the survey of methodologies employed by business firms to harness the power of information technology for strategic purposes, the fundamental information systems design and development processes, and the impact of information systems on the individual, organization, and society.

CST 160 - Introduction to Programming (0-3)

This course will introduce students to the foundation concepts of computer programming using the C programming language. The student will learn how to develop effective software engineering practice, emphasizing such principles as design, decomposition, encapsulation, procedural abstraction, testing, and software reuse. Structured programming will be reinforced through techniques designed to solve business and scientific problems. Laboratory exercises will provide practice in developing programming solutions writing programs that will reinforce basic programming concepts, logic flow, and structured design.

CST 270 - Discrete Methods and Models (0-3)

Examines the practical aspects of using discrete methods for understanding, modeling and interpreting data within industry. Topics presented in this course are directed toward employing statistical and discrete methods for problem solving.

CST 293 - CST Special Topics (1-4)

Prior approval of sponsoring professor and program director required

CST 295 - Principles of Data Analysis (0-3)

This course examines the concepts, techniques and methods used in the description and analysis of data and in statistical inference. Topics presented in this course are directed towards the analysis of experimental and survey data. Data analysis software will be used as a tool to collect, organize and process data.

CST 298 - CST Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required.

CST 300 - Principles of Software Engineering (0-3)

This course provides a business-oriented approach to the analysis and design of computer information technology systems. Exercises in the analysis, design, implementation, testing and maintenance of a modular application will provide the student with the foundation knowledge needed in today's computer technology field. Topics include software engineering goals, object-oriented methodologies, human interface design, and organizational issues.

CST 310 - Princ. of Object Oriented Prog (0-3)

This course introduces the principles of object-oriented programming. The course emphasizes good software engineering principles and programming skills in the context of a language that supports the object-oriented paradigm. Topics include abstraction, objects, classes, methods, parameter passing, encapsulation, inheritance, polymorphism, and object-oriented considerations for software design and reuse.

CST 315 - Social, Prof, & Ethical Issues (3)

This course provides a survey of the impact that computers and information technology has on society. It examines the roles and responsibilities that computer and information technology professionals have in directing current and emerging technologies.

CST 330 - Concepts Database Analysis & Des (0-3)

This course introduces the fundamental concepts of database analysis, design, and implementation with emphasis on the relational model. The course will cover databases used in today's networked client-serve applications. Topics include ANSI SQL, data normalization, tables, queries, reports, forms, security, replication, data layout, and backup/recovery.

CST 360 - Networking & Telecomm I (0-3)

This course introduces students to computer networks and telecommunications for today's computer information technology professional. The course will cover basic network terminology, the different types of networks, and the components that comprise a network. Specific topics include the OSI model, network protocols, network operating systems, network hardware, and network topologies. Additionally, this course will examine telecommunications and the role it plays in information exchange.

CST 370 - Net Centric Computing (0-3)

This course introduces the structure, implementation, and theoretical underpinnings of computer networking and the applications that have been enabled by that technology. The course will include topics in principles of web technologies and web engineering, support tools for web-site creation and web management, database-driven web sites; web security issues, and enterprise-wide web-based applications.

CST 380 - Technology Intgtn Field Experi (0-3)

This course provides access to a variety of audiences and technologies to explore and exchange ideas. Students will observe, document, and reflect upon the manner in which effective teachers use technology to augment processes of instruction, assessment, and learning. The field experiences may take many forms to include classroom observation, individual tutoring, as well as before-or after-school programs.

CST 390 - Information Org & Representatn (0-3)

A project based course that provides the opportunity for students to apply information technologies used to collect, organize, analyze, present and manage data used in decision making processes. Students will learn to join together the technical aspects of application development with human dimensions to aid an organization in answering complex questions.

CST 405 - CST Project Management (0-3)

This course introduces students to the processes involved with managing a corporate computer/information technology project from its initial beginning through implementation and ongoing maintenance. The course will cover current project management methodologies and process which include plan assessment, strategy formulation, implementation, quality control, and administration. In addition, the student will develop and review action plans for reengineering the computer/information technology project with the goal of building, sustaining, and expanding a competitive advantage within the business industry.

CST 410 - Strategic Technology Planning (0-3)

This course examines the processes that use information systems and technology to develop a competitive advantage as it relates to the business process. It introduces students to current approaches for deriving business and information technology strategies, while ensuring harmony among internal organizations, customers, suppliers, and other stakeholders.

CST 460 - Networking & Telecomm II (0-3)

This course provides advanced study in the areas of networking and telecommunications in the corporate, business, and scientific environments. The course will focus on the skills needed by today's computer information technology administrator and/or engineer. The student will learn how to design, develop, and support networks in today's client/server environment. Network architecture and administration issues will be highlighted and experienced through the use of a LAN/WAN environment.

CST 465 - Advanced Topics in Informatics (0-3)

An examination of informatics applications used in science, business and government. Students will be exposed to techniques and strategies used in field specific data access, management, and analysis. This is a seminar based course with subject matter expertise speakers in the disciplines of medical informatics, nursing informatics, bioinformatics, molecular informatics, geographical informatics and business informatics.

CST 470 - Adv Database Analysis & Design (0-3)

This course provides advanced study in how to develop and implement a business oriented, data-driven information system. Students will design, construct, test, and install a database system using fourth generation event-driven languages and/or other data access tools.

CST 472 - Adv Object Oriented Programmng (0-3)

Prerequisites: Grade of "C" or better in CST 310 and ENGL 190. This course covers advanced concepts in programming using object-oriented languages within various environments. The emphasis of the course will be on developing programming real-world business/scientific applications that are effective and reliable. Students will design, code, and document programs in an object-oriented language using object-oriented analysis and design methodology.

CST 475 - Advanced COBOL Programming (3)

This course will expose the student to the techniques necessary to solve complex business-oriented problems. Modular and efficient program design is stressed along with documenting, testing, and debugging techniques. Advanced programming topics will include multiple file processing, direct, random, and indexed file processing, subprogram development, advanced string manipulation, and multiple level arrays/table processing.

CST 485 - CST Portfolio Pro Seminar (1)

Taken the last semester of senior year in the CST major. A seminar course in which each student assembles and presents a degree program portfolio. The portfolio will consist of designated course projects that were completed throughout the CST degree program. The seminar will allow students to reflect on their personal and professional development and create a formal display of their knowledge and skills. The content and presentation of the portfolio will be evaluated by faculty according to established performance criteria. A pass/no pass grade will be given upon completion of the portfolio seminar.

CST 491 - CST Internship (1-4)

Requires permission from the program director, and Junior Status. This course elective allows students to acquire relevant work experience with local corporate or not-for-profit organizations. Students will have the opportunity to put knowledge and skills into practice under the direction of both a faculty sponsor and a practitioner from the organization. The arrangements for the working relationship and elective credit must be established prior to the start of the internship.

CST 493 - Advanced Special Topics (1-4)

Prior approval of sponsoring professor and Program Director required.

CST 495 - Special Problems in CST (1-3)

Individual reading and research on some topics not included in the regular offerings of the department.

CST 498 - Advanced Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required.

Contract Management (Ps) (CTM)**CTM 300 - Basic Princ of Contract Mgmt (3)**

This course will explore the contract management process in three broad phases: pre-award, contract award, and post-award. Each step of the phases will be addressed from both the Buyer and Seller perspectives, in both the federal and commercial environments. Key learning points include procurement planning, bid and proposal preparation, source selection, and contract administration. Students will participate in realistic team exercises to enhance their contracting skills, to include mock negotiations, dispute resolution and oral proposals.

CTM 325 - Contract Formation and Performance (3)

By its very nature the field of contract management is heavily influenced by the field of law. In this course, students will acquire an understanding of the formation and administration of a contract in accordance with Common Law, the Federal Acquisition Regulation (FAR), and the Uniform Commercial Code (UCC). Other areas covered include contract types, contracting authority, contract terms and conditions, contract changes, defaults, communication between parties, contract termination, conflict resolution and claims.

CTM 335 - Contract Administration and Monitoring (0-3)

Managing a contract is much like managing your own business. Like a business owner, as a contract professional you are ultimately responsible for a contract's profit or loss or the successful on-time, at or under budget completion. This means you have to understand the financial nuances of a contract from how estimating and pricing were done to timely accurate billing to close out. Applicable sections of the Federal Acquisition Regulation (FAR) will be reviewed. Students will be introduced to the basic techniques and applications of Earned Value Management (EVM). The roles of the government oversight organizations (DCAA and DCMA) will also be explored.

CTM 345 - Project Management: Principles and Practices (3)

Much of the work involved with contract management requires a basic understanding of project management. Using a holistic approach this course is designed to provide contract professionals with a basic understanding of what is necessary for successful project management. Students are introduced all phases of the project management process including: planning, scheduling, organizing, and controlling projects. The course includes major topics of strategy, priorities, organization, project tools, and leadership. Primary class emphasis is on the project management process and the tools available to help ensure success.

CTM 355 - Supplier Relations (3)

This course will focus on the criteria and methodology used for selection of suppliers and subcontractors as well as identifying the optimal contract type and monitoring contract performance using key metrics. Topics include: legal relationships; adequate definition and specification of requirements; single VS multiple sourcing; strategic teaming agreements and partnerships between companies and contract planning and scheduling. Students gain an understanding of how an outsourcing plan can facilitate selection of the right contract type, the right supplier(s) with the right capabilities at the right price and allow for the monitoring of both cost reimbursable and firm-fixed price type contracts.

CTM 400 - Intellectual Property Protection (3)

In the 20th century our nation's economy evolved from being manufacturing based to service based. The 21st century is seeing it adapt again to one based on information and knowledge. For many companies intellectual property has become their most critical asset, one which must be protected from domestic and foreign competitors. This course will examine ways to protect company property and gain a competitive advantage, with emphasis on obtaining, maintaining and enforcing intellectual property rights under United States and foreign law. Patents, trademarks, copyrights, trade secrets, protection of computer software and biotechnology, and international protection will be discussed.

CTM 415 - Contract Acquisition: Process and Negotiation (3)

In this course, students will study the contract award process through the following steps: identification of need, preparation of the solicitation, development of the proposal, source selection, negotiations and contract award. Students will also learn how to use "best practices" in regard to negotiation strategies and tactics.

CTM 425 - Contracting in the Global Marketplace (3)

Today there is little doubt that we have a global economy in which we must compete. In this course, students will learn how to procure and develop international contracts. The history of global trade and the complex legal and cultural environments of international trade will be explored. Students will learn about the various international bodies and conventions that apply to international contracting. Students will also gain an appreciation for the financial implications and learn methods they can use to assess the risk involved as well as resolve international trade conflicts.

Education (ED)**ED 120 - Human Growth & Development (3-4)**

Study of maturation in childhood, adolescence, and early adulthood designed for those entering the teaching profession. Emphasis is placed on biological, health, social, cognitive, and affective development. (Taken by all Renaissance candidates.)

ED 140 - Education of the Exceptional Individual (3)

Study of the concept of exceptionality, specifically addressing the implications of atypical educational development. Alternative instructional strategies, educational decision-making, special education resources, inclusive programming, and related issues are examined.

ED 150 - Surv of Science & Geography (4)

This course is a survey of the concepts, development and basic principles of physics, astronomy, biology, chemistry and geography with emphasis on: the scientific method, use of scientific tools, metric system, beginning chemistry, electricity, magnetism, light, severe weather immunology, reproduction, genetics, technology, geological time periods, evolution, and earth geography, in terms of man/land relationships and place formation.

ED 200 - Candidate Exp: Educatl Obsrvtn (1)

A field-based course that offers an introduction to the professional obligations and responsibilities of teachers. Must be completed prior to enrollment in a 300 level education course.

ED 210 - Teaching and Learning: Trends and Issues (3-4)

Study of contemporary issues in education: philosophical underpinning, innovations, current problems, and proposed changes. Topics will include discussion of the role of social context and socio-cultural background in learning, curriculum development, No Child Left Behind, and school-agency alliances for fostering learning.

ED 220 - Today's Diverse Educational Environment: Trend

Integrative course designed to explore, evaluate, compare and contrast schools and related social institutions with a focus on inter- and intra-cultural relationships. Teacher candidates will be introduced to the principles of human relation skill development.

ED 300 - Cand Exp: Serv & Prep Tchng (2)

An examination of the educational process through structured field assignments and observations. Teacher certification candidates only.

ED 320 - Classroom Inclsn & Fam Supprt (3)

Directed investigation of educational strategies that promote inclusion for all learners. Examination of family support systems in education.

ED 330 - Special Education: Counseling and career Devel

The course presents approaches to counseling students with mild-moderate disabilities and their families and addresses the issues of transition and career development. Candidates will focus on understanding, developing, and implementing approaches to interact with students and their families. Exploration of theories and methods that enhance positive relations with students and parents. Investigation of transitional programs and vocational options for students with disabilities. Field visitations required. Pre-requisite: Admittance into the Teacher Preparation Program.

ED 340 - Interactive Communication in the Learning Envir

Introduction to the methods of creating structure in the school environment. Preparation for implementing communication and behavior management strategies in the school environment. Prerequisites: ED 300 and admission to the teacher preparation program.

ED 348 - Fundamentals of Neurology and Learning (3)

An examination of neurological structures including embryonic development and maturation of the nervous system. Discussion of conditions and diseases that may impact the development of the central nervous system, including syndromes and traumatic brain injury. An introduction to cognitive neuropsychology.

ED 360 - Disabilities Studies I (4)

An introduction to the profession of special education with information regarding the characteristics of persons with the various disabilities included in IDEA. History, theoretical foundations and practices related to the social, emotion, health, and learning characteristics of individuals with mild-moderate disabilities. The course includes an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of school age individuals with mild-moderate disabilities and the implications these characteristics have for educational practice. Problems of definitions, screening, diagnosis, classification systems, transition, future planning, classroom management, and multicultural issues are introduced. Prerequisite: admission to the teacher preparation program.

ED 364 - Disabilities Studies II (2)

This course provides an advanced discussion of the speech and language characteristics of school age individuals with mild-moderate disabilities and implications that these characteristics have for educational practice. It stresses characteristics of speech and language and provides the candidate with a thorough background in speech and language development related to children with special needs. Prerequisite: ED 360 Disabilities Studies I.

ED 380 - Cand Exp: Classrm Teaching (8)

Full day, full-time teaching experience. Candidates are expected to demonstrate the knowledge and skills acquired in the core, methods, and specialization courses. Candidates placed with or under the supervision of a certified master teacher. Prerequisite: successful completion of ED 300 and appropriate methods courses.

ED 401 - Professional Internship I (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 402 - Professional Internship II (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 403 - Professional Internship III (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 404 - Professional Internship IV (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 410 - Principles of Education: Inclusion, Diversity, Beh

Integrative course designed to investigate educational strategies that promote inclusion for all learners; to evaluate, compare and contrast school and related social institutions with a focus on cultural relationships; to investigate methods for implementing communication and behavior management strategies in the school environment; and to develop competency in selection and application of technology into the curriculum. (taken by Elementary, Middle and Secondary RenPro-A candidates.)

ED 420 - Assmnt in the School Env (4)

Investigation into the development, interpretation, and use of standardized psychological and educational tests in the school environment. Overview of informal assessment instruments and assessment techniques, including portfolio design and evaluation. The course is designed with an emphasis on formulating instructional plans based on formal and/or informal assessment. (Taken by all Renaissance candidates.) Prerequisite: Admission to the Teacher Preparation Program.

ED 421 - School Curriculum and Instruction: Elem/Special

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 422 - School Curriculum and Instruction: Middle Scho

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 423 - School Curriculum and Instruction: Secondary E

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 426 - Classrms Without Borders II (3)

This examines the ideas and events that teachers can implement in the classroom for enrichment of the curriculum. Candidates will gain a better understanding of the resources of the community and how to incorporate its economic, political, intellectual, and cultural offerings into the classroom. Upon completion of the course, the candidate will know how to incorporate a variety of innovative subjects into the classroom curriculum. All classes will be field based. Prerequisite: acceptance into the Teacher Preparation program.

ED 428 - Classrooms Without Borders II (3)

This course will continue to examine the ideas and events that teachers can implement in the classroom for enrichment of the curriculum. Candidates will gain a better understanding to the resources of the community and how to incorporate its economic, political, intellectual, and cultural offerings into the classroom. Upon completion of the course, the candidate will know how to incorporate a variety of innovative subjects into the classroom curriculum. All classes will be field based. Pre-requisite: acceptance into the Teacher Preparation program.

ED 430 - School Curriculum and Instruct (6)

Explores foundation for curriculum development and instruction, including classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. Taken by all Renaissance candidates.

ED 432 - Aesthetic Educ & Physical Educ (1)

Integration of the fine arts (visual, music and dramatics) and physical movement in the classroom. Candidates will learn to select, design, adapt, and assess creative arts and physical activities that are developmentally appropriate, meaningful, challenging and that lead to positive learning outcomes and the development of positive dispositions toward aesthetic and physical expression. Taken by Elementary Renaissance Program Alternative Certification candidates.

ED 433 - Tchng Mthds in the Fine Arts (2)

This course will focus on the art and music education curriculum. Candidates will develop techniques for instruction as well as an awareness of age-appropriate developmental expectations. Integration of the arts into other content areas will be stressed as well as the role of the arts in extra-curricular endeavors. (Taken by Elementary and Special Education Candidates.)

ED 434 - Tchng Methds in Phys Ed (1)

This course will focus on the physical education curriculum. Candidates will develop techniques for instruction as well as an awareness of age-appropriate developmental expectations. Integration of physical education activities into other content areas will be stressed as well as the role of physical education in extra-curricular endeavors. Prerequisite: acceptance into the Teacher Preparation Program.

ED 435 - Remedial Math procedures (2)

Integration of the fine arts (visual, music, and dramatics) and physical movement in the classroom. Candidates will learn to select, design, adapt, implement and assess creative arts and physical activities that are developmentally appropriate, meaningful, challenging and that lead to positive learning outcomes and the development of positive dispositions toward aesthetic and physical expression. (Taken by Elementary RenPro-A candidates)

ED 438 - Community Based Science Advntrs (3)

This course focuses on science as an exciting adventure for elementary and middle school students. Candidates will explore various community resources to grasp a better understanding of providing innovative and integrative science instruction and hands-on activities. Some classes will be field based.

ED 441 - Teaching Methods in Elementary School in Math

Explores and discusses content, objectives, and methods in elementary curriculum content; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material. Addresses mathematics, social studies and science. (Also taken by Special Education candidate.)

ED 442 - Teaching Methods in Middle School Language Ar

Explores and discusses content, objectives, and methods in middle school language arts instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 443 - Teaching Methods in Middle School Social Scien

Explores and discusses content, objectives, and methods in middle school social science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 444 - Teaching Methods in Middle School Science (3)

Explores and discusses content, objectives, and methods in middle school science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material

ED 445 - Teaching Methods in Secondary English (3)

Explores and discusses content, objectives, and methods in secondary English instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 446 - Teaching Methods in Secondary Social Science (

Explores and discusses content, objectives, and methods in secondary social science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material

ED 447 - Teaching Methods in Middle School Mathematics

Explores and discusses content, objectives, and methods in middle school mathematics instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 448 - Teaching Methods in Secondary Mathematics (3)

Explores and discusses content, objectives, and methods in secondary mathematics instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 450 - Reading Methods I: Primary Grds (3)

Introduction to various approaches of reading instruction and examines current reading practices. Focus of this course is on emergent and developmental stages of learning to read, instructional methods and selection of materials. (Taken by Elementary Education and Special Education Renaissance candidates).

ED 451 - Rdnng Methds II: Diag & Intrvnt (3)

Designed as an introductory course to identify reading difficulties and intervention strategies with an emphasis on classroom application and correction of the reading problem. This course includes the study of formal and informal assessments and current literacy issues such as No Child Left Behind and state testing. Includes Practicum Experience. (Taken by Elementary Education and Special Education Renaissance Candidates)

ED 452 - Strtgs in Literacy Instrctn (6)

Examines research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes Practicum Experience. Taken by all Renaissance candidates.

ED 453 - Literacy in the Content Fields (3)

Examines research and best practices affecting student literacy development and instruction at the middle school and secondary level. Emphasizes the application of instructional strategies for developing reading and writing skills in the content areas. (Taken by Middle and Secondary RenPro-A Candidates)

ED 454 - Strategies of Literacy Instruction: Elementary/Sp

Examines research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes practicum experience.

ED 455 - Strategies of Literacy Instruction: Middle School

Examine research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes practicum experience.

ED 456 - Teaching Methods in Elementary Language Arts

Emphasizes reading and writing development and instruction at the fluent stage. Emphasizes the application of instructional strategies for developing reading and writing skills in the content areas of the elementary curriculum. Includes teaching all genres of children's literature.

ED 458 - Childs World of Literacy (3)

Live in that world...Laugh in that world...Learn in that world...with the child learns about reading and writing. Become a "kid-watcher" of literacy understanding how, what, and why the child is thinking; reflect on a "cutting edge" instructional plan. (This course is designed for elementary, middle school, "kid-watching" and "kid-watching" of diverse learners including the gifted child.)

ED 460 - Microcomp Apps & Tech in Ed (3)

An introduction to the principles underlying the application of technology in the school; selection and evaluation of various media incorporation of technology into the curriculum. (taken by all Renaissance candidates).

ED 462 - Disabilities Studies I (4)

An introduction to the profession of special education with information regarding the characteristics of persons with the various disabilities included in IDEA. History, theoretical foundations and practices related to the social, emotion, health, and learning characteristics of individuals with mild-moderate disabilities. The course includes an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of school age individuals with mild-moderate disabilities and the implications these characteristics have for educational practice. Problems of definitions, screening, diagnosis, classification systems, transition, future planning, classroom management, and multicultural issues are introduced. Prerequisite: admission to the teacher preparation program.

ED 464 - Disabilities Studies II (2)

This course provides an advanced discussion of the speech and language characteristics of school age individuals with mild-moderate disabilities and implications that these characteristics have for educational practice. It stresses characteristics of speech and language and provides the candidate with a thorough background in speech and language development related to children with special needs. Prerequisite: ED 360 Disabilities Studies I.

ED 468 - Disabilities Studies III (3)

Problems of definitions, screening, diagnosis, classification systems, legal implications, transition, future planning, classroom management, and multicultural issues are addressed. The topic of selecting and developing intervention programs for students with mild-moderate disabilities including physical and other health impairments is the centerpiece of the course. Course content is based upon research-based best practices with respect to instructional approaches, methods, and materials specifically developed for special populations. Prerequisite: Ed 364, Disabilities Studies II.

ED 485 - Education Portfolio (1)

This seminar addresses the practices of portfolio development as they pertain to candidates prior to and during student teaching. The portfolio is built around the MO Step standards. This includes a composition for each MO Step standard and artifacts. Grade obtained must be C+ or higher for teacher certification and graduation.

Hospitality Management (HMG T)**HMG T 300 - Introduction to Hospitality Operations (3)**

This course provides an introduction to the diverse scope and history of the hospitality industry. Various segments will be explored including lodging, food and beverage, theme parks and attractions, events, gaming, and tourism. Critical thinking will be applied to explore potential career interests and identify operational constructs within each segment.

HMG T 311 - Hospitality Sales & Marketing (3)

This course will cover hospitality industry specific sales and marketing strategies and tools that can be used to effectively plan and implement them. The unique distribution channel options available to the industry and the impact of these options on the industry will be reviewed. The uniqueness of the hospitality product mix (with its significant component of non-tangible service) will be evaluated. The concept of target markets and target marketing will also be included in the class. Prerequisites: ENGL 190 & CST 295.

HMG T 320 - Event Management (3)

This course provides the fundamental framework necessary for planning meetings and events regardless of size or function. Students will attain and demonstrate knowledge related to event planning, development and assessment of financial and contractual documents and logistics including site selection, risk management, and food and beverage. Through examination of the industry resources and academic research, students will examine and apply the essential components of an event process blueprint in developing a plan for a specific function.

HMG T 340 - Branding the Customer Experience (3)

This course explores the relevance and interconnectivity of customer service as it relates to the organization's brand and service climate. Course objectives include analyzing strategic and competitive intelligence to provide a method of measuring and assessing customer satisfaction. Students will utilize critical thinking to analyze the presence and significance of branding in organizations through case studies and industry publications.

HMG T 360 - Hospitality Technology (3)

This course provides an introduction to technology systems and components utilized within the hospitality industry. Students will examine the functionality of point of sale, back office, and property management systems; time, attendance, and payroll systems, and human resources and labor management systems within the industry. Students will evaluate the effectiveness of technology through conducting a site visit and informational interview with hospitality organization.

HMG T 420 - Hospitality Administration (3)

This course examines various operational strategies and promotes administrative development. Students will analyze the operational departments/areas of sales & marketing, customer service, risk & crisis management, and technology within a hospitality organization. Students will apply strategic theory and concepts in analyzing and writing case studies in which examples of specific strategy implementation are demonstrated by a hospitality organization.

HMG T 497 - Hospitality Capstone (0-3)

This course offers a theoretical and practical approach to effectively managing a hospitality organization. Reflective writing allows application of critical thinking skills in regards to defining and refining career goals. Experiential learning will provide immediate application of skills as students complete a minimum of 24 practicum hours at a hospitality organization. Practical application of fundamental competencies utilized throughout the practicum experience will serve as the final reflection assignment. Theoretical skills will be assessed through a final research project examining industry best practices including a presentation of the findings. Fundamental competencies will be evaluated by the practicum site supervisor. The course is designed to serve as the capstone of the hospitality management minor.

Informatics (IF)**IF 540 - Knowledge Management (3)**

This course will examine emerging knowledge management processes used in organizations to support and achieve their strategic goals and objectives. Key concepts of database and interface design principles used to implement knowledge management and dissemination will be explored using multidisciplinary examples. Topics include techniques and skills in data modeling, database architecture and design, application development and knowledge management systems implementation. Prerequisite: IF 500.

IF 598 - Graduate Reading Course (1-4)

The graduate reading course provides opportunities through selected readings and/or a practicum component to apply substantive, research-based instruction that effectively enhances a candidate in the Master of Science in Organizational Informatics overall learning experience.

Mathematics (MATH)**MATH 092 - Basic Mathematics (3)**

Prep course designed to expose students to signed Numbers: common fraction, decimals and percentages; ratio and proportion; area and volume; powers and roots; algebraic expressions and operations; linear equations; basic trig metric functions; factoring polynomials.

Mathematics (PS) (MATK)**MATK 114 - Intermediate Algebra (3)**

This course is a review of basic algebraic skills needed to prepare students for work in college level mathematics. This course includes a review of the real number system and its application to solving linear and quadratic equations. Topics also include graphic and solving systems of equations and inequalities, logarithms, polynomials, functions, radicals, exponents, and graphs.

Organizational Leadership (ORLD)**ORLD 500 - Organizational Dynamics (0-3)**

This course provides a foundation in organizational theory and practice; and introduces student to the field of organization development. It provides students with a framework for understanding and changing organizations from a micro and macro level. Students will learn how to create an organization that is responsive to environmental forces; and align the organization's structure and culture with strategy. The course is applicable to different types of large and small, private and public entities in the contemporary business environment. As part of the course, students will engage in in-depth case study development and analysis of real world businesses.

ORLD 501 - Contemporary Organizational Leadership (0-3)

This course provides an introduction to leadership, highlighting historical and contemporary perspectives and research findings. Students will review fundamental leadership approaches and theories and examine the role of leaders in the 21st century. Students will also study leadership development approaches and the impact of effective and ineffective leadership within organizations. Strategic leadership practices will be identified and direct application will be emphasized at the individual, interpersonal/group, and organizational level. Throughout the course, students will create an integrated model of leadership based on credible perspectives, theory, and research findings. Integrated models can be directly applied to an organization that the student studies throughout the course.

ORLD 502 - Applied Research Methods (0-3)

In this course, students will learn about research methods that commonly applied in conducting research in an organizational setting that fall under the paradigm of action research. Areas of focus include data collection, analysis, and synthesis and dissemination of results. Students will learn the strengths and weaknesses of different types of data (e.g., subjective self-report, bottomline performance data, market data), forms (or formats) (qualitative vs. quantitative), and methods. Additionally, students will learn how to evaluate the credibility of data and how to use data from multiple sources to make informed decisions.

ORLD 503 - Applied Analytics (0-3)

This course introduces students to the analytical skills needed to produce evidence-based research results within their organizations. Students will review the foundations of analytics, and they will use these foundations to develop a working knowledge of more advanced analytics (e.g., analysis of variance, regression, and factor analysis). Students will also learn the appropriate ways to report the results of their analyses through the use of text, figures, and tables. In addition, attention will be paid to ways to communicate results to senior leaders and layperson audiences.

ORLD 510 - Prof Leadership Development (0-3)

This course focuses on professional development. The course is designed to improve personal awareness in the arenas of self-management, professionalism, work attitudes and motivation, personality, innovation and creativity, communication, diversity, and ethical decision making. In addition, students will gain an appreciation and understanding of the diverse individual differences that leaders encounter in global workforce. Students can apply concepts from this class to their own professional development and also use concepts to promote and sustain a diverse working environment. Upon completion of this course, students will recognize their strengths and weaknesses and create and professional development plan that emphasizes self-management practices.

ORLD 515 - Talent Mgmt & Development (0-3)

This course looks at talent management and development in organizations from a holistic, systems perspective. Talent management begins with the recruiting and staffing process and moves through the entire life-cycle of the employee as an active contributor in the organization. Students will study the major theories and approaches to selecting and developing employees. Topics that will be covered include strategic selection, employee and leadership development, assessment options for selection and development, workforce planning, and employee motivation and retention. We will also discuss contemporary topics such as use of technology to implement talent management and development, multi-media methods for coaching and mentoring, and applied models for talent planning and succession planning.

ORLD 525 - Leading a Healthy Organization (0-3)

This course focuses on the issue of organizational health. Students will develop a working definition of organizational health, focusing on elements of employees and the organization. Students will also learn how the organizational environment can promote positive or negative health, with a specific emphasis on the critical roles of stress. Specific types of interventions will be discussed as a way to provide a comprehensive framework for discussing organizational health. Students will learn how to design, implement, and evaluate key interventions related to organizational health, such as work-life balance, wellness, and employee involvement initiatives. Students will then develop a plan for designing, implementing, and evaluating an intervention in their organization.

ORLD 535 - Team Leadership (0-3)

The ability of a group to function as a team to run things, to make things, or to provide recommendations about things is a powerful organizational dynamic. This course addresses teaming as a leadership tool to be used in appropriate situations to maximize individual talent through collective interactions. Students will learn what makes a group a team, how to build and lead a team, and how to facilitate team performance. Structured exercises and assessments carried out both in and outside the classroom will provide students with teaming experiences that develop their team consultation and facilitation skills. The most recent body of research literature will be used to develop a realistic understanding of what teaming can and cannot do as a leadership tool.

ORLD 545 - Leading Organizational Change (0-3)

This course is designed to prepare students to lead organizational change efforts directed at improving organizational functioning and quality of work life. A general framework of planned change combined with the organizational development perspective of leading change will be used to introduce students to change facilitation tools and techniques. Using case studies, students will design change interventions and change management strategies using group simulations, demonstrating change agent competencies in the areas of systems thinking, action research consultation skills, project management, and strategic visioning. Awareness of the empirical evidence underlying the strategic, technostructural, human resource, and human process change strategies will be identified.

ORLD 565 - Future-Focused Leadership (0-3)

This course focuses on the competencies necessary to be a future-focused leader. Students will learn how to think about the future, in terms of visioning, scenario planning, and systems thinking. As a key component of the course, strategic elements will be introduced. In addition, students will learn the value of creativity and innovation in developing a future-focused approach of leadership. As a component of the course, students will be asked to develop a future-focused vision for their work unit or organization.

ORLD 575 - Contem Issues in Leadership (3)

This course will be focused on contemporary issues in leadership. Students will use cases and recent scholarly and popular press media to explore some of the issues at the forefront of leadership, such as ethics, followership, and leadership assessment. This course will be designed as a way to spark advanced discussion on the topic of leadership, allowing students to go more in depth into contemporary leadership topics and paradigms. Students will produce a reflection paper focuses more in depth on one of the topics covered in the course.

ORLD 590 - Action Research I (3)

This course serves as the first capstone experience for SPS graduate students. Students will revisit program competencies emphasized by the program and critically reflect on the ways in which they have developed themselves within those competency areas and within the 5 dimensions of the SLU experience. Specific attention will be paid to strengths and weaknesses of the student, as well as opportunities for programmatic improvement. This will culminate in a formal development plan for the student. Lastly, during this course, students will be assigned a faculty mentor, who will work with the student to develop a proposal for an action research project. The project will be implemented and summarized in ORLD 595: Action Research II.

ORLD 595 - Action Research II (3)

This course serves to complete the capstone requirement for SPS Graduate students. Students will conduct their action research project and produce a summary of synthesis of their results. The capstone project will include evidence that the student has successfully applied the competencies taught within the program.

ORLD 598 - Graduate Reading Course (1-4)

The graduate reading course provides opportunities through selected readings and/or a practicum component to apply substantive, research-based instruction that effectively enhances a candidate in the overall learning experience.

Organizational Studies (Ps) (OSTD)

OSTD 293 - Special Topics (1-4)

Prior approval of sponsoring professor and Program Director required

OSTD 298 - Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required

OSTD 300 - Organizational Foundations (0-3)

An introduction to the Organizational Studies Major. This course will cover theory and practice within organizational management and organizational behavior at the individual, interpersonal, team, and organizational levels. A general understanding will also be gained in the areas of accounting, human resources, marketing, law, and leadership. Students will become more familiar with library resources needed for successful completion of the courses in the OS major. The course will be taught using lecture, discussion, and experiential exercises and will promote the synthesis of knowledge across the OS curriculum.

OSTD 320 - Interpersonal Relations in Org (3)

An examination of the knowledge and skill necessary to perform effectively in professional relations. Students will gain a deeper understanding of interpersonal relationships in organizations framed in ethical contexts related to perception, impression management, managing diversity, self disclosure, coaching, conflict management, influence, power, and politics. Students will complete self-assessments and engage in skill-building activities to learn how to effectively manage relationships within organizations while using Communication Improvement Plans.

OSTD 330 - Team Dynamics (0-3)

A study and application of team and small group behavior in organizations. Students will gain a deeper understanding of team structure, processes, and performance outcomes including topics like team types and stages, member roles, leadership, and decision-making. Using a self-directed work team environment, students will complete a team project demonstrating concepts and processes within team dynamics.

OSTD 393 - Advanced Special Topics (3)

Prior approval of sponsoring professor and Program Director required.

OSTD 398 - Advanced Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required.

OSTD 410 - Concepts & Theories of Leadership (3)

Promotes leadership development through the study of leadership theory and concepts and encourages the practical application of leadership at all levels. It includes analysis of historical approaches to leadership and focuses on influential contemporary leadership perspectives such as Servant Leadership, Situational Leadership, Transformational Leadership, and Principle-Centered Leadership. Through an examination of leadership theory and research, self-assessments and reflection, and application to the work environment, students will create a personal leadership development plan.

OSTD 480 - Organizational Theory & Practice (3)

An overview of how organizations work including theory, research, and application. Students will gain a deeper understanding of organizational structure, culture, communication, and strategic planning processes within the internal and external environment. Current trends will also be discussed. Students will complete cases and engage in experiential exercises to facilitate critical thinking and the application of course content to organizational settings. The final course project will integrate knowledge and skills in the area of organizational theory with systematic problem solving skills to assess and diagnose an organizational problem. This course is the Capstone Course for the OS Major. Prerequisites: OSTD 300, 320, or 330; OSTD 410; PST 320 and 340; Senior Status

OSTD 485 - OS Portfolio Pro Seminar (1)

Taken the last semester of senior year in the OS major. A seminar course in which each student assembles and presents a degree program portfolio. The portfolio will consist of designated course projects that were completed throughout the OS degree program. The seminar will allow students to reflect on their personal and professional development and create a formal display of their knowledge and skills. The content and presentation of the portfolio will be evaluated by faculty according to established performance criteria. A pass/no pass grade will be given upon completion of the portfolio seminar.

OSTD 491 - Org Studies Internship (1-4)

Requires permission from the program director, and Junior Status. This course elective allows students to acquire relevant work experience with local corporate or not-for-profit organizations. Students will have the opportunity to put knowledge and skills into practice under the direction of both a faculty sponsor and a practitioner from the organization. The arrangements for the working relationship and elective credit must be established prior to the start of the internship.

Philosophy (PHIL)**PHIL 110 - Introduction to Philosophy: Critical Thinking (3)**

This course will focus primarily on the nature of argumentation and critical thinking. The course will also address the role of definitions, distinctions between inductive and deductive logic, and how to employ these tools in the construction of arguments and essays. The writings of Plato and Aristotle will be used throughout the course to provide examples and an introduction to classical philosophical texts.

Professional Studies (PS) (PST)**PST 100 - Learning Strateg., Processes, (0-3)**

This course explores the various functions that comprise the complex task of learning. Theories of development, motivation, intelligence, information processing, learning styles, behaviorism, and problem solving will be presented. Personal and environmental factors associated with academic and workplace success will be examined. Application of course content will enable students to use a variety of resources to become more self-directed, effective, efficient learners.

PST 190 - Survey of Economics (3)

Analysis of how individuals, firms and nations make choices given limited resources. Determinants of decision making in market economies. The political economy of income, employment, and inflation in the aggregate. The role of government and the Federal Reserve.

PST 205 - Found. of Res. Methods & Stats (3)

Fosters understanding of psychology as a science. Integrates introduction to basic designs, hypothesis generation, ethics, and writing conventions with computation of descriptive statistics and conceptual overview of inferential techniques. Preparation for: reading empirical articles and applied and advanced courses. No lab required.

PST 301 - Contemporary Spain Study Abroad: Culture-Co

An innovative course dealing with the societal practices, economic trends, and the diverse spiritual climate of Spain. The multidisciplinary course will cover issues related to Spain's cultural transformation, comparative business and leadership experiences, and religious diversity. While in Spain, students will participate in site visits to support the development of an understanding of the complexities of this nation from a global perspective. Students will also be exposed to the historical framework of Spain as well as its modern context to enhance their intercultural competence as professionals and leaders.

PST 310 - Accounting Concepts for Profes (0-3)

An introduction to major concepts in the areas of financial and managerial accounting. Students will gain a deeper understanding of financial statements, accounting mechanics, accrual accounting, financial planning, variance analysis, internal controls and financial analysis. The final course project will require students to utilize knowledge and skills in the area of financial and managerial accounting to manage the financial data of a fictional organization.

PST 320 - Human Resources in Orgs (0-3)

An examination of human resource management functions. Students will gain a deeper understanding of the legal environment and equal employment opportunities; job design and analysis; recruiting, orientation, and training; performance appraisal; compensation systems; labor relations; collective bargaining and grievance processes; and health and safety in the workplace. The final course project will require students to conduct in-depth research in the area of human resource management (HRM) and apply HRM theory and research to a not-for-profit organization.

PST 330 - Legal issues in Organizations (3)

An introduction to the nature, formation and application of law in the U.S. legal system. Topics will include American public law; federal/state/local law governing business and industry; torts and contracts; litigation and arbitration; regulatory law; labor and employment law; compensation law; consumer protection; law as it relates to profit/nonprofit and public/private sector organizations. Students will apply course content and case law to a real world legal issue in the completion of an augmented closed brief.

PST 340 - Marketing Strategies in Orgs (3)

An analysis of the fundamental principles and strategies of marketing. Students will gain an understanding of the functional role of marketing within an organization and within the expanding global economy. Students will gain a deeper understanding of the external and internal variables that affect Marketing; eCommerce marketing; the roles of advertising, public relations, and sales; Integrated Marketing's role in the 21st century; and Strategic Marketing Planning. Students will integrate knowledge and skills acquired throughout the course with outside sources and information in order to develop an integrated marketing plan for an organization.

PST 484 - CIPP Capstone Course (1)

The SLU-CIPP capstone course is aimed at providing students with the students with the opportunity to integrate the knowledge and skills they have acquired through the degree program, provide experiences for students to engage in meaningful interactions with their community, and offer the time for students to produce a portfolio demonstrating their academic accomplishments throughout the course of the degree program. By working on a capstone project that draws on prior course work and that culminates in a community service project students utilize their critical thinking skills in synthesizing previous course work and extend and develop their own original ideas.

PST 490 - Social Science Research Method (0-3)

Social Science Research Methods is designed to initiate the student to current social and policy research technologies and practices. In this course the student will engage in the study of both quantitative and qualitative approaches to social science research using a systematic process. Issues in criminal justice, public policy and administration, and urban planning will be the primary focus of research and cases. Major theories and concepts in social science and policy research applicable to these topics, as well as selected student projects, will be addressed through lectures, readings from the text, audio/visual presentations, class discussions, cases, and practice exercises. This course will provide the student with opportunities to think critically about social science and policy research and possible solutions to current problems confronting the criminal justice system, public policy decision-makers and social science research professionals.

Psychology-(PS) (PSYK)**PSYK 101 - General Psychology (3)**

Provides a basic and general knowledge of the theoretical, scientific, and conceptual foundations of psychology, including biological, cognitive, emotional development, cultural and social aspects. Includes key concepts and principles, methods for collecting and evaluating evidence, and application of psychological knowledge.

PSYK 333 - Applied Personality (3)

This course presents contemporary personality psychology organized around six domains of knowledge: Dispositional, Biological, Intrapsychic, Cognitive/Emotional, Self-Representational, and Social. The integration of the domains addresses the fundamental personality questions of what makes each of us human, often like some but different from others, and yet still individually unique. Workplace topics, such as job performance, leadership personnel selection and work motivation, will be studied from a personality perspective. The class will be interactive with each student developing an integrated personality model and applying the model to topics of personal and professional interest.

PSYK 334 - Applied Social Psychology (3)

Introduction to social behavior focusing on how people relate to, think about, and influence each other. This course addresses topics such as attitude formation and change, social cognition, conformity, aggression, altruism, prejudice, and interpersonal attraction and relationships. Activities throughout the course focus on both the research and the application of these principles in the organizational and legal environments.

PSYK 414 - Drugs and Behavior (3)

Behavioral, physiological and sociological effects of drugs which alter a person's ability to normally function in society. These drugs include alcohol, nicotine, caffeine, tranquilizers, stimulants, depressants, narcotics, hallucinogens, and marijuana.

PSYK 425 - Motivation & Self-Management (3)

This course provides an overview of motivation and self-management as it specifically relates to employees in the workplace. Some of the topics to be addressed include: basic theories of employee motivation, rewards and punishments, motivational triggers, emotional intelligence, time management. The course will also emphasize specific strategies, tools, and techniques to assist students in evaluating and improving the way in which they interface with their work environments.

PSYK 430 - Social Psychology (3)

Introduction to the scientific study of social behavior focusing on how people relate to, think about, and influence each other. Topics include attitude formation and change, social cognition, conformity, group decision-making, aggression, altruism, prejudice, and interpersonal attraction and relationships.

PSYK 431 - Personality Theory (3)

The dominant personality theories of Freud, Jung, Adler, Skinner, Rogers, Maslow, Kelly and others are presented within a historical and contemporary context. Emphasis is placed on the application of theory to personal situations through small group discussions and student logs.

PSYK 445 - Personal & Career Advncmnt (3)

This course focuses on the career development process taking a broad, view of career, as a means to growth and job promotion, self-discovery, and an evolving series of role-related experiences across the lifespan. Students will learn about definitions of career, models for career development and the interplay of individual factors such as personality, aptitude and abilities upon career choice. In addition, students will study the impact of early experiences and other environmental factors upon career choice and how individual, social, chance, and environmental factors shape career decisions and choices. Explanations of the origin of individual aptitudes and abilities and the practice of aptitude and ability testing and how to use those techniques in selecting and placing employees will be discussed. Emphasis will be placed on skill development in career choice and decision making, career counseling, and identifying best-fit options.

PSYK 447 - Occupational Health & Stress (3)

This course focuses on issues involved in the development and maintenance of a healthy workforce, with an emphasis on physical, mental, and emotional health. Some of the topics to be addressed include: occupational stress and stress management, the Occupational Safety & Health Administration (OSHA) and its role in workplace health, the interplay between employee well-being and organizational effectiveness, and the use of Employee Assistance Programs in organizations. The course will also provide students with specific tools, strategies, and techniques for managing stress and evaluating the health of their organization.

PSYK 472 - Developmental Psych: Adult (3)

Provides an overview of the process of adult development from early adulthood through late adulthood. Course will review theories of adult development and empirical findings from psychology, health and medicine, sociology, and economics that deal with issues of adult development including health, cognition, personality, relationships and sexuality, death and dying, culture, work and retirement, mental health, and stress. Students will research a physical, social or career-related concern of personal relevance and through self-assessment and reflection create a self-improvement plan.

PSYK 473 - Industrial Psychology (3)

Focuses on the application of psychological principles to improve the effectiveness of personnel management. The course covers the following primary topic areas: analyzing jobs, designing selection systems, developing performance appraisals, psychological measurement for personnel decision making, training and development design, and understanding the legal environment.

PSYK 476 - Training & Development (3)

This course focuses on the application of psychological principles to the effective design, delivery, and evaluation of training in professional settings. It introduces a comprehensive approach to training and development including topics like: training needs assessment; learning theory, styles, and environment; training techniques and media; and evaluation design and training effectiveness. The course is interactive consisting of case analysis, experiential exercises and work place applications. Upon completion of the course, students will be able to apply the training model to the research, design and critique of strategic training programs.

PSYK 477 - Occupational Health & Stress (3)

This course focuses on issues involved in the development and maintenance of a healthy workforce, with an emphasis on physical, mental, and emotional health. Some of the topics to be addressed include: occupational stress and stress management, the Occupational Safety & Health Administration (OSHA) and its role in workplace health, the interplay between employee well-being and organizational effectiveness, and the use of Employee Assistance Programs in organizations. The course will also provide students with specific tools, strategies, and techniques for managing stress and evaluating the health of their organization.

Pathway to College (PWY)**PWY 101 - Foundations of Professional Communications**

This course will help students be confident, efficient and effective writers, communicators and users of technology. This course offers an opportunity to learn and apply the practical principles of professional communication. Emphasis is placed on understanding the fundamentals of writing and speaking in the workplace. This course will also introduce students to the fundamentals of technology used in today's workplace. Common computer principles and applications such as internet navigation, email, word processing, spreadsheets and presentation software will be covered.

PWY 102 - Foundations of Professional and Career Development

This course will help students acquire basic knowledge and skills necessary for maintaining an effective and productive work environment. This course offers the opportunity to learn and apply the practical principles of effective workplace behavior. This course will also introduce students to some of the knowledge and skills necessary to develop a path toward a career, including career exploration, time and stress management skills, and decision making.

PWY 103 - Foundations of Life Sciences (3)

This survey course will help students gain foundational knowledge about the life sciences necessary for understanding the workings of the human body. This course also offers the opportunity to learn medical terminology as applied in hospital situations. Students will be introduced to the scientific method of decision making and apply this process to actual medical case studies.

Real Estate & Community Dev (RECD)**RECD 300 - Real Est. Roles and the Public (0-3)**

This course introduces students to the variety of roles in a real estate transaction including appraisers, brokers, city officials, contractors, investors, developers, urban planners, lawyers, and lenders. Notions of fair and affordable housing will also be covered.

RECD 393 - Special Topics (3)

This course introduces students to the variety of roles in a real estate transaction including appraisers, brokers, city officials, contractors, investors, developers, urban planners, lawyers, and lenders. Notions of fair and affordable housing will be also covered.

RECD 400 - Real Estate Law (0-3)

This course includes the study of the legal principles governing real estate transactions with an emphasis on promulgated contracts. Topics addressed in the class are as follows: contract law, estate in land, types of ownership, deeds, mortgages, title insurance agency and homestead.

RECD 415 - Real Estate Finance (0-3)

This course is designed to provide an understanding of the fundamentals of real estate financing and development that inform housing and economic development policy decisions. Topics covered include the legal and financial structure of real estate transaction, the nature of public versus the private role in real estate transactions, the various methods for financing in a real estate transaction, and the decision analysis involved in identifying prospective site and projects. The prerequisite for this course is PST-310 Accounting Concepts for Professionals with a recommended prerequisite of RECD-300 Real Estate Roles and the Public Sector.

RECD 420 - Real Estate Appraisal, Market Research, and F

This course will provide an in depth description of the consulting fields of real estate appraisal, real estate market research and real estate feasibility analysis. Upon completion, the student should be a good consumer of these services.

RECD 435 - Introduction to GIS (0-3)

This course is designed to provide an overview of the conceptual, technical, and procedural aspects of Geographic Information Systems (GIS). It will provide an in-depth introduction to two of the major GIS applications along with an introduction to a third GIS application. Creation of GIS products and projects stressing the conceptual context of the technical and mechanical activities will be a major component of the lab activities. An understanding of the practical applications of spatial data and its digital management will be developed through lab exercises. General GIS principals are interpreted and related to their application in spatial information analysis and problem solving. Emphasis will be placed on the application of the GIS technology as a tool, and its importance in GIS project operations and product development.

RECD 439 - Intermediate GIS Applications to Real Estate (

The future success of retail, real estate, and restaurants will be determined to a large degree by the competitive advantages of implementing smart technologies, such as GIS. The intermediate GIS course will expand beyond the basic principles of Geographic Information Systems (GIS) and emphasize the tools that will make students competitive and successful in the real estate industry. Students will increase their knowledge of the GIS system through an emphasis on spatial intelligence and project management formulation and management skills. Students will also use the latest software to create and produce qualitative and attractive maps.

RECD 487 - Real Estate Capstone (0-3)

A seminar course in which students, with the guidance of a faculty mentor, produce a project incorporating the knowledge and skills learned in the real estate courses. The goals are to: apply real estate principles and practices to real-life work settings; integrate knowledge and skills learned in the other real estate courses; and acquire practical experience in the field. Prerequisites include: RECD-300, 315, 400, 415, and CST-293.

RECD 535 - Introduction to GIS (3)

This course is designed to provide an overview of the conceptual, technical, and procedural aspects of Geographic Information Systems (GIS). It will provide an in-depth introduction to two of the major GIS applications along with an introduction to a third GIS application. Creation of GIS products and projects stressing the conceptual context of the technical and mechanical activities will be a major component of the lab activities. An understanding of the practical applications of spatial data and its digital management will be developed through lab exercises. General GIS principals are interpreted and related to their application in spatial information analysis and problem solving. Emphasis will be placed on the application of the GIS technology as a tool, and its importance in GIS project operations and product development.

RECD 539 - Intermediate GIS Applications to Real Estate (

The future success of retail, real estate, and restaurants will be determined to a large degree by the competitive advantages of implementing smart technologies, such as GIS. The intermediate GIS course will expand beyond the basic principles of Geographic Information Systems (GIS) and emphasize the tools that will make students competitive and successful in the real estate industry. Students will increase their knowledge of the GIS system through an emphasis on spatial intelligence and project management formulation and management skills. Students will also use the latest software to create and produce qualitative and attractive maps.

Sales Leadership (SLM)**SLM 300 - Principles of Selling (0-3)**

This course explores the numerous dimensions of selling - as a profession and as an integral part of the global free enterprise system. This course focuses on history and role of influence in professional selling. Students will analyze and research persuasive communication and negotiation skills while also applying sound selling principles such as attention, interest, desire, and closing technique. Students will use text materials to enhance learning experiences while also practicing and delivering sales presentations to enhance educational principles.

SLM 320 - Management of Selling (0-3)

This course explores sales management from both an institutional and a motivational perspective. The goal of the Sales Management course is to examine the elements of operating an effective sales force as the key component to organizational success. The course will focus on ways to achieve organizational goals and have a positive influence on shareholder return. Course objectives include relationship management as a key account control, sales force structure, the use of technology to improve sales force effectiveness, and soft skills such as recruiting, developing, retaining, organizing and motivating talent.

SLM 340 - Customer Service (0-3)

This course explores the relevance of customer service as an integral role in the selling cycle. Students will understand the importance of developing and nurturing client relationships as a vital method for acquiring and maintaining customers/clients. The course will extend students' understanding of relationships as a key component of selling strategy. Course objectives include analyzing strategic and competitive intelligence to provide value for client relationships and methods of measuring and assessing customer/client satisfaction.

SLM 345 - Strategic Sales Effectiveness (0-3)

This course explores the vital nature of effective sales force management and the issue of strategy as critical to achieving sales targets and aligning the sales force with the organization's strategic direction. Students will understand the need to develop strategy, communicate the plan and motivate the team to achieve organizational success. Students will also focus on relationship and consultative selling with key strategic multi-level accounts with emphasis on major account selling, coordination between salespeople and the firm's other functional areas.

SLM 400 - Sales Practicum (0-3)

The practicum course is a unique opportunity to match a learner's skills and interests in sales with a participating employer in an internship. Every week four hours will be spent in the virtual classroom discussing current topics in sales with additional time spent in a practicum, learning the practical side of sales. Learners will work with key organizations to define the roles and responsibilities of selling professionals and how to create a selling culture.

Security & Strategic Intel (SSI)**SSI 150 - Foundations of Security and Strategic Intelligence**

An introduction to the program of study, providing the student with a foundation for the study of security and intelligence by identifying security concepts (securing humans, tangible assets, and information), intelligence concepts (the cycle of intelligence: collection, processing, analysis, dissemination, feedback/utilization), and the roles of security and intelligence professionals within corporate and governmental organizational contexts. Prerequisites: None

SSI 200 - Threat and Risk Assessment (3)

An investigation of the tools utilized to identify threats and risks and then effectively assess, mitigate, and manage those risks. The course integrates components of information technology, analytics, and psychology with threat and risk analysis and spans the issues inherent in both corporate and governmental contexts. Prerequisites: Grade of "C" or better in SSI 150, ENGL 1900, PSYK 101, CMMK 121; and CIS 295.

SSI 300 - Coordination across Agencies, Organizations, a

An investigation of the roles of SSI professionals within large organizations, including creation and maintenance of effective relationships across departmental, organizational, and agency lines and exploration of the benefits for the both the SSI professional and his/her organization gained through identifying and creating innovative ways to provide service and added value across these lines. Prerequisites: Grade of "C" or better in SSI 200.

SSI 303 - Global Security Management (3)

Extends SSI 150 by serving as a continuing investigation of the protection of human and tangible assets and information at a global, strategic level. It discusses the issues involved in dealing with complex policy formation that must be effective and compatible across many cultures and nations. The role of technology and its impact on private sector organizations are addressed, including topics such as social media, intellectual property/piracy, and brand protection. Prerequisites: Grade of "C" or better in SSI 150, SSI 200, ENGL 1900, PSYK 101, CMMK 121; and CIS 295.

SSI 310 - Analytics in Security and Intelligence (3)

An investigation of the roles of SSI professionals within large organizations, including creation and maintenance of effective relationships across departmental, organizational, and agency lines and exploration of the benefits for the both the SSI professional and his/her organization gained through identifying and creating innovative ways to provide service and added value across these lines. Prerequisites: Grade of "C" or better in SSI 200.

SSI 380 - Trends in Strategic Security and Intelligence (3)

This course utilizes modern, sometimes evolving, case studies through which the student develops key competencies through practical application. Whether concerning legal and regulatory issues, advances in security and intelligence technology, or scenario planning based on recent events, the course provides students with cutting-edge tools and techniques for responding to current and future security and intelligence demands. Prerequisites: Grade of "C" or better in SSI 200.

SSI 465 - Law Enforcement Administration (3)

The course provides an in-depth investigation of the nature, structure, and administrative processes of law enforcement organizations, from local to state to federal agencies. Students develop the introductory skills required to effectively administer a law enforcement department and apply the knowledge and skills they learned across the curriculum to develop the competencies required to analyze personnel roles and functions and plan departmental initiatives. Prerequisites: Grade of "C" or better in SSI 304.

Theological Studies (SPS Cert) (THEK)**THEK 390 - Universal Spirituality (3)**

This course explores the various approaches to Spirituality. It brings together complementary elements from different schools that build a comprehensive spirituality. Historic, geographic, gender and cultural differences are studied as expressions of a single core spirituality.

THEK 397 - Spirituality and Psychology (3)

This course will explore the interface of religion, spirituality and psychology as exemplified in the practice of psychology where many of the issues that come to the psychotherapist are existential questions such as the meaning of life, work and personal relationships.

Theological Studies (THEO)**THEO 462 - Cont Adult Spirituality Conf (1)**

Cont Adult Spirituality Conf

Applied Behavior Analysis (ABA)

ABA 301 - Introduction to Applied Behavior Analysis (3)

This course is an introduction to applied behavior analysis. Applied behavior analysis is a field dedicated to the scientific application of behavioral principles and procedures to socially relevant problems. During this course, students learn the causes of behavior. Students will also learn about basic principles and procedures, such as reinforcement, punishment, and functional assessment. In addition, we will cover particular content areas including behavioral medicine, behavioral gerontology, drug and alcohol abuse, classroom management, developmental disabilities, and applications in business and industry.

ABA 599 - Thesis Research (0-6)

Students will conduct original research and begin to write a thesis that reflects independent thought and thorough knowledge of applied behavior analysis.

ABA 746 - Principles and Concepts in Applied Behavior A

This course will familiarize students with behavior analysis fundamental philosophical assumptions, and the basic concepts and principles of operant and respondent conditioning. The course will review some of the basic laboratory research that has illuminated the principles of behavior. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 747 - Assessment and Selecting Interventions in Appl

This course will develop basic knowledge of students with respect to behavioral assessment methodologies and selection and design of interventions in the field of applied behavior analysis. This course will review some of the basic assumptions and characteristics that define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 748 - Behavior Change and Processes in Applied Beh

This course will expand basic knowledge of students with respect to behavior analysis fundamental concepts, principles and philosophical assumptions including basic behavioral principles of operant and respondent conditioning, stimulus control, and develop a working understanding of these principles in behavior change strategies and interventions in the field of applied behavior analysis. This course will review some of the fundamental applied literature that has demonstrated the efficacy of behavioral strategies and continues to define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 749 - Behavior Change and Ethics in Applied Behavior

This course will familiarize students with the ethical issues confronting those working in behavior analytic or related capacity. Students will learn the ethical responsibilities inherent to working in their chosen field. Ethical codes and cases will be analyzed. Topics will include gaining informed consent, protection of confidentiality, selection of the least intrusive behavior change methods and procedures, and protection of individual rights. The ethical standards addressed in this course will prepare students working in the field of behavior analysis or related fields for board certification in Applied Behavior Analysis.

ABA 774 - Measurement and Experimental Design in Appli

This course will develop basic knowledge of students with respect to single subject research design, measurement and application of the empirical approach to evaluation of effectiveness of interventions in the field of applied behavior analysis. This course will review some of the basic assumptions and characteristics that define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 792 - Special Topics in Applied Behavior Analysis (3)

This course builds upon basic principles of learning and applied behavior analysis presented during previous courses in the Behavior Analysis course structure. The course will offer advanced coverage of special topics, including: Clinical practice, Autism, and Organizational Behavior Management. Clinical behavior analysis focuses on the use of verbally based interventions to treat persons in outpatient/clinical settings. In behavior analysis and autism we will review diagnostic criteria and evidence based practices. The Organizational Behavior Management section of the course will provide an overview of contemporary research and practice in the field.

ABA 820 - ABA Integrative Seminar I (0-1)

This is a three part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, review empirical literature pertinent to those change efforts.

ABA 826 - Practicum I (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on applied behavioral analysis

ABA 827 - Practicum II (3)

Students will continue to learn and to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis in applied behavioral analysis

ABA 828 - Practicum III (3)

Students will continue to learn and to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis in applied behavioral analysis

Biosecurity/Disaster Prep (BSDP)

BSDP 518 - Writing for Intelligence (3)

This course is designed to provide students with the writing skills required to clearly, concisely and correctly deliver to end-users basic, current and estimative intelligence products. Students will be trained in the process of collecting, collating, analyzing, disseminating and evaluating intelligence products. The course emphasizes the importance of communicating the analyst's evidence based judgments in a clear, concise and easily understandable manner. It is designed to develop and refine the student's critical thinking skills and their ability to translate these skills into an actionable analytical product through the production of Actionable Intelligence Briefings and Travel Assessments.

BSDP 564 - Medical and Public Health Intelligence (3)

This course introduces students to the rationale for the emerging role of the public health and medical communities in the intelligence gathering, analysis and dissemination process. Focusing on early detection of emerging physical threats and novel/emerging infectious diseases it will give the students the requisite knowledge and skills to provide the homeland security community with threat indications and warnings. Students will be given the analytical tools to allow them to gauge the impact of physical threats that would result in mass casualties and novel/emerging infectious diseases. They will be expected to develop and recommend rational and viable courses of action to those threats.

BSDP 566 - Fundamentals of Disaster Planning (3)

This course provides an overview of strategies for and challenges to planning for all types of disasters. All phases of the emergency management model will be addressed: mitigation, preparation, response, and recovery. Content includes tools and resources needed to develop and/or evaluate a facility or community all hazards response plan and create exercises to test this plan.

BSDP 567 - Introduction to Biostatistics and Decision Ana

This course will cover basic statistical methods, including common inferential statistical tests encountered in infectious disease epidemiology, emergency and public health response and medical intelligence. The course will include an introduction to decision analysis and developing and using decision trees used for optimizing choices in the face of uncertainty.

BSDP 570 - Public Health and Disasters (3)

This course introduces the growing threat and potential public health consequences of all types of disasters. Content includes an introduction to public health and public health's role in disaster preparedness and response. In this course, threats to public health are introduced. Intentional disasters (chemical, biological, and radiological terrorism) and natural disasters are covered; emphasis is placed on infectious disease emergencies such as biological terrorism and emerging infections. (Offered annually)

BSDP 571 - Terrorist Organizations and Their Motivations

This course is designed to provide students a broad understanding of terrorist organizations and their motivations. History of terrorism, current movements and organizations (both domestic and international) will be covered. Emphasis will be placed on terrorist use of chemical/biological/radiological/nuclear weapons of mass destruction. (Offered annually)

BSDP 572 - Communicable Diseases and Infection Control

This course teaches the fundamentals of communicable diseases. Content includes the microbiology of contagious pathogens, disease transmission, and infection control measures to prevent or stop the spread of communicable diseases. Emphasis is placed on the pathogens that are likely to be used in a bioterrorism attack and new or re-emerging infectious diseases. (Offered annually)

BSDP 573 - Disaster Planning for Infectious Disease Disas

This course provides an overview of strategies for and challenges to planning for all types of disasters; emphasis is placed on biosecurity emergencies such as bioterrorism and outbreaks of emerging infectious diseases. Content includes tools and resources needed to develop and/or evaluate a facility or community all-hazards response plan and create exercises to test this plan. Prerequisite: BDSP 572. (Offered annually)

BSDP 574 - Epidemics & Other Disasters (3)

This course is a survey of the potential impact of disasters on contemporary society, with emphasis placed on emerging, highly communicable, essentially untreatable diseases. Content includes the medical, social, economic and political consequences of historically significant epidemics and the complexities of managing and recovering from a highly lethal pandemic. The course will review past epidemics and pandemics, such as the Black Plague of the Middle Ages, the effects of the 15th Century introduction to smallpox in the Americas, the 1918-1919 influenza pandemic, Hoof and Mouth disease in Great Britain, hantavirus, and SARS. Chernobyl, Bhopal, and Hurricane Katrina will also be studied. Students are expected to apply historical data to contemporary epidemic simulation and planning efforts. (Offered annually)

BSDP 575 - Epidemiological Methods and Infectious Disease

Through audio lectures and readings, this course will present the student with the descriptive and analytical tools of epidemiology and surveillance. The student will analyze a data set using the epidemiological software package Epi Info. Students will participate in weekly internet discussions and analysis of problem sets. (Offered annually)

BSDP 576 - Disaster Communications and Media Relation

This course will provide an overview of crisis communication challenges associated with disasters, including basic human communications and communication needs, the impact of stressors in communications, risk communications to communities and to crisis communications. Students will learn the theoretical foundations of risk communication, how to apply those principles during a public health crisis, and how to formulate and institute appropriate communications plans for a variety of audiences and disaster response organizations. (Offered annually)

BSDP 578 - Behavioral and Cultural Aspects of Disasters (3)

This course examines the behavioral and cultural implications of terrorism and other disasters. Students will study a range of adaptive and abnormal responses to catastrophic events. Cultural and psychosocial sources of resilience to terrorism will be reviewed. (Offered annually)

BSDP 582 - Disaster Management and Risk Analysis (3)

This course will give the student an overview of the importance of biosecurity and the performance of vulnerability and risk assessments. It will also teach them the skills necessary to be a competent manager/leader during an emergency. Management case studies will be used to help students identify limits to their knowledge and to help them recognize when they need to obtain additional resources. (Offered annually)

BSDP 585 - Public Health Ecology (3)

This course will present the public health triad (interactions between humans, animals, and the environment). Content includes: general human and ecological factors contributing to zoonotic and other disease transmission; notable public health threats of infectious origin; scenarios of transmissible disease outbreaks in the wake of certain ecological changes; risk assessments for biohazards.

BSDP 586 - Preparing for Disasters: Resiliency and Stress

While many private and public agencies have some sort of disaster response plan, few take into account the mental and emotional ramifications of disaster upon general and vulnerable populations. This course will investigate the use of resiliency and stress inoculation before disasters to lessen disaster impact and encourage effective and prompt recovery.

BSDP 587 - Facing the Challenge of International Bioterror

This course will examine bioterrorism- the hostile infliction of disease, and how National and Global governance should manage the challenges it raises. The issue will be addressed from a variety of perspectives including: political, legal, medical and public health, with a special focus on international cooperation in dealing with bioterrorism.

BSDP 588 - Emerging Infections: Epidemiology and Public

This course will present to the student an overview of Emerging Infectious Diseases, not only in the United States, but internationally. The course will lead off with an overview of the topic, emphasizing topical issues and concerns. Selected topics in order of importance to public health will be examined, with an emphasis on the epidemiology of the infection and its public health impact, either potential or actual.

BSDP 589 - Business Continuity and Pandemic Planning (3)

This course will give the student an understanding of Business Continuity Management and Pandemic Planning concepts. It will lay a foundation for recovery of people, places and technology in a business setting. This class will also focus on the unique aspects of planning for a pandemic.

BSDP 598 - Graduate Reading in Environmental and Occu

This course provides specialized study in environmental health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

BSDP 625 - Capstone in Biosecurity and Disaster Prepare

Prerequisite: All other courses must be completed before enrolling in the Practicum, unless the student has special permission from the Program Associate Director or Director. Students may enroll in the Practicum during their final semester, even if they are taking another course(s) at the same time. This course is the capstone project for the Biosecurity and Disaster Preparedness programs. Students will demonstrate the skills of interdisciplinary planning and consequence management needed to respond to a bioterrorist event or naturally occurring epidemic. Students will develop an exercise using an infectious disease scenario. (Offered annually)

Behavioral Sc/Health Educ (BSH)**BSH 500 - Behavioral Science and Public Health (3)**

This course introduces concepts, theories and methods employed by behavioral scientists to develop, implement and evaluate public health interventions. Selected theories of health behavior are presented. Principles of program evaluation methodology are introduced. Emphasis is placed on the application of theory and method to the design and assessment of approaches to solving current public health problems.

BSH 510 - Health Promotion Program Planning (3)

Following the general framework of the PRECED-PROCEED planning model, this course explores the principles, theories, and essential steps of the health promotion planning process. Content includes a detailed review of the methods used in assessing. In this course, the process and methods of evaluation will be framed in terms of "quality assurance," that is, documenting the extent to which program actions are implemented in accordance to stated objectives. Offered annually.

BSH 520 - Historical, Philosophical and Political Bases of

This course engages students in critical thinking and discussion about the conceptual bases of public health and health education, including the philosophical and political ideologies which have shaped research and practice in both fields. Students completing this course will be able to critically consider public health programs and policies. (Offered annually)

BSH 531 - Health Communication (3)

This course provides an overview of theory and research on persuasive communication, emphasizing the application of persuasive communication principles to health education practice. Special emphasis is given to the application of new communication technologies to meet public health objectives. Students successfully completing this course will be able to analyze and critique health education and health promotion messages on the basis of theory and empirical research, and identify basic principles of persuasive communication which are applicable to health education practice. Offered annually.

BSH 540 - Community Diagnosis (3)

This course reviews the theoretical bases underlying community diagnosis and community organizing, provides students with the opportunity to develop specific skills in community diagnosis, and assists in assessing the personal and professional challenges faced when working in diverse communities. Offered annually.

BSH 597 - Research Topics in Behavioral Science and Health

This course provides direct research experience in behavioral science and health education. Content is developed jointly between the student(s) and a faculty mentor.

BSH 598 - Grad Read Crse: Beh Sci & Hlth (1-3)

This course provides specialized study in behavioral science and health education to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

BSH 600 - Health Promotion Program Evaluation (3)

The course focuses on principles and procedures to evaluate health promotion and disease prevention programs. Evaluation design, reliability and validity, formative and process evaluation, and meta-analysis are introduced. The course includes intensive critique of case studies from the disease prevention program and policy literature. Case studies designed to reflect the diversity of methods and the range of possible applications are selected. (Offered annually)

BSH 602 - Intervention Research (3)

This course helps students conceptualize, design, and conduct of behavioral intervention research in public health. Students are introduced to intervention research projects conducted to address a wide range of health problems and populations in community, health care, work-site and school settings. Students evaluate and critique these interventions in terms of research design and methodology, planning approach, and adherence to principles of participation. Students will design intervention-research projects to address a public-health problem of their choice. (Offered annually.)

BSH 697 - Research Topics in Behavioral Science and Health

This course provides specialized research study in behavioral science and health education for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

BSH 698 - Graduate Reading in Behavioral Science and Health

This course provides specialized study in behavioral science and health education to enhance skills in literature review and problem solving for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

Biostatistics (BST)**BST 500 - Principles of Biostatistics (3)**

This course is designed as an introduction to statistical analysis for students in public health, health administration and research. Topics include basic probability and descriptive statistics, statistical inference and hypothesis tests, linear and logistic regression, and non-parametric statistics. Content is taught for conceptual understanding and application. Statistical software is used throughout the course. (Offered every semester.)

BST 502 - Theory of Biostatistics (3)

This course introduces the principles of probability and biostatistical inferences. Topics covered: role of statistics in scientific research, discrete random variables, continuous random variables, expectation and variance, moments and moment-generating functions, marginal and conditional probability, independence, functions of random variables, sampling distribution, the central limit theorem, methods of statistical estimation, hypothesis testing and confidence interval, and likelihood ratio test. (Offered annually.)

BST 503 - Statistical Programming and Study Planning: S

This course teaches statistical programming for statistical analysis using SAS software. Programming topics may include: working in the Windows environment, syntax development, creating data sets, reading and manipulating external data files, transforming data, formatting variables, statistical analysis and graphical display. Prerequisite: BSB 500, or permission of Instructor.

BST 510 - Introduction to General Linear Modeling (3)

This course presents a unified approach to the application of linear statistical models in biomedical and health services research. Topics include simple and multiple linear regression, Pearson's χ^2 and non-parametric correlation, analysis of variance (ANOVA), and logistic regression. Both the theory and application of the general linear model (GLM) are presented. (Offered annually.)

BST 520 - Survival Data Analysis (3)

This course treats statistical methods for analyzing survival data derived from laboratory, clinical, and epidemiological studies of humans. Both parametric and nonparametric approaches are presented. Focus will be in the practical applications of these methods to clinical and epidemiological research. The SAS and SPSS statistical packages will be used for data management and analysis. (Offered annually.) Prerequisites: (BST 500 or BST 502) & BST 503 & 510

BST 521 - Categorical Data Analysis (3)

This course introduces the theory and application of methods for categorical data, with emphasis on biomedical and social science applications. The course will cover the following topics: analysis of two-way, three-way, and higher dimension contingency tables using log-linear model, measures and tests of association for nominal and ordinal tables, logistic regression, weighted least squares, generalized linear models, and the use of computer software analyzing categorical data. (Offered annually.) Prerequisites: (BST 500 or BST 502) & BST 503 & 510

BST 522 - Multilevel and Longitudinal Data Analysis (3)

This course will focus on applications of various statistical methods for analyzing longitudinal, or repeated measures, data. The core concepts will cover multilevel analysis, growth curve modeling, and structural equation modeling.

BST 523 - Bayesian Statistics (3)

The Bayesian approach to statistics is an alternative to the traditional methods based on hypothesis and significance testing. Bayesian statistics uses prior information and combines it with observable data to quantify knowledge after observing data in what is called the posterior. Simulation is used to approximate this posterior distribution.

BST 540 - Applied Data Management (3)

This course is an advanced course on data management for graduate students in the College for Public Health and Social Justice. Students will learn advanced concepts and techniques of research data management with particular emphasis on applications in public health. Students will learn to use multiple data management and data analysis software packages including Excel, Access, MySQL SPSS, SAS and R.

BST 542 - Sampling Theory and Survey Design in Public H

This course will provide a survey of the fundamental types of probability sampling designs that are used for data collection with Public Health Surveillance Sample Surveys including: systematic random sampling (including Random-Digit Dialing), simple and stratified random sampling, cluster sampling and multistage sampling. The course will briefly discuss the applications of current survey research methods including web-based surveys and the use of cell phones within the context of surveillance systems and registry-based samples. The role of survey design choices in reducing total survey error as well as the role of questionnaire design in reducing non-sampling biases will be discussed briefly. The main topics to be covered in detail include: design-based parameter and variance estimation methods, construction and use of survey weights and statistical models incorporating sample designs as well as the use of survey sampling for registry based samples and matched case/control studies. Methods for evaluating, reducing and adjusting for survey nonresponse will also be covered.

BST 597 - Research Topics in Biostatistics (1-3)

This course provides direct research experience in biostatistics. Content is developed jointly between the student(s) and a faculty mentor.

BST 598 - Graduate Reading in Biostatistics (1-3)

This course provides specialized study in biostatistics to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

BST 625 - Capstone in Biostatistics (3)

The capstone course will emphasize practical aspects of being a successful statistician, including communicating with nonstatisticians, orally and in writing. Sample size determination, an important problem in biostatistics, will be studied both analytically and using simulation.

BST 697 - Research Topics in Biostatistics (1-3)

This course provides specialized research study in biostatistics for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission

Criminology & Criminal Justice (CCJ)**CCJ 101 - Intro to Criminal Justice (3)**

This course serves to introduce students to the three main components of the criminal justice system: the police, courts, and corrections. Topical coverage in this course includes: background information of definitions/classification of offenses, crime data, and victims and offenders; police organization, roles, functions, and responsibilities; court organization, processes, and outcomes; and, punishment issues such as probation, jail, prison, and community corrections.

CCJ 102 - Introduction to Criminal Justice: Service Learni

This course serves to introduce students to the three main components of the criminal justice system: the police, courts, and corrections. The course utilizes an experiential approach to understand the nature of crime and populations at risk to explain the human dimension of criminal justice. Topical coverage in this course includes: background information of definitions/classification of offenses, crime data, and victims and offenders; police organization, roles, functions, and responsibilities; court organization, processes, and outcomes; and, punishment issues such as probation, jail, prison, and community corrections.

CCJ 200 - Research Methods in CCJ (3)

This course provides an overview of the scientific method, the philosophy and goals of science, and a detailed study of qualitative and quantitative methodologies. Topics covered include: research design, conceptualization, operationalization, measurement issues, sampling types and procedures, surveys and other data collection instruments, experimental research approaches, qualitative approaches, and evaluation research techniques.

CCJ 205 - Multi-culturalism for Criminology & Criminal Ju

This class examines how race, sex and culture impact the operation of the criminal justice system and affect employees, victims and perpetrators. Emphasis will be placed on sensitizing students to how social and demographic factors influence the lived experience of those associated with the criminal justice system.

CCJ 215 - Criminology: The Nature of Crime (3)

This course provides an introduction to the various theories of criminal offending. Particular attention is paid to both the individual and the contextual level factors that contribute to or facilitate propensities toward criminal behaviors. Through the course materials, lectures, and discussions, students will begin to understand the nature of crime.

CCJ 215 - Intro to Criminology (3)

This course provides an introduction to the various theories of criminal offending. Particular attention is paid to both the individual and the contextual level factors that contribute to or facilitate propensities toward criminal behaviors. Through the course materials, lectures, and discussions, students will begin to understand the nature of crime.

CCJ 220 - Law Enforcement (3)

This course provides an overview of the role that law enforcement plays in the criminal justice system. The topics covered include the history and organization of the police, patrol and other law enforcement activities, police community relations, police discretion, and legal issues in policing.

CCJ 225 - Introduction to Corrections (3)

This course serves to introduce students to major contemporary issues in the area of both community and institutional corrections. Students will gain an understanding of how corrections operates in the United States and various issues pertaining to corrections as a whole. Topics covered include detention, sentencing, intermediate sanctions, adult institutions, probation, parole, and correctional staffing and personnel issues.

CCJ 250 - Statistics in Criminology & Criminal Justice (3)

This course serves to introduce students to the quantitative skills, methods, and techniques necessary for analyzing the implementation and impact of programs and policies, specifically those related to criminology and criminal justice. Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. This is an introductory course in quantitative statistical analysis that covers the properties/characteristics and distributions of data and variables relevant to CCJ as well as both descriptive and inferential statistical approaches to analyzing research questions.

CCJ 293 - Special Topics (3)

BIOLOGY OF EVIL
 Do the darkest parts of our nature have a biological component? Criminology, as a discipline, has been dominated by sociological theories of antisocial behavior that have argued against a biological component to adverse human outcomes. The end result of this dominance is that generations of criminology students are taught that social processes and environmental influences are paramount in explaining variation in criminal behavior. At the same time, evolutionary and genetic explanations of antisocial behavior have largely been censored from the discipline. Findings from biology, evolutionary psychology, behavioral genetics, molecular genetics, and neuroscience, however, have converged to show that every human behavior, prosocial, antisocial and criminal, is influenced (to varying degrees) by genetic factors. This course is design to make you fluent in what has been termed by the psychologist Steven Pinker as the new sciences of human nature.

CCJ 305 - Juvenile Delinquency (3)

This course serves to provide students with an in-depth understanding of the causes and correlates of delinquent behavior. Utilizing lectures, classroom discussions, and service learning methods, students will experience the human dimensions of offending and its implications for working in the justice system. Taught from a life-course perspective, the class will examine the impact of risk from the five domains of life risk: individual, family, school, community, and peers.

CCJ 310 - Juvenile Justice (3)

Juvenile justice offers students the opportunity to learn about the historic development of a separate system of justice for youth as well as current issues surrounding the functioning of this system. The course includes lecture, discussion, and service learning to provide students with an experience that enables them see the human side of this system. The community experiences will be woven into the course materials to give students a foundation upon which to begin to view offenders and the world they live in.

CCJ 315 - Contemporary Theories of Crime (0-3)

This course builds on the material covered in CCJ 215, Introduction to Criminology, by concentrating on developments in theories of crime in the latter part of the 20th century and into the new millennium. Special attention will be paid to integrated, developmental, and life course theories. The course will include a service learning dimension that places students in community agencies that work with offenders or with individuals who live in high-risk environments so that students develop a more personal understanding of the human side of crime and justice.

CCJ 320 - Ethics in Criminal Justice (3)

The primary objective of this course is to familiarize students with the major ethical themes and debates in criminal justice. Accordingly, the research, both empirical and theoretical (normative), that has been conducted with regard to policing, courts, and corrections (as well as a number of particular ethical issues) will be the major focus of the course discussions. In the end, students should not only be familiar with the broad conceptual debates and controversies surrounding criminal justice alternatives, but should also have a firm understanding of the different ways in which ethical evaluations of those alternatives are made.

CCJ 325 - Community Corrections (3)

The primary objective of this course is to familiarize students with the main community-based correctional programs employed by the criminal justice system. This is accomplished by examining the theory, practice, and human impact of treating criminal offenders in the community. This course will examine the major themes and issues in community-based corrections, present the conceptual debates and controversies surrounding certain community-based correctional programs (e.g., probation, boot camps, etc.), and explore the current research on community-based correctional programs and their effectiveness.

CCJ 330 - Corporate & White Collar Crime (3)

This course presents information on the various types, causes, and measurement of white-collar/corporate criminal offenses. Students will understand and consider the competing theories currently used to explain white-collar/corporate criminality as well as explore the use of a myriad of criminal punishments to prevent/deter corporate and personal misconduct and sanction this kind of behavior should it occur. The course also provides illustrations of different key cases along with their financial and social costs.

CCJ 335 - Understanding Serial Killers (3)

This course examines the phenomenon of serial killers in both theory and practice. The course also examines the extent to which criminological theory can explain observed behavior in serial killers. In this course we will also scrutinize how law enforcement deals with serial killers and how law enforcement can optimize the chances of apprehension through the application of modern and conventional investigative techniques.

CCJ 340 - Victimology & Victimization (3)

This course provides students with a comprehensive introduction to the study of victims of crime. Course materials cover a broad variety of victim-related topics, including: perspectives on and explanations of victimization, various patterns of victimization, social characteristics of victims, victims' roles in criminal offending, victims' treatment by criminal justice decision makers (e.g., police, attorneys, judges), and efforts designed to reduce to the various consequences associated with being a crime victim.

CCJ 350 - Race & Crime (3)

This course will examine the distribution of crime within subgroups in American society and the role of criminological theory and empirical evidence in the explanations of criminality. The course will provide students the opportunity to critically assess the nature of the association between race/ethnicity and justice. Using an experiential learning model, students will participate in service learning in the St. Louis metropolitan area to understand how social conditions may also contribute to the associations between race/ethnicity and crime. Through this interactive learning method students will explore the facts and fiction of the nexus between race and crime.

CCJ 360 - Mental Health & Crime (3)

Mental Health & Crime: This course will provide students with a comprehensive overview of the issues and challenges located at the intersection of mental health/illness and the criminal justice system. Attention will be focused on a range of issues, including, but not limited to, the definition of mental illness, deinstitutionalization and the criminalization of the mentally ill, the impact of mental illness on criminal proceedings, treatment/intervention effectiveness, and the reentry/reintegration of mentally ill individuals.

CCJ 400 - Criminology & Criminal Justice Practicum (1-6)

The criminology/criminal justice practicum provides students with an opportunity to learn about and experience the criminal justice system from the inside. Students will work with criminal justice practitioners to understand the workings of various justice agencies. As an experiential course students will be required to commit to at least 100 hours to the agency they select. Students will also be required to complete readings and written work as assigned by their instructor.

CCJ 401 - Externship in Criminology and Criminal Justice

The course is designed to allow students an opportunity to immerse themselves in local communities and organizations, particularly those working with disadvantaged communities in order to understand the human side of living in risk, especially since high-risk conditions (e.g., poverty, residential instability, racial segregation, etc.) are associated with higher rates of officially reported criminal offending. Students are challenged to examine the consequences of environmental stressors on populations and what that might mean to and for justice systems. The course combines the academic experience with Ignatian principles of experience and reflection, in order to gain self-awareness critical to criminal justice practice.

CCJ 405 - Criminal Law and Procedure (3)

This course provides students with a basic understanding of substantive and procedural criminal law. Understanding criminal law and procedure is fundamental to understanding how our courts operate as well as understanding the legal constraints under which law enforcement and correctional personnel must operate. The course lays a foundation for understanding how evidence is used in the prosecution of criminal offenses.

CCJ 415 - Criminal Investigations (3)

This class is designed to provide students with a basic understanding of the criminal investigation process. Students will learn how to properly conduct an investigation, specifically, how to properly secure a crime scene, how to properly document investigative efforts (e.g., sketch, model, and photograph a crime scenes), how to properly search a scene, how to conduct effective interviews, interrogations, and surveillances, and how to handle informants and conduct undercover work. Emphasis will be placed on understanding why proper criminal investigative techniques are so important, ethics in investigations, and how to prepare a credible and winnable case for the prosecution.

CCJ 460 - Mentored Research Experience (1-3)

This course provides students with an opportunity to work with and assist a faculty member in an ongoing research project. The course requirements are tailored to the specific dimensions of the research project on which the student collaborates. These opportunities can include literature reviews, data entry and analysis, survey administration, or any other assigned task that allows the student to partner with a faculty member to learn, through a hands-on approach, the process of conducting a research project. The course requires completion of CCJ 200.

CCJ 470 - Independent Study in CCJ (1-6)

The course provides students with an opportunity to develop their own research project that will be completed independently under their own initiative. The student will receive guidance and support of the assigned faculty member. The course requires prior approval of the faculty member and completion of a contract of agreement on products to be delivered and method of evaluating course/project outcomes.

CCJ 490 - CCJ Capstone (3)

This course analyzes the various actors in the criminal justice system, their decision making processes, and the policies they create and implement. The course offers an integrative framework for understanding the policies emanating from the criminal justice system. This final course provides an opportunity to integrate key concepts of criminology/criminal justice in a specific area of interest. Capstone projects are expected to demonstrate competence in critical thinking, inquiry skills, and the synthesis of knowledge through the development and presentation of an examination of a particular CCJ policy, program, and/or initiative.

CCJ 500 - Applying Criminological Theory (3)

This course examines the role of criminological theory in the development of criminal justice policy. Theories examined include both macro and micro level theories that influence strategies for deploying justice personnel and developing treatment strategies. The course includes a focus on the importance of theory for the allocation of resources, identification of promising strategies for prevention and intervention, justice program success, for Criminological theory organizes the way scholars and practitioners observe and explain delinquent and criminal behavior. Theories of crime also help explain how and why the justice system should respond and set policy for addressing criminal behavior.

CCJ 510 - Ethics in the Admin of Justice (3)

This course familiarizes students with the major ethical themes and debates in criminology and criminal justice. Through analysis of empirical and theoretical research that has been conducted with regard to policing, courts, and corrections (as well as a number of particular ethical issues) students will gain the knowledge necessary to identify, understand, evaluate, and respond appropriately to ethically-challenging circumstances they are likely to encounter as criminal justice professionals. Upon completion of the class, students will be familiar with the broad conceptual debates and controversies surrounding criminology and criminal justice options and alternatives and will have a comprehensive understanding of the different ways in which ethical evaluations of those options and alternatives are made. (Offered annually.)

CCJ 520 - Methodological & Statistical Literacy in CCJ (3)

This course aims to provide fundamental information, skills and understanding necessary for graduate students to digest, comprehend, and critique the basic methodological and statistical information that they will most likely confront in their future studies and current/future professions. The course introduces students to the essential methodological issues found and techniques utilized in today's criminological and criminal justice research and literatures. The course also builds upon the methodological foundation established in the first half by exploring and examining the most common statistical techniques used in these bodies of literature. Specific attention will be paid to providing the knowledge base necessary to critically read and review substantive research articles, evaluation reports, and government documents pervasive in criminology and criminal justice professions.

CCJ 600 - Issues in Law Enforcement (3)

This course is designed to provide a comprehensive examination of policing in the United States. It will examine the origins and history of policing and the current state of knowledge surrounding police organizations, police subculture, police behavior, police-community relations, and methods of controlling police behavior and misconduct. The course will ultimately provide students with a critical and contextual understanding of the evolution of policing, the functions of policing in contemporary society, and the future of policing in America.

CCJ 610 - Issues in Corrections (3)

This is an advanced seminar in corrections aimed at graduate (MS) students. This course examines both institutional as well as community corrections although the emphasis--as in real life--is placed on incarceration. Students will read (and think) extensively on timely issues surrounding contemporary corrections including: prisons, jails, probation and parole, inmate perspectives, institutional misconduct/disorder/violence, rehabilitation/treatment programming, gender, family-related concerns, and reentry. Thus, this course provides a broad foundation of information on US corrections today. (Offered annually.)

CCJ 620 - Juvenile Justice Administration (3)

The course examines the roots of the juvenile court and its associated institutions, issues in its administration, and current issues and challenges to its functioning. From its inception in 1899 the juvenile justice system represented a unique legal institution. By design it is a system of individualized justice. The nature of the juvenile system makes administering it a challenge. The juvenile justice system must hold youth accountable for delinquent behavior while crafting individualized treatment plans. As an open system it is further pressed by the desires of external constituencies that seek retribution and punishment which are at times in opposition to individualized care.

CCJ 640 - Issues in Jurisprudence (3)

This course provides students with a working knowledge of how the courts operate and fit within our democracy. Students will gain an understanding of the parameters of Constitutional guarantees including the Due Process Clause, the Equal Protection Clause and various guarantees contained in the Bill of Rights and how the judiciary effectuates those rights. Special emphasis will be placed on understanding how the Constitution impacts upon the operation of the law enforcement and correctional components of the criminal justice system. Sources of civil and criminal civil rights liability will be explored with an emphasis on best practices to avoid and minimize risk of liability. In addition, students will gain the tools to meaningfully access, understand and evaluate legal materials, particularly case law and statutory law. (Offered annually.)

Environmental/Occupation Hlth (EOH)**EOH 500 - Environmental and Occupational Health (3)**

Course addresses the interaction of the physical, psychological, and social environments of individuals in which they work and live. It presents a broad survey of the major environmental issues facing contemporary society in first and third world countries. The course combines an overall ecological concern with specific elements related to personal and community health, emphasizing the interrelatedness of the two and conveying an awareness of how current environmental issues directly affect our lives. (Offered twice each year.)

EOH 510 - Human Toxicology and Environmental Health (3)

Toxicology is the basic science of poison and its adverse effects on living organisms. These deleterious effects on man are the focus of this course. The fundamental information that make up the core of toxicology will be introduced. The course will be divided into five basic areas: (1) basic principles, (2) effects on the organ system, (3) review of general categories of toxic agents, (4) basic environmental toxins, and (5) the general application of toxicology. (Offered annually.)

EOH 511 - Environmental Toxicology (3)

This course deals with the deleterious effects of toxins in the environment and workplace. The toxic effects on humans of metals, solvents, pesticides, and food additives will be presented and discussed in terms of their route of exposure. Basic methods of risk assessment will be introduced along with issues in regulatory toxicology. Offered annually.

EOH 520 - Evaluation of Environmental Hazards (3)

This course presents the study of chemical, physical, and biologic agents, and ergonomic factors related to environmental and occupational exposures. Methodologies used for their recognition and evaluation relative to potential health effects and the etiology of related illness and disease are discussed. Federal and State regulatory requirements of the Environmental Protection Agency, the Occupational Safety and Health Agency, other relevant federal and state agencies and consensus organization will be addressed. (Offered annually.)

EOH 522 - Occupational Safety (3)

This course provides an overview of the managerial, behavioral, and engineering-technical aspects of occupational safety. Historical perspectives, regulatory compliance and industry best practices are discussed. The course also addresses current trends in worker compliance and participation as well as the technical aspects of an array of applicable regulatory standards. Specific technical aspects are explored in greater depths in support of the research paper/presentation and directed study components of the course. (Offered annually.)

EOH 527 - Environmental Forensics (3)

This course will serve as an introduction to the field of site investigation. We will discuss the role of the environmental scientist in the field through lecture, case studies, and assignments. This course will identify the tools of the environmental scientist which are many and varied, from historical documents to chemical fingerprinting and radio-dating.

EOH 529 - Environmental and Occupational Laboratory (3)

This course emphasizes the use and application of sampling and analytical methodologies for environmental and occupational exposure measurement, and toxicity testing of chemical and physical agents in the environment. This is a quantitative, hands on, instrumentation and laboratory based course. Field use application is introduced. (Offered annually)

EOH 530 - Biological Hazards in Modern and Developing

This course addresses the nature of biological hazards at the intersection of developing and modern countries. These hazards are described by their sources, pathways, routes of entry, and health effects of infectious and allergenic agents that are found in either workplaces or the general environment. Through in-depth field exercise, lectures, and case studies, students will learn how to identify, measure, and control biological agents that are present in a variety of settings. Basic concepts from aerosol science, industrial hygiene, microbiology, infectious disease epidemiology, sanitation, behavioral science, and environmental engineering are applied to problems of infectious or allergic disease prevention and control. (Offered annually.)

EOH 540 - Human Health Risk Analysis (3)

This course introduces the concepts of qualitative and quantitative methods of risk assessment. Class discussions, reading assignments, lectures and case studies are used to introduce and develop knowledge of information sources pertaining to assumptions, uncertainties, end-product determinations, and interpretations associated with the various components of the risk-assessment process. Students will apply quantitative risk analysis methods on real-life cases. (Offered annually.)

EOH 550 - Environmental and Occupational Epidemiology

This course presents the epidemiological methods used to investigate the health effects of occupational and environmental exposures to toxins. Epidemiological evidence concerning the health effects of selected occupational and environmental exposures will be critically reviewed and evaluated. (Offered annually.)

EOH 560 - Policy, Science and Decisions in Environmental

The purpose of this course is to provide students with analytical tools they can use to think critically about environmental policymaking. The focus of the course is on the interface between the fields of environmental, public health, and policy sciences. Therefore, special attention is paid to policy decisions that affect environmental protection and public health. The course examines the current approaches to environmental regulation such as command and control, comparative risk assessment, and market-based incentives. It also discusses environmental justice issues, sustainable development, and policies concerning particular environmental problems in the United States and the international community. (Offered annually.)

EOH 597 - Research Topics in Environmental and Occupat

This course provides direct research experience in environmental health. Content is developed jointly between the student(s) and a faculty mentor.

EOH 598 - Graduate Reading in Environmental and Occup

This course provides specialized study in environmental health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

EOH 625 - Capstone in Environmental and Occupational H

This course brings together the didactic, theoretical and applied fundamental principles and methodologies of environmental health. The student will critically review case studies from journal articles and present reviews in class both orally and in writing. The student will also prepare an expert witness affidavit and defend it in a mock court trial. (Offered annually.)

EOH 640 - Exposure Assessment Methods (3)

This area is of growing importance in research and professional areas such as industrial hygiene, epidemiology, toxicology, environmental management and engineering, and regulatory policy development. Topics include an overview of methodologies and applications, representative exposure monitoring strategies and methods, exposure categories, assessing exposure histories, and risk assessment models. (Offered annually)

EOH 697 - Research Topics in Environmental and Occupat

This course provides specialized research study in environmental and occupational health for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

Epidemiology (EPI)**EPI 500 - Principles of Epidemiology (3)**

This course is an introduction to epidemiology, which is the study of the distribution and determinants of disease in human populations and the application to the control of health problems. Topics will include analytic reasoning in public health and disease surveillance, descriptive and analytic study designs, and causal inference. Basic statistical measures used in the analysis of epidemiologic studies, including measures of disease frequency and measures of association, will be covered.

EPI 502 - Epidemiology Methods II (3)

This course is offered to graduate students who desire more intensive training in epidemiologic research methods than offered in EPI-500. This course covers observational study designs, infectious disease outbreak analysis, sampling methods, statistical power, multivariate analysis, types of bias, and causal inference. Offered annually.

EPI 511 - Epidemiology of Infectious Disease (3)

The history of epidemiology and infectious diseases are intricately intertwined. Our understanding of Infectious Diseases requires an integration of phenomenal advances including newly recognized pathogens, explosion of diagnostic technology, hosts with unprecedented compromised states, a better understanding of dynamic demographic and sociocultural forces, and improvements in study design, analysis, and modeling. (Offered annually.)

EPI 512 - Chronic Disease Epidemiology (3)

This course considers some of the major substantive issues and methods used in chronic disease epidemiology. Emphasis will be on the application of epidemiologic principles and methods related to cancer, cardiovascular diseases, psychiatric illness, and other chronic diseases. Topics include classification of diseases, rates, associations, etiology, prevention, and control. (Offered every year.)

EPI 522 - Maternal and Child Health Epidemiology (3)

This course explores epidemiologic methods/research related to maternal and child health. Emphasis is placed on research which potentially challenges current public health policy. The course includes analysis of infant mortality, prenatal and childhood elevated lead levels, perinatal substance abuse, prenatal and childhood HIV infection and childhood asthma mortality. Policy implications are discussed. (Offered annually.)

EPI 523 - Applied Epidemiology (3)

This course provides students with an understanding of the applications of epidemiology in public health and health care settings. It includes a brief review of key epidemiologic concepts; examples of the use of epidemiologic data in public health planning, health services decision-making and policy making; and case studies of current issues in epidemiology. Individual student projects involve data collection, analysis, and/or dissemination. (Offered annually.)

EPI 525 - Social Epidemiology (3)

This course will provide a survey of the social determinants of health (e.g. socioeconomic status, race/ethnicity, social capital and neighborhood influences) with emphasis on methods and issues of measurement of social factors, and advanced methodologies in social epidemiology (e.g. community-based participatory research, GIS and spatial mapping, multi-level modeling).

EPI 527 - Cancer Epidemiology (3)

This course provides an overview of concepts related to cancer epidemiology, including cancer biology, etiology, surveillance, and study design. Classic examples and current topics will be used to explore the role of epidemiology in addressing disparities, policies, and population-based approaches to cancer prevent and control.

EPI 528 - Perinatal Epidemiology (3)

Issues related to the perinatal period from the framework of epidemiologic methods will be examined in the course through critical review of epidemiologic studies and exploration of design issues for this population. The students will also learn to apply perinatal research principles to data analysis in perinatal research through in-class data analysis exercise and individual research project.

EPI 550 - Environmental and Occupational Epidemiology (3)

This course presents the epidemiological methods used to investigate the health effects of occupational and environmental exposures to toxins. Epidemiological evidence concerning the health effects of selected occupational and environmental exposures will be critically reviewed and evaluated. (Offered annually.)

EPI 597 - Research Topics in Epidemiology (1-3)

This course provides direct research experience in epidemiology. Content is developed jointly between the student(s) and a faculty mentor.

EPI 598 - Graduate Reading in Epidemiology (1-3)

This course provides specialized study in epidemiology to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

EPI 625 - Capstone in Epidemiology (3)

The purposes of this course are 1) to develop the practical statistical skills to analyze an epidemiologic data set, and 2) to learn to write a scientific paper in the form of a journal article from the results of epidemiologic data analysis. Stratified analysis and modeling using main effects logistic regression will be emphasized. (Offered annually.)

EPI 697 - Research Topics in Epidemiology (1-3)

This course provides specialized research study in epidemiology for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

EPI 698 - Graduate Reading in Epidemiology (1-3)

This course provides specialized study in epidemiology to enhance skills in literature review and problem solving for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

Health Management & Policy (HMP)**HMP 130 - Contemporary Challenges in Health Care (3)**

This course is an introduction to the US health care system and its many challenges. Students will gain a basic understanding of private insurance operations, public financing for health care including Medicare and Medicaid, the operations of hospitals and clinics, as well as health care professionals' roles in the health care system. Students will be encouraged to discover creative solutions to these challenges both from domestic programs and other countries' health care systems.

HMP 170 - Fundamentals of Emergency Management (3)

This course will provide an overview of the history of Emergency Management and Homeland Security in the U.S., its current status, and future in managing high consequence events. Students will examine the fundamental definitions, theories, principles, and frameworks associated with Emergency Management. Students will be required to complete selected FEMA self study courses.

HMP 210 - Business Sectors in Health Care (3)

This course describes and analyzes business sectors within healthcare that significantly affect cost and quality of health services. Examples are suppliers (pharmaceuticals, medical-surgical supplies, medical devices, distributors, and group purchasers) financial intermediaries (HMOs, PBMs) and health care providers (hospitals, medical groups, nursing homes). Each sector is analyzed in terms of organizations, products/services, customers, and strategic business practices.

HMP 250 - Management of Health Care Organizations (3)

This course provides students with an introductory overview of the major functional areas of health care management and shows their relevance to the delivery of health care services in a turbulent and very complex environment. Health care organizations are broadly clustered into: strategy and marketing, financial management, human resources management and data and systems.

HMP 270 - Dissecting Disasters (3)

This course will provide a broad overview of the history of natural and manmade (intentional) disasters responded to by United States agency representatives (e.g., 1918 Pandemic, Great Flood of 1923, 1994 Northridge Earthquake, September 11th, etc.). Students will analyze the complex nature of disasters, while identifying overriding themes and examining lessons learned.

HMP 271 - Public Health Issues in Emergency Management

This course will review the role and capacity of public health and health care systems in disaster preparedness and response to all disasters. Students will examine the growing threat and public health consequences of disasters. The course will cover theory and practice in emergency management and consider implications for policy makers.

HMP 272 - Emergency Management Technology (3)

The purpose of the course is to provide an introductory overview of the technologies of Emergency Management. The four phases of Emergency Management will be explored and analyzed with regards to available and future technologies. Critical thinking skills will be enhanced as we explore the cost benefits of technologies.

HMP 320 - Health Care Economics & Policy (3)

The main purpose of this course is to enable students to apply economic theory and analysis to health issues and problems, by emphasizing how markets work and why they fail in the production of health and delivery of health care services. Topics covered include an overview of the US health economy; the production of health and the demand for health care; market structure; the market for health insurance, managed care, and hospital services; and the role of public policy in producing healthy populations.

HMP 340 - Health Care Marketing (3)

The purpose of this course is to train future health services management professionals marketing and management of health services. The course is intended to present concepts and tools used in developing, implementing, and managing successful marketing strategy. The marketing processes, consumer behavior, marketing mix, controlling and monitoring marketing processes are studies relative to the unique and changing aspects of the health services industry.

HMP 350 - Health Care Human Resources Management (3)

The focus of this course is on functions and concepts required for managing human resources in health care organizations. It integrates traditional human resource management (HRM) with ideas from other organizational behavior. Course content includes recruitment, training and development, compensation, performance appraisal, motivation, union activity, and conflict resolution.

HMP 371 - Mental Health Implications of Emergency Management

This course will provide an introduction to the disaster field, a detailed examination of the service delivery systems, and guidelines for attending to the mental health needs of disaster victims and responders. This course views disasters events within their ecological context and strives to create sensitivity to diverse and at-risk populations.

HMP 420 - Health Care Financial Management (3)

Corporate finance concepts and techniques are applied to health care organization decision making using relevant case studies. In addition to basic finance concepts, topics include capital acquisition, cost of capital, capital investment decisions, tools of risk analysis, and financial and operating analysis. Analyses are applied to for-profit and not-for-profit health care organizations. The course employs extensive use of spreadsheets.

HMP 450 - Health Operations Management (3)

Course examines operational issues in health care management. Topics include systems analysis, continuous quality improvement and re-engineering, demand forecasting, facility location and design models, decision analysis techniques, linear programming, queuing and waiting models, inventory control models, and statistical quality control. The goal is to instill an understanding of the language, applications, and limitations of quantitative models with regard to decision-making and problem solving in health service organizations.

HMP 460 - Strategic Management in Health Care (3)

This is the capstone course in the health administration undergraduate curriculum and is open to advanced BSHM students or others with the permission of the instructor. The purpose of this course is to assist the student in integrating strategic thinking and strategic management of health care organizations. Integration is facilitated by individual and team analysis of complex cases, including simulations.

HMP 461 - Advanced Emergency Management (3)

This course will provide an overview of the history, current status, and future of Emergency Management and Homeland Security in the U.S. Students will examine associated definitions, theories, and principles. The course will introduce students to various levels of assessment, planning and operational implementation of preparedness and recovery plans.

HMP 470 - Exer Design & Eval For Em Mgt (3)

The purpose of the course is to provide an overview of exercises in the discipline of Emergency Management and Homeland Security. It will cover the seven major types of exercises: seminar, workshop, table top, games, drills, functional, and full-scale. The phases of Emergency Management exercises will be explored and analyzed in detail.

HMP 471 - Seminar in Emergency Management (0)

This is a cumulative course that documents the student's undergraduate education in emergency management. The purpose is to provide a guided process for the production of materials required by the International Association of Emergency Managers.

HMP 488 - Directed Research in Health Management (3-6)

The course provides students with an opportunity to work closely with faculty on research in health management.

HMP 491 - Health Management Rounds (0)

Career development lecture series designed to expose students to the philosophical approaches, leadership styles, policy processes and decision-making strategies used by successful health care management executives, health policy makers and health policy analysts across the spectrum of the health sector

HMP 493 - Special Topics (1-3)

Topics course, content varies.

HMP 494 - Internship (1-6)

The Health Management internship is an opportunity for experience in health care settings, including opportunities to understand how organizational decision making is made and implemented. Students, mentors, and preceptors will develop and specify the responsibilities and expected benefits. Internship sites selections are the primary responsibility of the student although some are available through the department.

HMP 498 - Directed Readings in Health Management (3-6)

The course provides students with an opportunity to work closely with faculty on research in health management.

HMP 500 - Health Care Organization (3)

This course provides an overview of and orientation to the US health care delivery system. Topics include the delivery, financing, regulation, and administration of health care services, and the economic, legal, political, and social factors which influence the health care system. Historical and contemporary issues are addressed. (Offered annually.)

HMP 503 - Introduction to Health Care Accounting (3)

This course introduces students to the basics of financial and managerial accounting. The focus will be on the accounting concepts that are most critical to management decision making within a managed health care environment. Offered annually.

HMP 504 - Fundmntls of Econ & Finance (3)

Focus is on understanding the basic theories of economics and how they relate to financial analysis and methods. Principal learning approaches employed include lectures, class discussion, and preparation of problem sets. Offered every Fall semester.

HMP 510 - Quality Improvement in Health Care Managem

This course examines the historical development, current concepts and techniques and future trends related to the monitoring and evaluation of the quality of health care services. Cases will be used to present current issues surrounding attempts to integrate quality management and increased accountability in health care organization. (Offered annually)

HMP 511 - Health Operations Management (3)

Course examines operational issues in health care management. Topics include systems analysis, continuous quality improvement and re-engineering, demand forecasting, facility location and design models, decision analysis techniques, linear programming, queuing and waiting models, inventory control models, and statistical quality control. The goal is to instill an understanding of the language, applications, and limitations of quantitative models with regard to decision making and problem solving in health care organizations. (Offered annually.)

HMP 513 - Health Information Systems (3)

This course is designed to develop four areas of student knowledge, skills, and competencies in Health Information Management (HIM). It provides a broad overview of the theory and application of computers in the health setting, with emphasis on the health manager's role in relation to the information function. It introduces students to computer hardware, software and operating systems through hands-on experience with specific application programs such as word processing, spreadsheets, statistical packages, and data base managers. Students learn to identify the necessary resources, staff support and change management required to develop, implement, and evaluate a health information system. Finally, the course explores the potential and limits of information technology in improving community level health delivery via such resources as the Internet. (Offered annually.)

HMP 516 - Health Care Supply Chain Management (3)

This course will provide students a comprehensive understanding for managing the health care supply chain with its unique challenges. Content is classified into: understanding external partners, traditional supply chain management functions, and critical departments that disproportionately account for health care supply costs. Students will conduct a supply-chain project in an organization.

HMP 517 - Managerial Epidemiology (3)

This course introduces concepts, methods, and strategies in epidemiology as they apply to health services management. The course provides basic tools used in descriptive and analytical epidemiology, both of which are crucial to making informed inquiries into the health of human populations and informed decisions regarding the distribution of health services resources. Analytic reasoning is emphasized throughout the course; however, formal statistical methods are not covered in detail. (Offered annually.)

HMP 519 - Analytical Methods for Health Management (3)

This course presents basic epidemiological and statistical methods necessary for healthcare management, including disease and outbreaks, measuring outcomes and risks, and common statistical methods. For a specific management problem, students will apply methodological skills to understand, describe, analyze, and present a health problem.

HMP 520 - Health Economics (3)

This course examines the corporate responsibility of health services administrators in reducing environmental and occupational health risks of communities and individuals they serve and of employees and patients who use or work in the health delivery system.

HMP 521 - Economic Evaluation (3)

Economic evaluation is the comparison of different interventions (or a proposed intervention versus the status quo) to determine which is the best use of society's scarce resources. It includes cost-minimization, cost-benefit, cost-effectiveness, and cost-utility analysis. This course will cover the theoretical basis for economic evaluation, its use in health, and the mechanics of the 4 types of analysis. (Offered annually.)

HMP 530 - Management of Health Care Organizations (3)

This course focuses on the macro-organizational concepts of managing complex health care organizations. Health care organizations are complex systems transforming inputs (professional, supplies, etc.) into outputs (health services) for customers (patients). To perform well, these systems require appropriate environmental assessments, strategy, governance, organizational structure, work processes, distribution of power, innovation and change. These requirements for effective organizational performance form the core content of the course. (Offered annually.)

HMP 531 - Medical Practice Management (3)

This course will focus on ambulatory health care delivery systems, comparing and contrasting them with other health care models. The managerial process, including financing, personnel, organizational structures, physical plant, and external relationships, will be explored. The relationship of demographic variables to the planning process for ambulatory care will be developed. (Offered annually.)

HMP 533 - Long-term Care Administration and Planning (3)

This course is designed to provide the student with a body of knowledge representative of the current state-of-the-art. Emphasis will be placed on adapting health care administration concepts to serving the long term care population with particular emphasis on continuity of care. Inter-disciplinary staff coordination and the complex family-client interrelationships will be examined as facets of promoting and maintaining optimum potential quality of life for each client. (Offered annually.)

HMP 534 - Health Care Marketing (3)

The purpose of this course is to train future health services professionals in managing and marketing health services from a strategic perspective. The course is intended to present principles, theories, methods, and tools used in developing, implementing, and managing successful marketing strategy, which creates and shapes the future. The marketing process, consumer behavior, the marketing mix, and controlling and monitoring marketing processes are examined in relationship to the unique and changing aspects of the health services industry. (Offered annually.)

HMP 535 - Business Sectors in Health (3)

This course introduces students to business sectors within healthcare that strategically impact cost and quality of health services. Covered sectors include suppliers (pharmaceuticals, medical-surgical supplies, medical devices, distributors, and group purchasers), financial intermediaries (HMOs, PBMs) and care providers (hospitals, medical groups, nursing homes). Each sector is analyzed in terms of organizations, products/services, customers, and strategic business practices.

HMP 537 - Organizational Behavior and Management (3)

This course provides an understanding of how decision makers manage an organization to achieve strategic initiatives and the impact that these efforts have on the behavior of people within the organization. Topics include: organizational effectiveness, strategic alignment, organizational structures and processes, group processes, leadership, decision making, negotiation, motivation and human resource management. (Offered annually.)

HMP 538 - Management of Human Resources in Health Care

This course focuses on functions and concepts required for managing human resources in organizations. It combines traditional human resource management (HRM) functions with concepts from organization behavior. Course content includes selection, training and development, compensation, performance appraisal, motivation, organizational development, union activity, and modes of conflict resolution. (Offered annually.)

HMP 539 - Ethical Leadership in Health Management and

This applied course examines leadership through case studies in a variety of contexts and cultures. The purpose is to expand students' point of view by considering the theoretical foundations and historical perspectives of leadership, contemporary views of leadership, and student's personal exploration of ethics-based leadership in the healthcare setting.

HMP 540 - Legal Aspects of Health Services Management (

This course is designed to familiarize students with legal issues in the health care field. It is also designed to provide students with insight into how the legal system functions, how lawyers analyze legal problems, and how health care administrators may interact with the legal system and lawyers. (Offered annually.)

HMP 548 - Social Justice and Social Ethics in Community

Many health care organizations judge their success based on their ability to care for those who lack the resources to otherwise access care. What does justice require of such an organization? This course will apply traditional bioethical principles to community benefit decisions and explore the concept of human dignity as it relates to the special moral importance of health. This course will also provide students with opportunities to explore how personal ethics must be coupled with social ethics.

HMP 550 - Health Policy (3)

A course in health policy for advanced graduate students. The purposes of the course are to orient the students to the policy process, to increase the student's understanding of the nature of health policy making and health politics and to provide the student with an opportunity to develop an in-depth understanding of current health care policy issues. (Offered every other year.)

HMP 552 - Legislative Health Policy and Procedures (3)

This course provides a theoretical and practical understanding of the procedures and practices that define legislative health advocacy in the area of Federal health policy. The course provides students with an understanding of the legislative procedures and process, and the skills needed to address public health policy issues at the federal level. Students will examine aspects of planning, strategic thinking and political endeavors necessary to develop and implement legislative policy. Prerequisite: HMP 550.

HMP 553 - Capstone Sem In Health Policy (3)

As a capstone or culminating experience, the seminar integrates learning from all aspects of the curriculum through application of knowledge in individual and group exercises. The course also considers issues of current significance for health policy in the United States and internationally. (Offered annually.)

HMP 555 - Global Health Management and Policy (3)

This course addresses global variation in health care policy formulation and implementation as well as major differences in health care organization management structure and operations across health care systems. Throughout the course, specific health care systems will be compared via case studies to describe the globalization of health care.

HMP 561 - Advanced Emergency Management (3)

This course will provide an overview of the history, current status, and future of Emergency Management and Homeland Security in the U.S. Students will examine associated definitions, theories, and principles. The course will introduce students to various levels of assessment, planning and operational implementation of preparedness and recovery plans.

HMP 562 - Crisis Leadership (3)

Today's organizations, communities, and social systems are faced with unprecedented, increasingly complex, and more devastating and recurrent crisis events. This course provides students with an overview of crisis leadership and emergency management, the continuum between traditional and crisis leadership, and a framework for a systematic approach to related theory, models and methods.

HMP 563 - Interpersonal Dynamics and Crisis Leadership (

This course introduces students to research, methods, tools and group interactive exercises to understand behavior and functioning in times of crisis. Theory, models and methods for assessment of emotional intelligence are used and the constructs are applied to enhance knowledge of personal leadership under stress or in crisis situations.

HMP 564 - Critical Thinking and Crisis Leadership (3)

This course utilizes a multidisciplinary approach to increase understanding of Crisis Leadership within the context of critical thinking. The crisis leader is examined for effective leadership before, during and after a crisis. The focus is systems thinking, anticipatory thinking, crisis framework, crisis family types, knowledge systems, and methods to analyze stakeholder roles and influence.

HMP 569 - Crisis Leadership Capstone Sem (3)

This course provides the opportunity for students to apply knowledge, skills and competencies developed during completion of previous core courses required to complete the MPH in Emergency Management and Crisis Leadership. Students will apply emergency management and crisis leadership theory, models and methods studied in previous courses to analyze, interpret and create recommendations regarding systemic models for improving community resilience. A necessary foundation for successful completion of course objectives is effective use and application of systems and critical thinking skills and understanding of the role of crisis leadership examined from a perspective of improving personal and systemic resilience to prevent, prepare, mitigate, and more effectively respond and recover from crisis events.

HMP 570 - Health Care Financial Mgmt (3)

Corporate finance techniques for financial decision-making are applied to health care organizations using "real world" case studies. In addition to basic finance concepts, topics include capital acquisition, cost of capital, capital investment decisions, tools of risk analysis, and financial and operating analysis. Both for-profit and not-for-profit health care organizations are studied. The course employs extensive use of Excel spreadsheets. (Offered annually.)

HMP 571 - Financial Aspects of Health Care (3)

Managed health care integrates health insurance functions with delivery of medical care. This course introduces students to financial issues faced by health care managers in a managed care environment. Topics include fundamentals of insurance, capitation rate development, risk analysis in managed care systems, cost accounting and management, and Medicare and Medicaid managed care. The course employs case analysis and team projects with local health-related organizations. (Offered annually.)

HMP 572 - Government Financing of Health Care (3)

This course introduces the students to the economic theory of public goods and relates it to the role of government in providing for the maintenance and improvement of community health. The efficiency and effectiveness of current government financing strategies are analyzed. Topics include the theories of public goods and public choice, public budgeting processes, cost-benefit/cost effectiveness analysis of public investment, structure of Medicare, Medicaid and public health funding, and the economic effects of public financing of health-related services (Offered annually.)

HMP 573 - Security and Privacy for Health Care Information

Medical professionals need to update their understanding of how to protect patient privacy due to migration of paper-based medical records to electronic form. This elective explores security, privacy and regulations/compliance within the health care industry, combining theory, best industry practices, case studies, and hands-on labs.

HMP 580 - Strategic Management in Health Care Organization

This is the capstone course in the health administration curriculum and is open to advanced MHA students or others with the permission of the instructor. The purpose of this course is to assist the student in integrating the knowledge and skills developed during the course of study in the MHA program in the context of strategic thinking and strategic management of health care organizations. Integration is supported by individual and team analysis of complex cases, at least two of which are simulations. (Offered annually.)

HMP 583 - Applied Management Projects I: Definition and

This course will help students enhance their problem analysis/solution development skills for project definition and planning in the healthcare context. This is the first of a two-part series on applied projects and designed for executive master of health administration students. Instructor approval required for other students.

HMP 584 - Applied Management Projects II: Execution and

This course will help students enhance their problem analysis/solution development skills for project definition and planning in the healthcare context. This is the second of two part series on applied projects and design for executive master of health administration students. Instructor approval required for other students.

HMP 589 - State Health Policy Fellowship (3)

The purpose of this course is to give graduate students in Health Policy an overview of the health care policy process in the state of Missouri. Students will work first hand with a Legislator and their aides on every aspect of the policy process to build the skills necessary to understand the health policy process in Missouri. Students will attend legislative hearings, write policy documents, and help legislative staff work on health policy legislation throughout the legislative process. (Offered annually.)

HMP 591 - Health Management and Policy Rounds (0)

Career development lecture series designed to expose students to the philosophical approaches, leadership styles, policy processes and decision-making strategies used by successful health care management executives, health policy makers and health policy analysts across the spectrum of the health sector.

HMP 594 - Internship (0)

A required intensive 13-week field experience designed to provide students with an opportunity to employ skills and principles learned in the classroom while working in a health care organization. (Offered annually.)

Maternal Child Health (MCH)**MCH 500 - Maternal Child Health I: Foundations in Matern**

This course introduces Maternal Child Health in public health using the Life Course Model and including: key MCH legislation and programs, analysis of current health issues for mothers, children, and families from preconception to adolescence. Health disparities, MCH policies, and programs in resource-poor environments, domestically and internationally, receive attention.

MCH 501 - Maternal and Child Health Practice: Programs,

Builds on MCH I and MCH Epidemiology and other required courses. Focuses on application of assessment, program design and program evaluation skills to meet MCH population needs domestically and internationally. Attention will be given to leadership skills including program management, policy analysis and advocacy for mothers, children and their families. Prerequisites: 1) Either MCH Epidemiology or Perinatal Epidemiology, and 2) MCH I: Foundations in Maternal Child Health. Perinatal Epidemiology may be taken concurrently.

MCH 597 - Research Topics in Maternal Child Health (1-3)

This course provides direct research experience in maternal and child health. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

MCH 598 - Graduate Reading in Maternal Child Health (1-3)

This course provides specialized study in maternal and child health to enhance skills in literature review and problem solving for master's-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

MCH 697 - Research Topics in Maternal Child Health (1-3)

This course provides specialized research study in maternal and child health for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

MCH 698 - Graduate Reading in Maternal Child Health (1-3)

This course provides specialized study in maternal and child health to enhance skills in literature review and problem solving for doctoral-level students. Content is developed jointly between the student(s) and a faculty mentor. Special Permission: Permission of Instructor. (Offered as needed.)

Public Health Studies (PHS)

PHS 601 - Design and Analysis in Public Health (3)

The purpose of this proseminar is to lay a foundation for the incoming student in the doctoral program in Health Services Research upon which all subsequent courses may build. That foundation consists of four principal components: (a) an introduction to the history, nature, and culture of health services research; (b) an introduction to the methods of critical appraisal necessary for evaluating the burgeoning literature field; (c) the routine application of those critical appraisal methods in the context of written assignments and in-class discussion; and (d) a hands-on review of basic statistical analysis using the national norming study for the SF-36 health outcomes measures as the example. Offered annually.

PHS 605 - Science, Theory and Public Health (3)

Doctoral students are presented with a framework for understanding health and health policy. Institutions involved in health require good data and professional analysis to guide goal-setting and policy decision. Students will explore how to focus their research careers on issues integral to the field of public health. Offered every fall semester.

PHS 606 - Applied Research Skills in Public Health (3)

Provides doctoral students with exposure to a broad spectrum of opportunities to perform actual tasks and endeavors characteristic of those of practicing research professionals in a variety of settings in the field of Public Health. Course embodies professional activities integral both to completing doctoral training and the onset of the professional career. Offered every spring semester.

PHS 692 - Professional Development (0)

This course allows doctoral students to identify their professional skills and abilities that are required of their chosen pursuit. They must then identify ways to achieve the competencies and skills that are missing from their formal curriculum that will enable them to achieve their desired outcomes. This will be different for each student but might include: teaching, public speaking, writing, professional networking, etc. This course will assist students in the identification and pursuit of these skills.

PHS 694 - Teaching Internship (0)

Introduces students to the methods of undergraduate and graduate level teaching, including syllabus preparation and presentation skills.

Public Health (PUBH)**PUBH 201 - Introduction to Global Health (0-3)**

This course introduces students to the concepts of public health by tracing its historical evolution. By using classic public problems and their resolutions, the philosophy, values and mission of public health are examined. The trends in global health such as epidemic responses, disease-specific programs, funding mechanisms, and capacity-building are discussed.

PUBH 235 - Contemporary Issues in Global Health (0-3)

This course explores biological, environmental, social, and political factors impacting the health of populations across the globe. Topics covered will change depending on current events, but will likely include: environmental degradation, climate change, biosecurity, health education in diverse populations, and chronic and infectious diseases.

PUBH 365 - Public Health & Social Justice (3)

Health has special more importance for the well being of individuals and populations. We will discuss ethical issues associated with economic measures, resource allocation, priority setting, and human rights. The course is designed to evoke thoughts on personal and institutional responses to the questions of social justice and health.

PUBH 371 - Evidence Based Public Health (3)

This course introduces students to approaches for developing and selecting public health interventions and evaluating their efficacy from a scientific perspective. With examples taken from health systems around the world, students learn how to access and interpret data systems and analytical methods and apply public health evidence to public policy making. This course will address the challenges of translating and disseminating research discoveries into communities.

PUBH 420 - Biological Basis of Public Health (3)

A basic understanding of public health biology is the cornerstone upon which rest the five core disciplines. A unique characteristic that differentiates public health from other social movements or social action is its grounding in science. The biological aspects of humans, microorganisms, and other factors such as physical environment will provide insight into this important relationship.

PUBH 462 - Politics and Public Health Advocacy (3)

Public health is inherently a political discipline. Practitioners require an understanding of the way public opinion and legislation on matters of public health are shaped. This course exposes students to the basics of public health policy, coalition-building, written and verbal advocacy tools, and includes several real-world experiences of advocacy work.

PUBH 495 - Global Health Field Experience (1)

This course provides students with: 1. the background to anticipate, insofar as possible, what they might experience during an international health trip; 2. the knowledge to draw upon to make the trip more beneficial for them and the people they encounter; and 3. the opportunity to reflect constructively on the experience when they return.

PUBH 497 - Directed Research in Public Health (3-6)

The course provides students with an opportunity to work closely with faculty on research in public health.

PUBH 501 - Mission and Practice of Global Public Health (3)

This course introduces students to the context of public health practice, including its legal basis, history, mission, the core functions of public health, and institutional structure of public health practice. Theoretical and practical perspectives are presented to illustrate the workings of public health at local, state, national, and global levels.

PUBH 502 - Ethical Issues in Public Health (3)

Through readings, lectures, discussions, and case studies, students develop: (1) knowledge of the basic ethical concepts operative in medical and public health ethics; (2) understanding of current ethical challenges facing those engaged in health promotion, disease prevention, and epidemiologic research; and (3) the ability to articulate ethical challenges and to make critical and informed ethical decisions. (Offered annually.)

PUBH 511 - Managerial Aspects of Public Health Practice (3)

This course presents concepts and methods of management tools useful for directing a public health agency. Topics concerning organizational design, finance and budgeting, human resources management, public relations, quality improvement, and planning are presented with examples primarily focused on state and local public health practice.

PUBH 530 - Public Health Approaches to Address Pediatrics (3)

This course will introduce students to selected topics in intentional and unintentional pediatric injury control and strategies for developing and evaluating effective prevention programs. Specific topics include car related injuries and injuries from falls, burns, firearms and violence with focus on risk factors for population subgroups.

PUBH 544 - Eliminating Health Disparities (3)

This course will examine community-based solutions for eliminating health disparities. Emphasis will be placed on examining the policy implications and evaluation of strategies and programs. Additionally, mechanisms for increasing cultural sensitivity and creating cultural competence among public health workers will be explored. (Offered every other year.)

PUBH 551 - Grant Writing (3)

This course will provide information and hands-on experience on the content and process for preparing competitive grant proposals. Lectures and discussions will examine major funding sources and their interests, core components of grant proposals, the process for preparing proposals, strategies used by reviewers to evaluate grant proposals, and techniques for writing concisely. (Offered annually)

PUBH 560 - GIS and Public Health (3)

This is an introductory course in Geographic Information Systems (GIS) and its application in the Public Health arena. Historically, the public health system has relied on three components to accomplish its vital role in the community of mankind. These three components are comprised of public health workforce, the structure that supports and maintains these dedicated workers and the information and communication systems used by these organizations in collecting and disseminating accurate data for the decision-makers and the public. This course will explore portions of the last component of this mix. It will delve into the basic structure of geographic information systems (GIS), define GIS as a technology -a computer -based system for integrating and analyzing geographic data - and explore the concept that geographic patterns are inherent in data and relationships between features.

PUBH 561 - Remote Sensing in Public Health (3)

This introductory course emphasizes the use of remote sensing techniques and methods as tools are applied to understand infectious disease and environmental health interactions. The goal of this course is to give students a combination of theoretical background, examples of applications in the literature and hands-on experience in using remote sensing hardware and software. This course will provide an introduction to the basics of remote sensing, focusing on analyzing and addressing public health issues. It is intended for graduate students and will provide information and experience to understand the basic concepts, language, and methodologies of remote sensing as related to the issues of concerns to public health professionals. It will provide a platform of knowledge and expertise from which informed decisions concerning the application of remote sensing methodologies and interpretations can be made. This course will not produce remote sensing experts in the public health arena; however, individuals who understand the concepts, can frame pertinent questions, and coordinate with remote sensing analysts or spatial scientists to investigate and solve public health questions.

PUBH 562 - Politics and Public Health Advocacy (3)

Public health is inherently a political discipline. Practitioners require an understanding of the way public opinion and legislation on matters of public health are shaped. This course exposes students to the basics of public health policy, coalition-building, written and verbal advocacy tools, and includes several real-world experiences of advocacy work.

PUBH 592 - Public Health Rounds - Integrating Public Heal

The purpose of this course is to promote student's development of professional skills and knowledge necessary for successful careers, and to support students prior to and during their internship experiences. The sessions will provide information and skills for choosing an appropriate practice experience, exploring careers in public health, and preparing for job searches and placement.

PUBH 594 - Practice Experience in Public Health (0)

This course provides supervised experience in application of public health techniques through work in a public health agency or other health care organization.

PUBH 595 - Special Study for Examinations (0)

Registration is required for Master of Public Health students during the semester of their oral comprehensive examinations.

PUBH 596 - Research Project (0)

This course is an independent directed research project that culminates the Master of Science in Public Health. Under the guidance of the academic advisor and other qualified mentor(s), each student designs and implements a research project commensurate with their professional training and interests, using the skills developed in the Masters of Science in Public Health curriculum.

PUBH 597 - Research Topics in Public Health Practice (1-3)

This course provides direct research experience in public health. Content is developed jointly between the student(s) and a faculty mentor.

PUBH 598 - Graduate Reading in Public Health Practice (1-

This course provides specialized study in public health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

PUBH 625 - Capstone in Public Health Practice (3)

This culminating experience requires students to apply the knowledge and skills they have acquired across the MPH curriculum to a situation approximating some aspect of professional practice. Each student will prepare a major paper focused on a program, service, or policy related to a significant public health problem or issue.

Social Work (SWRK)**SWRK 100 - Fields of Action in Social Work (3)**

Overview of the Social Work profession which includes values, history, fields of practice, issues of social welfare, social justice and vulnerable populations. Current controversies, future trends and career opportunities are explored.

SWRK 228 - Human Behavior & the Social Environment (3)

This course is designed to introduce the student to theories, bodies of knowledge, and perspectives which provide critical insight into the behavior of individuals. The critical perspective will be used to analyze and integrate the various theories of human development within the values and social justice orientation of social work.

SWRK 229 - Human Development through the Life Span (3)

This course is designed to introduce students to human growth and development from prenatal life through old age, according to a variety of theoretical perspectives. It includes theories and knowledge of biological, psychological, social, cultural, and spiritual aspects of human life across the life span.

SWRK 302 - American Social Welfare System (3)

Examination of the evolution of the governmental and voluntary system of social welfare. Values and political factors in the shaping of social policy. Contribution of and response by social policy to poverty and vulnerable groups in society. The use of systematic models of policy analysis.

SWRK 327 - Diversity Issues in Social Work Practice (3)

Examination of the role of human diversity in social work practice. Focus is on differences and similarities in the experiences, needs and beliefs of people distinguished by ethnicity, gender, race, and sexual orientation. Offers a multi-dimensional, cross cultural generalist framework.

SWRK 353 - Social Work Practice with Individuals (3)

This is the first of three courses in the practice sequence, in which students are introduced to the competencies relevant to generalist social work practice and oral and written communication skills. Using the individual as the client system, this course provides a foundation in skills, theories and methods of generalist practice that can be built upon in the other practice courses and will also emphasize interviewing, engagement, assessment, intervention, evaluation and termination.

SWRK 354 - Social Work Practice with Families and Groups (3)

Building upon the skills developed in SWRK 351: Social Work Practice with Individuals, the focus of SWRK 354: Social Work Practice with Families and Groups will be to expand those skills into work with families and groups. Specific theories and interventions associate with families and groups will be introduced. New skills relating to families and groups will be developed.

SWRK 372 - Introduction to Social Work Research (3)

Concepts central to empirical research and their application. Methods and techniques of research; the relationship between research, social work practice, and practice evaluation.

SWRK 452 - Social Work Practice: Organizations & Communities (3)

This course covers the basic elements of cellular communications include propagation phenomenology, multipath, frequency reuse and fading. Included are important aspects of cellular system performance including Grade-of-Service, cellular coverage, and cellular capacity. The course also covers select topics in current cellular system standards including digital modulation and error correction coding schemes.

SWRK 481 - Social Work Practicum I (5)

Students assigned responsibility for work with individuals, groups and communities in various social work sites under professional supervision. Practice experience carried concurrently with SWRK441 and SWRK442.

SWRK 482 - Social Work Practicum II (5)

Continuation of SWRK481.

SWRK 486 - Integrative Practice Seminar I (1)

This seminar is designed to facilitate the integration of the content of social work courses with the anticipated job demands of social work practice. It will address some of the practical questions and problems faced by students in the course of their practicum placements.

SWRK 487 - Integrative Practice Sem II (1)

Continuation of SWRK486.

SWRK 498 - Independent Study (1-6)

Prior approval must be obtained from the undergraduate program director and from a faculty member who agrees to supervise the student in the independent study.

SWRK 600 - Foundations of Theory Development in Social Work (3)

This required course is designed to equip doctoral students with the knowledge and skills to engage in effective theory development and synthesis. The course considers some of the major historical currents in the philosophy of science that undergirds contemporary scientific research and accentuates emerging ideas in science that cross-cut traditional boundaries. The course culminates in a theoretical synthesis paper suitable for submission to a peer-reviewed journal.

SWRK 601 - Principles of Statistics and Data Analysis (3)

This required course serves to introduce doctoral students to the quantitative skills, methods, and techniques necessary for scientific analysis, particularly in the social and behavioral sciences. Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. Students will also be introduced to STATA, the statistical software program that will be used in subsequent analytical courses. This introduction will include instruction on data entry, data manipulation, and conducting basic data analysis and interpretation of results.

SWRK 602 - Research Design & Measurement (3)

This course is designed to equip social work PhD students with the knowledge and skills to engage in effective descriptive, explanatory, and intervention research. The course accentuates the application of optimal methodologies and measurement techniques vis-a-vis a particular research question or study objectives. It focuses on conceptualizing and designing a research project culminating in a research proposal. (Offered every spring.)

SWRK 603 - Multiple Regression Analysis (3)

This required course is the second of two required courses on quantitative analyses for doctoral students at the School of Social Work. The course is designed to equip students with the knowledge and skills to apply linear regression to empirical social work research. In the course students will learn the concepts of regression, simple regression, multivariate regression, regression diagnostics, and the goodness of fit. The course also involves categorical predictors, transformation of variables, collinearity, variable selection, and generalized linear models. A list of topics is provided in the course schedule. (Offered every spring)

SWRK 700 - Values and Ethics in Social Work (3)

This course is a comprehensive review of the values and ethical dimensions of social work practice.

SWRK 701 - Social Justice: Human Liberation and Community Development (3)

This course explores the meaning of social justice, community-building, human liberation and environmental parity within the context of social work practice. Based on social work's historical mission of intervention in high-risk communities while advocating for social reform, this course is aimed at teaching students the history, theory and practice realities of community-building locally and globally.

SWRK 702 - Social Policy (3)

This course focuses on social policy within the context of its historical development and its current functions within contemporary society. It examines the substance of policy choices, the values and beliefs that underlie these choices, the political process through which the choices are made, and the potential roles of social workers in that process.

SWRK 703 - International Social Work (3)

These courses are offered in a rotation in the summer session or January intercession. Section 04-The Ghana Experience-This is a two week experiential course in Ghana, West Africa, which features concentrated study, lectures, and interactions with the people of Ghana. The course involves an in-depth examination of global, social, and economic issues of development; and explores the agencies, elements, and patterns of responses used to address hunger, health care, education and other issues impacting the people of developing countries. Section 05-Resources and Distributive Justice Issues in India-The program is divided into two settings, urban and rural. In approximately half the course, students will study urban issues through lectures and fieldwork in Mumbai. In the second half of the course, students will examine rural issues in the same format in Dahanu. The program content includes Indian political, social and economic history and current social and environmental issues. Fieldwork in both settings provide students with practical hands-on experience.

SWRK 704 - Spirituality in Clinical and Healthcare Practica

This course provides a framework for examining religious experience within the context of social work values. The purpose is to develop knowledge and skills for spiritually sensitive clinical and/or healthcare practices. Students have the opportunity to reflect upon their personal beliefs and values and integrate these experiences into their professional practice in ways that are responsible, sensitive and competent. Models of spiritually sensitive practice are developed and critiqued.

SWRK 705 - Social Work Practice in an International Cont

This course is designed to provide students with a working foundation for social work practice in an international context. This course exposes students to international practice situations and current social issues that affect many developing countries, including poverty, civil conflict and communicable diseases. A variety of conceptual frameworks and theories are applied to current and new strategy options to provide students with the beginning skills to assess the needs of poor communities and the outcome effectiveness of programs using an international perspective. Special attention is paid to cultural diversity and social justice expectations in these environments.

SWRK 707 - Policy Practice for Social Justice (3)

In this course, students will gain leadership skills to effectively advocate for social policy and economic justice. Course content will prepare students to use a range of tools and skills to effectively change or enhance societal structures. Social work skills in policy practice with oppressed and vulnerable groups will be explored in the student's area of concentration.

SWRK 708 - Social Policy and the Family (3)

Problems and issues confronting American families and existing and proposed policy initiatives to address the matters. Focus on the values, the political forces, and the knowledge base behind policy intervention. Major emphasis on policy analysis as a systematic means of approaching this topic.

SWRK 710 - Policy Leadership for Community and Organi

This course will explore conceptual, analytical, and strategic parameters of effective policy leadership for community work. It seeks to provide for the community social worker both perspective and guidance for facilitating changes in community policy forums, decision-making structures, and policy implementation arenas. An operational goal of the course is to increase the community policy development skill repertoire of the MSW professional to inform and enhance effective community practice.

SWRK 711 - Social Work and the Law (3)

This course is an overview of the U.S. legal system and how the law impacts social work practice at different levels and in a variety of settings. The course includes content on legal issues related to competency, nonprofit management, criminal justice, and family matters.

SWRK 715 - Practice with Families and Communities Expe

This course is designed to examine the needs of families and communities of all sizes that are struggling with poverty. A variety of poverty reduction models are examined to develop an understanding of multilevel assessment and practice interventions focused on empowering families and communities. Patterns of social and economic injustices that result in the inequitable distribution of resources and opportunities are also examined.

SWRK 716 - Diversity & Anti-Oppression Practice (3)

This course focuses on human diversity within and between groups and anti-oppression interventions in social work practice. The content includes perspectives on discrimination and oppression based on race, gender, class, age, sexual orientation, ethnicity, mental and physical disability, and/or spiritual orientation. Course addresses how group membership affects access to resources, services and opportunities and relates to risk factors for specific population groups.

SWRK 717 - Foundations of Non-Violent Peacemaking (3)

This seminar course focuses on essential knowledge and skills necessary to engage in the peacemaking process. Students explore and analyze their own understanding of the concepts of peace and conflict and examine the role of peacemaking in light of those understandings. Models for peacemaking are examined. Practical skills associated with the peacemaking process including conflict mediation/resolution and reconciliation are discussed.

SWRK 718 - Care of Elderly: Interdisc App (2-3)

Designed to focus on an integrated approach for health care delivery to the elderly. Emphasis is on the physiological, psychological, socio-cultural, spiritual, ethical, and political/legal theoretical basis for care of the elderly. Opportunities are provided to acquire a knowledge about the elderly from the various disciplines in relation to practice, education, and research.

SWRK 720 - School Social Work (3)

This course provides the student with the basic knowledge and skills needed by the school social worker. Content includes the historical development of school social work; education and special education laws and mandates; school social work processes including referrals and assessments; and the social work roles of clinician, broker, advocate, educator, consultant and researcher in the school.

SWRK 721 - Community Theory & Practice (3)

In this course, students gain advanced knowledge and skills for community practice. Course content focuses on theories of community and social systems as well as practice theories emphasizing social change, empowerment, and promotion of social and economic justice for culturally diverse and at-risk communities. The roles of community organizer, community developer, and social planner are emphasized in this course.

SWRK 725 - Human Behvr/Environment (3)

This course is an introduction to theories, knowledge, and perspectives which explain the behavior of individuals and social systems. The theories are the basis of social work practice.

SWRK 729 - Social Work in Corrections (3)

This course presents the issues and trends within adult and juvenile corrections. This course will assess adult and juvenile correctional systems, including jails and prisons, probation, parole, and alternatives to incarceration. Treatment of substance abuse, health problems, and mental illness are examined within the context of correctional settings and offender populations.

SWRK 731 - Fall Inter-Professional Team Seminar (0)

This course is designed to provide students with a learning experience focused upon client system centered care as members of an interprofessional team. The purpose of the team will be to provide education, consultation, and/or direct care for medically underserved individuals/families using an interprofessional plan of care. The interprofessional team will identify a pertinent health-related issue with their chosen population. They will cooperate, collaborate, communicate, and integrate in order to provide a holistic approach to care. Each professional will use his or her knowledge and expertise to maximize the productivity of the interprofessional team to improve health outcomes. Seminars will provide opportunities for students to discuss and reflect on how service activities express the professional obligation to work as change agents for a more just society. Registration and attendance in one Fall section of Saint Louis University's Inter-Professional Team Seminar is required for all MSW students in the Clinical concentration.

SWRK 732 - Spring Inter-Professional Team Seminar (0)

This course is designed to provide students with a learning experience focused upon client system centered care as members of an interprofessional team. The purpose of the team will be to provide education, consultation, and/or direct care for medically underserved individuals/families using an interprofessional plan of care. The interprofessional team will identify a pertinent health-related issue with their chosen population. They will cooperate, collaborate, communicate, and integrate in order to provide a holistic approach to care. Each professional will use his or her knowledge and expertise to maximize the productivity of the interprofessional team to improve health outcomes. Seminars will provide opportunities for students to discuss and reflect on how service activities express the professional obligation to work as change agents for a more just society. Registration and attendance in one Spring section of Saint Louis University's Inter-Professional Team Seminar is required for all MSW students in the Clinical concentration.

SWRK 733 - Advanced Social Work Practice (3)

Students will learn the practice skills needed to effectively integrate services, care, and support for individuals and families facing health, mental health and substance use problems. Building on students' foundational knowledge of general practice skills this course will emphasize practice and implementation of approaches designed to enhance effective communication, consumer engagement, motivation and empowerment with clients as a member of a collaborative inter-professional team. Through the use of case vignettes, role-plays, and small group activities students will gain experience and skills necessary to be effective in a variety of roles in integrated physical and behavioral health care settings. This is a Concentration Core Course for MSW students in the Clinical concentration.

SWRK 734 - Human Behavior and the Social Environment

This course explores theories of human behavior as it relates to health, illness, disability, diversity, and environmental factors. This is a Concentration Core Course for MSW students in the Clinical concentration.

SWRK 735 - Complementary Approaches to Healing in So

This course introduces the student to alternative and complementary schools of thought in medicine, including allopathic, anthroposophic, ayurvedic, Chinese, chiropractic, homeopathic, naturopathic, and osteopathic approaches to healing.

SWRK 737 - Organizational Theory and Leadership (3)

In this course, students develop an understanding of theories of organization and leadership as applied to human service organizations. Students examine the theories most commonly used for understanding and leading human service organizations. Particular attention is given to understanding the dynamic environment within which social work and other human service leaders operate. (NOTE: This course is no longer taught. The content was integrated into SWRK 785 Organizational Programming and Planning).

SWRK 739 - Seminar in Communicating With Children (3)

Unique ways in which children communicate thoughts, feelings, aspirations and conflicts; modes used by others in communicating with children.

SWRK 741 - Family Interaction under Stress (3)

This course examines the contemporary U.S. family as one of the major social institutions and as a social system. A range of theoretical perspectives are presented as analytical tools for exploring the nature of family interaction under stress. Emphasis is placed on systems. This course examines the contemporary U.S. family as a major societal institution and social system. A range of theoretical models is presented as analytical tools for probing the nature of family interaction under stress. Emphasis is placed on the interactional, systems, and life cycle perspectives as comprising a comprehensive theoretical framework for understanding the types of stresses encountered by families over time and the attempts by family members to cope with these stresses.

SWRK 742 - Evidence Based Practices in Community Men

This course focuses on a person-centered, recovery-oriented and evidence-based framework for social work practice with individuals diagnosed with psychiatric disabilities and/or substance use disorders. Students develop skills in the assessment, diagnosis, treatment planning and intervention of major psychiatric and substance use disorders. The nature and diagnosis of psychopathology and the ethical integration of the DSM into clinical social work practice is critically analyzed. Emphasis will be placed on understanding the complex nature of co-occurring medical, mental health and substance use disorders and in the integration of a range of evidence-based interventions in the area of mental health and substance use practice.

SWRK 744 - Substance Abuse Interventions (3)

The overall goal of the course is to increase student knowledge about alcohol and drug abuse/dependency and the recovery process. This course surveys the theoretical, practice, policy, and research literature that deal with the etiology, dynamics, treatment, and prevention of substance use disorders in contemporary U.S. society. The view conveyed in this course is that substance use and abuse, its causes, its effects, and its remedies are extremely broad, systemic, multi-level, and

SWRK 745 - Health and Mental Health Interventions with O

This course explores skills and competencies needed to effectively work with older adults and their families. It provides an overview of health and mental health issues with an emphasis on holistic and systemic assessments and social work practice interventions. The environmental, psychosocial, biological and spiritual influences on health and mental health are highlighted. Clinical, programmatic and policy interventions known to promote healthy behaviors are discussed. Attention is paid to social justice, ethics and the law, particularly as it relates to economic deprivation and oppression leading to the inequitable distribution of health services to older adults.

SWRK 746 - Principles and Concepts in Applied Behavior

This course familiarizes students with the fundamental concepts and principles and philosophical assumptions of behavior analysis as well as the basic concepts of operant and respondent conditioning. Students review some of the basic laboratory research that has illuminated the principles of behavior. The material covered contributes to prepare students to work in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 747 - Assessment and Selecting Interventions in A

This course develops students' basic knowledge with respect to behavioral assessment methodologies, and the selection and design of interventions in the field of applied behavior analysis. This course reviews some of the basic assumptions and characteristics that define the field. The material covered prepares students to work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 748 - Behavior Change and Processes in Applied B

This course expands students' basic knowledge with respect to behavior analysis fundamental concepts and principles and philosophical assumptions including the basic behavioral principles of operant and respondent conditioning. This course develops students working understanding of the use of these principles in behavior change strategies and interventions in the field of applied behavior analysis. Students review some of the fundamental applied literature that demonstrates the efficacy of behavioral strategies and that continue to define the field. The material covered prepares students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 749 - Behavior Change and Ethics in Applied Beha

This course familiarizes students with the ethical issues confronting those working in a behavior analytic (or related) capacity. Students learn the ethical responsibilities inherent to working in their chosen field. Ethical codes and cases are analyzed. Topics include gaining informed consent, protecting confidentiality, selection of the least intrusive behavior change methods and procedures, and protecting individual rights. The ethical standards prepare students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 750 - Social Work Practice with Individuals, Familie

This course prepares students to apply a generalist perspective and systems framework to direct social work practice with individuals, families, and groups. This course emphasizes the basics of communication, interviewing, relationship building, and professional use of self, skills essential to effective social work assessment, intervention and evaluation. Theories and practice skills related to social work with individuals, families, and groups will be the primary focus.

SWRK 751 - Social Work Practice with Communities and

This course prepares student to apply a generalist perspective and systems framework to social work practice with communities and organizations as well as task/problem-solving groups within larger systems and settings.

SWRK 753 - Social Work Practice with Groups (3)

This course provides the student with a beginning concept of group therapy and process. It offers the opportunity to study and experience the process through structured experiences designed to teach the key processes of work.

SWRK 754 - Divorce Mediation (3)

This course will prepare social work students to provide divorce mediation based on the core social work value of client self-determination. Students will learn interest-based negotiation theory and skills of divorce mediation for use in social work practice. This course discusses the basics of family law including equitable property division, parenting responsibility and distribution of financial responsibility.

SWRK 755 - Social Work Practice in the Health Field (3)

This course provides the framework for social work practice in the health care field. This course will cover the array of social work practice approaches and nature of interdisciplinary practice in various health settings such as clinics, hospice, skilled nursing care, and hospitals.

SWRK 756 - Clinical & Public Health Approaches to Worki

This course is designed to assist students, current practitioners, administrators, evaluators, and policy makers to understand the basic orientation, clinical approaches, and public health strategies that are effective in providing health and mental health care to Veterans. This course is to understand how to implement and use the Department of Veterans Affairs (VA) and Department of Defense (DoD) evidence best practices and programs for the assessment and management of Traumatic Brain Injury (TBI), Post Traumatic Stress Disorder (PTSD), Substance Use Disorders (SUD), and for the prevention of suicide. A central focus of the course is on measurement based care, thus we will review the epidemiology, risk factors, and clinical assessment and measurement of mental health and co-occurring conditions in the Veteran populations. Additionally, we will apply this data using the evidence based tools and consensus guidelines developed specifically by and for use in the VA/DoD health care systems with case vignettes on various Veteran populations.

SWRK 757 - Foundations of Family Practice (3)

This course involves a survey of the family practice field in its epistemology, cultural influences, and models of practice. The course strives to integrate theoretical ideas into an understanding of practice applications, including methods and techniques. Students will integrate the general systems approach with family practice models in social work settings. Content will include both historical and present-day family practice models.

SWRK 760 - Behavioral Interventions with Children & Adol

Using a systems framework, viewing the child in environment, this course teaches students behavioral learning theories for work with children who have a wide range of challenging behaviors. These practice skills are essential for working with children in schools, residential treatment, juvenile justice system, foster care, outpatient psychiatric case management, etc. Students will learn to educate, consult, and collaborate with families and/or caregivers in the use of these methods.

SWRK 762 - Diagnosis and Assessment in Clinical Practic

This course is designed to assist in the development of skills related to the diagnosis and assessment of psychopathology. Issues related to the etiology of psychopathology and the historical construction and development of diagnostic categories will be assessed. Special emphasis will be placed on the exploration, understanding and critical analysis of the nature and diagnosis of psychopathology and the integration of the DSM-IV-TR into clinical social work practice. While students will develop skills in the ethical use of the DSM-IV-TR in their practice, they will at the same time critically analyze the nature of clinical diagnosis as it relates to issues of gender, culture, age, sexual orientation, political power and socioeconomic status. Ethical issues to the integration of the DSM-IV-TR will be explored and the relationship between psychiatry and social work will be analyzed. Students will be challenged develop solutions to the paradigmatic and ethical dilemmas associated with the use of the medical model and psychiatric diagnosis within the profession of social work.

SWRK 763 - Loss, Grief and Healing (3)

This course explores the process and stages of loss and change as well as the counseling implications for social workers. Topics include the impact of losses and changes resulting from material loss, relationship loss, intrapsychic loss, functional loss, role loss and systemic loss.

SWRK 764 - Children and Families in the Social Service S

This course provides social work knowledge and skills directed toward helping children and families involved with social service systems due to child abuse and neglect and other risk factors. The course will address issues of abuse, neglect, foster care, adoption, family treatment models, and case management.

SWRK 768 - Health & Mental Health Policy (3)

Health care system of the United states from medical, sociological, political and economic perspectives; policy issues and alternatives.

SWRK 769 - Marital/couples Counseling (3)

This is an introductory theory and skill development in course in marital and couples counseling. The focus is on developmental and on-going marital and couples relationship challenges.

SWRK 771 - Intimate Partner Violence (3)

The focus of the course is on ways to reduce the incidence and impact of intimate partner violence. Students address and examine the theoretical understandings for violence against women and other intimate partner violence as well as the need for direct services, community organizing, and public policy changes that will help end intimate partner violence.

SWRK 772 - Cognitive Behavior Therapy for Social Work P

Students in this course will learn basic knowledge and skills of cognitive-behavior therapy as they relate to stage-appropriate assessment and treatment of persons with co-occurring mental illness and substance use issues. These skills will include developing a therapeutic alliance, problem formulation, assessment of maladaptive thoughts and schemas, cognitive restructuring, exposure therapy, development of various coping skills and relapse prevention. Students will learn how to integrate other treatment approaches such as harm reduction, motivational interviewing, and mindfulness with cognitive-behavioral approaches in order to assist people to achieve and maintain therapeutic goals.

SWRK 773 - Approaches to Trauma Care (3)

This is an introduction to the study of trauma ranging from violence, natural disasters, child abuse and other forms of traumatic experience and its impact on client populations served in the field of social work. The implications of trauma are explored through various theoretical frameworks and assessment practices that address the biological, psychological, sociological and spiritual effects on individuals, families and communities. Theories and models of crisis intervention are presented, as well as their application in clinical practice with survivors of violent events and natural disasters. Students also examine and develop skills necessary to utilize evidence-based treatments with specific populations.

SWRK 774 - Measurement and Experimental Design in AP

This course develops students basic knowledge related to single subject research design, measurement and application of the empirical approach to evaluation of effectiveness of interventions in the field of applied behavior analysis. Students review some of the basic assumptions and characteristics that define the field. The material covered prepares students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 775 - Advanced Social Work Practice in Trauma wit

This course will introduce students to the common concepts (general theory and foundational knowledge), which informs evidence-based assessment and intervention with traumatized children and adolescents. Strength-based practice will be highlighted along with a focus on the identification of protective and promotive factors that foster resiliency and post-traumatic growth. Trauma is broadly defined and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, and witnessing interpersonal crime (e.g. domestic violence) and other traumatic events. The course will highlight the role of development, culture and empirical evidence in trauma-specific interventions with children, adolescents and their families. It will address the level of functioning of primary care giving environments and assess the capacity of the community to facilitate restorative processes.

SWRK 776 - Advanced Social Work Practice in Trauma wit

This course will introduce students to the common concepts (general theory and foundational knowledge), which informs evidence-based assessment and intervention with traumatized adults. Strength-based practice will be highlighted along with a focus on the identification of protective and promotive factors that foster resiliency and post-traumatic growth. Trauma is broadly defined, and includes adults exposed to traumatic events such as natural disasters, war, child abuse and neglect, sexual trauma, surviving life threatening accidents/injuries, and witnessing interpersonal crime (e.g. domestic violence), etc. The course will highlight the role of age, culture and empirical evidence in trauma-specific interventions with adults, with a specific emphasis on trauma treatment for Veterans in VA primary and specialty care settings (e.g. Prolonged Exposure, Cognitive Processing Therapy.)

SWRK 777 - Clinical Approaches to Family Practice (3)

This course is designed to develop knowledge, understanding, and skills related to, and the ability to think critically about, classic approaches to family practice from a social work perspective. An examination of a modernist orientation as well as the basic philosophical/theoretical assumptions underlying several classic approaches and the practice principles that have evolved from them is offered. Students are introduced to both seminal sources and current applications of five of the following approaches to family practice: psychodynamic, natural systems theory, experiential, structural, communications, strategic, and behavioral/cognitive. An important aspect of the course is a consideration of the ramifications for social justice and other social work values and ethics of a modernist stance.

SWRK 778 - Motivational Interviewing (3)

Students in this course will learn the theory and skills of motivational interviewing as they relate to stage-appropriate assessment and treatment of persons with co-occurring health, mental health and substance use issues. These skills will include: (1) using empathy and the skills of open ended questioning, affirmation, reflective listening and summarizing to develop discrepancies between behaviors and goals; (2) rolling with resistance; (3) eliciting, recognizing and reinforcing change talk; and (4) negotiating a change plan. Students will learn how to integrate motivational interviewing with assessment and treatment planning skills as well as other relevant interventions such as harm reduction, medication, and cognitive-behavioral approaches in order to assist people in achieving and maintaining therapeutic goals.

SWRK 785 - Organizational and Program Planning (3)

In this course, students are introduced to the basic conceptual and methodological principles and skills necessary for planning practice in human service organizations. Students examine the role of strategic and operational planning in charting the future of a well-run, human service organization. They acquire an appreciation for and critical perspective on the interconnectedness of organization and environment, anticipating trends, considering social change, needs and social problems, and planning for resource utilization, programmatic response and assessing program impact. Particular attention is given to the essential elements of designing a response to be used in requests for proposals and grant applications.

SWRK 786 - End of Life Care and Social Work Practice on

This course prepares students to work with clients who are experiencing a life threatening illness. Students will explore physical, psychological, spiritual, emotional and sociocultural concerns typically encountered by clients and families confronted with a terminal illness. Emphasis will be given to the significance of the interprofessional approach to providing this kind of care with a focus on the professions of social work and nursing.

SWRK 787 - Research Methods I (3)

This course is designed to equip social work students with the knowledge and skills to engage in effective research at the programmatic, policy, and direct levels of practice. It is the first in a 2 course sequence. Research Methods I focuses on students becoming not only effective consumers of research literature but also understanding the fundamentals of empirical research. The course accentuates the application of optimal methodologies and techniques necessary to examine the impact of services with clients, to assess the effectiveness and efficiency of human service programs and to investigate the efficacy of social and public policies. It focuses on conceptualizing and designing an applied research project culminating in a research proposal.

SWRK 788 - Research Methods II (3)

This course is designed to equip social work students with the knowledge and skills to engage in effective research at the programmatic, policy, and direct levels of practice. It is the second in a 2 course sequence. Research Methods II focuses on executing the fundamentals of empirical research. It nurtures the students' ability to evaluate social work services, human service programs and/ or social and public policies in order to improve them. The course accentuates the application of optimal methodologies and techniques necessary to examine the impact of services with clients, to assess the effectiveness and efficiency of human service programs and to investigate the efficacy of social and public policies. Students should emerge from the course able to execute an applied research project including refining a research study; collecting, managing, analyzing data; and report writing. The course culminates in a completed research project. Prerequisites: SWRK 787 and one of the following, which may be taken concurrently: SWRK 822, 823, 824, 832,

SWRK 790 - Feminist Approaches to Social Work Practice

The course is designed to clarify feminist issues and to illustrate how a feminist perspective in social work practice can facilitate individual and social change. Characteristics, values, techniques and areas of feminist practice are explored and distinguished from other theoretical models.

SWRK 791 - Social Work and Pharmacology (3)

This course introduces students to the mechanisms of action, side effects, major drug interactions, and therapeutic uses of major classes of drugs. The role of social workers in medication management will also be addressed, particularly the skills needed to effectively collaborate with clients, families, and other health providers on medication-related issues. Special consideration will be given to the medication needs of special populations, including persons with mental illness, children, pregnant women, elderly persons and racial/ethnic minorities, as well as prescription drug abuse, over-the-counter medications and herbal remedies.

SWRK 797 - Financial Education, Literacy and Capability P

The course examines the role of social work within financial capability practice. This course focuses on financial literacy, financial education initiatives, and financial empowerment practices for individuals and families across the life cycle and communities. Social policy and policy change efforts related to these areas are also examined. Special attention is given to oppressed populations and communities experiencing poverty and near-poverty.

SWRK 798 - Introduction to Non-Profit Organization Mana

This course examines the roles of the nonprofit sector and nonprofit organizations in contemporary society. The role of nonprofit organizations as vehicles for citizen participation and as commercial enterprises will be highlighted. The challenges facing nonprofit organizations in contemporary society will also be analyzed.

SWRK 799 - Social Entrepreneurship (3)

This course introduces students to the concept and practice of social entrepreneurship. It reviews the historic and contemporary approaches to and models of social entrepreneurship. It explores the range of issues and challenges associated with social entrepreneurship. Particular attention will be given to microenterprise, venture philanthropy, social venture capitalism, social return on investment and business planning for social enterprises.

SWRK 801 - Urban Issues Symposium (3)

In this interdisciplinary course, which is taught in cooperation with the School of Public Health, the School of Law, and other academic units at the university, students develop practical knowledge and skills required to successfully advocate for individuals and families grappling with various problems associated with housing.

SWRK 808 - Social Work, Education, and Individuals with

This course provides the student with a working knowledge of the learning, psychological, cognitive and social characteristics of youth and children with exceptionalities. Current methods of practice within the educational setting, interventions, strategies, and modifications for use within the general education classroom are examined.

SWRK 809 - Sex Therapy in Clinical Practice (3)

This course deals with assessing and treating the sexual problems most commonly presented by individuals, and couples, including disorders of desire, aversion, orgasm, and pain. The principle of sex therapy will be covered from social constructionist and system perspectives, taking into account history, context, meaning, and relational components. Foundational and contemporary theories of sex therapy will be covered.

SWRK 810 - Urban Ecology: Communities and Neighbor

Ecology is the study of the relationships of species to environments. Human ecology is the study of the characteristics of spatially defined communities and the spatial arrangements of land uses within these spatially defined communities. This approach arose at the University of Chicago during the early part of the 20th Century and enjoyed great popularity in academic circles up until the 1950s. This course will explore the methods and theories that contribute to our ecological understanding of urban neighborhoods and communities.

SWRK 812 - INTRODUCTION TO GEOGRAPHICAL INFORM

This course is designed to provide an overview of the conceptual, technical, and procedural aspects of Geographic Information Systems (GIS).

SWRK 813 - ISSUES IN PUBLIC ADMINISTRATION (3)

This course examines the role of public administration in the U.S., including its historic evolution and current issues such as privatization, quotas, affirmative action, and whistle-blowing.

SWRK 814 - Urban Economic Development (3)

This course examines factors determining business, industrial, and commercial location, techniques used in analyzing metropolitan growth, and methods used by industrial development organizations to attract business firms.

SWRK 815 - INTRODUCTION TO PUBLIC SECTOR BUDGE

This course deals with the economic and political aspects of public budgeting at all levels of government. It features an in-class budget simulation.

SWRK 819 - Foundation Integrative Practice Seminar (1)

This seminar is designed to provide opportunities for students to integrate foundation and a generalist perspective of social work theories, methods, values, and ethics with practicum experiences. Additionally the seminar will focus on maximizing learning experiences in the student's practicum and in gaining knowledge of other target populations and social service settings. Students will gain skills in peer consultation and support, case presentation, researching for practice-based literature, and in approaching various practicum challenges.

SWRK 820 - Concentration Integrative Practice Seminar (1)

This seminar provides an opportunity for students in the first Concentration Practicum SWRK 822 Practicum II, to integrate theoretical constructs and information gained in the classroom with the application of social work practice. The seminars are designed to provide additional integration of coursework and daily practice; enhance a student's knowledge and skill base through peer sharing; and provide a supportive opportunity for students to debrief on practice challenges.

SWRK 821 - Foundation Practicum I (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 240 hours in the field.

SWRK 822 - Concentration Practicum II (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field.

SWRK 823 - Concentration Practicum III (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field.

SWRK 824 - Concentration Practicum IV (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field.

SWRK 825 - Practicum V (3)

This elective provides additional practicum experience in an area of special interest to the student.

SWRK 828 - Fundraising for Non-Profit Organizations (3)

This course focuses on the cycle, stages and progression of fund development for formal, nonprofit organizations and grassroots associations. It introduces the concept of advancement, development, relationships and cultivation for nonprofit organizations. It emphasizes the importance of developing relationships within and matched to the stages and activities of institutional advancement and development.

SWRK 829 - Post Modern Approaches to Family Practice (

This course is designed to develop knowledge and understanding of, skills related to, and the ability to think critically about postmodern approaches to family practice from a social work perspective. An examination of the basic philosophical/theoretical assumptions underlying several postmodern approaches and the practice principles that have evolved from them is offered. Students are introduced to some of the seminal sources relative to postmodern thinking in addition to those describing the following approaches to family practice: the reflecting team; solution-oriented-therapy; solution-focused therapy; narrative therapy; and therapeutic conversations. An important aspect of the course is a consideration of the ramifications for social justice and other social work values and ethics of a postmodern stance.

SWRK 830 - ABA Integrative Seminar (0)

This is the second part of a three-part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, reviewing empirical literature pertinent to those change efforts.

SWRK 831 - Foundation Practicum I (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 300 hours in the field.

SWRK 832 - Concentration Practicum II (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field.

SWRK 833 - Concentration Practicum III (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field.

SWRK 834 - Elective Practicum IV (3)

This elective provides additional practicum experience in an area of special interest to the student.

SWRK 840 - ABA Integrative Seminar (0)

This is the third part of a three-part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, reviewing empirical literature pertinent to those change efforts.

SWRK 841 - Foundation Practicum I (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 300 hours in the field. √Prerequisites: Foundation courses.

SWRK 842 - Clinical Practicum II (2)

Clinical students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field.

SWRK 843 - Clinical Practicum III (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field.

SWRK 843 - Clinical Practicum III (2)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field.

SWRK 898 - Independent Study (1-3)

This offers students the opportunity for individual and independent study of a particular area related to social work theory or practice. Prior approvals by the student's academic advisor, Director of the MSW Program, and faculty member directing and evaluating the study are required.

Geographic Information Science (GIS)

GIS 217 - GIS in Civil Engineering (3)

This course discusses the fundamental concepts of GIS, and the methods and software used to solve civil engineering programs. The course also covers skills to deal with remote sensing data, basic and differential GPS surveying to prepare students for today's growing business needs in civil engineering companies and government agencies. Students may only apply credits toward their graduation requirements from one of the following courses: EAS-217, BIOL-417, EAS-417, or SOC-465.

GIS 401 - Introduction to GIS (3)

This class introduces concepts, science, and theory of GIS and provides hands-on learning experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. (Offered every fall.)

GIS 402 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS, including remote sensing for GIS, geospatial statistics, and GIS biogeography. Each subject is presented by a professor who specializes in it. (Offered every spring.)

GIS 403 - Geospatial Methods in Environmental Studies (0)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment. Geospatial methods to be discussed include: spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, and various applications of the techniques with special attention in environmental studies such as risk assessment and mitigation, environmental modeling, natural resource management, water/air pollution & control, forest fire mapping, health and environmental change analysis etc.

GIS 404 - Introduction to Remote Sensing (3)

This course include fundamental knowledge on the physics of remote sensing; photogrammetry; multispectral, hyperspectral, and thermal imaging; RADAR; and LIDAR. Principles are reviewed in lectures, and lab assignments cover image processing, environmental modeling, and analysis. The course objective is to demonstrate applications of remote sensing in environmental sciences with software training in ENVI+IDL and SARscape. (Offered every fall.)

GIS 405 - Microwave Remote Sensing: SAR Principles, Dat

The course covers principles of synthetic aperture radar (SAR), SAR satellites and data sources, SAR image processing, interpretation and applications. Popular data processing techniques, including SAR intensity processing, InSAR and DInSAR techniques, polarimetry tools/classification methods, Persistent Scatterer Interferometry are discussed through detailed step-by-step lab work on the processing chain including measuring earthquake deformation, land subsidence, landslides, building sinking, and tree height/health estimation, DEM generation, and various environmental applications. Students will have experience on ordering, processing and interpreting SAR data, and an opportunity to discuss advantages and limitations of SAR remote sensing for their specific research, and to explore RADAR w/ LiDAR for its common applications in vegetation assessment and terrain characterization.

GIS 406 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

GIS 485 - GIS Capstone (3)

In this course, students will consolidate their coursework and demonstrate their mastery of professional remote sensing and/or GIS competencies through ongoing research projects. Depending on whether students' interests are in remote sensing or GIS, topics will cover spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, InSAR, and various applications of techniques. (Offered as needed.)

GIS 501 - Introduction to GIS (3)

This class introduces concepts, science, and theory of GIS and provides hands-on learning experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. (Offered every fall.)

GIS 502 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS, including remote sensing for GIS, geospatial statistics, and GIS biogeography. Each subject is presented by a professor who specializes in it. (Offered every spring.)

GIS 503 - Geospatial Methods in Environmental Studies (0)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment. Geospatial methods to be discussed include: spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, and various applications of the techniques with special attention in environmental studies such as risk assessment and mitigation, environmental modeling, natural resource management, water/air pollution & control, forest fire mapping, health and environmental change analysis etc.

GIS 504 - Introduction to Remote Sensing (3)

This course include fundamental knowledge on the physics of remote sensing; photogrammetry; multispectral, hyperspectral, and thermal imaging; RADAR; and LIDAR. Principles are reviewed in lectures, and lab assignments cover image processing, environmental modeling, and analysis. The course objective is to demonstrate applications of remote sensing in environmental sciences with software training in ENVI+IDL and SARscape. (Offered every fall.)

GIS 505 - Microwave Remote Sensing: SAR Principles, Dat

The course covers principles of synthetic aperture radar (SAR), SAR satellites and data sources, SAR image processing, interpretation and applications. Popular data processing techniques, including SAR intensity processing, InSAR and DInSAR techniques, polarimetry tools/classification methods, Persistent Scatterer Interferometry are discussed through detailed step-by-step lab work on the processing chain including measuring earthquake deformation, land subsidence, landslides, building sinking, and tree height/health estimation, DEM generation, and various environmental applications. Students will have experience on ordering, processing and interpreting SAR data, and an opportunity to discuss advantages and limitations of SAR remote sensing for their specific research, and to explore RADAR w/ LiDAR for its common applications in vegetation assessment and terrain characterization.

GIS 506 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

GIS 585 - GIS Capstone (3)

In this course, students will consolidate their coursework and demonstrate their mastery of professional remote sensing and/or GIS competencies through ongoing research projects. Depending on whether students' interests are in remote sensing or GIS, topics will cover spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, InSAR, and various applications of techniques. (Offered as needed.)

Sustainability (MOS)

MOS 450 - Future Issues US Rail Trans. (3)

The course will explore the enormous promise of expanded research and development focused on new U.S. rail systems and corridors and on the political and economic challenges involved in building them.

MOS 502 - Sustainability Foundations (3)

This course covers the fundamental concepts of sustainability. It provides a survey of perspectives, frameworks, and competencies to engage in trans-disciplinary sustainability problem-solving. Students will develop an understanding for integrating critical concepts from economics and business, social and public policy, and environmental science and law to address pressing sustainability challenges. A critical component of this course will be using this understanding to advance students' capstone or thesis project through the development of a research proposal.

MOS 505 - Sustainable Business Practices (3)

In today's complex business environment, organizations are constantly challenged to develop and execute innovative policies and processes that ensure profitable growth. Business leaders often believe that continued growth is not compatible with environmental stewardship, but ecological and industrial performance need not be mutually exclusive. Increasingly, competitive companies are recognizing the importance of embedding sustainability into corporate strategy and adopting business practices that are economically viable, socially equitable, and environmentally responsible. In this course, we explore key concepts, debates, and issues driving the development and execution of business practices at the nexus of sustainability and industry.

MOS 506 - Environmental Aspects of Sustainability (3)

This course provides an overview of the environmental aspects of sustainability. Topics include: environmental sustainability, laws; population, environmental impact; biodiversity and ecosystems; climate change, air pollution; solid and hazardous waste management; water resources/pollution; renewable energy, mineral and soil resources.

MOS 511 - Sustainability in Society and Cultures (3)

This course is designed to provide students with a working foundation for sustainable development in the context of social, economic and political environments and their interactions between each other. The course will explore policy questions at the global, national, and local levels, developing a well-rounded understanding of terms and concepts used to describe sustainable development. With this broader understanding students will be able to more fully appreciate universal conflicts that are present in the classic environment/economy debate.

MOS 516 - Environmental Politics and Policy (3)

Examines the politics and processes of U.S. environmental policy-making. Topics include: why government makes environmental laws; competing values influencing environmental policy; institutions, processes, and political actors that shape the creation and implementation of environmental laws; how government addresses environmental problems; how American actions influence international attempts to address environmental problems

MOS 522 - Certification in Sustainability Reporting (3)

Firms and their stakeholders are increasingly embracing the importance of disclosing and reporting non-financial measures of performance related to corporate responsibility. Thus, firms are leveraging sustainability reports to disclose their environmental and social performance. This course is geared toward helping you understand how best to assess, document, manage, report, assure and communicate environmental and social (non-financial) performance via Sustainability Reporting. The course will provide guidance on key concepts, frameworks, standards and best practices for sustainability reporting, assurance and verification.

MOS 549 - GRI Certification (1)

This seminar is comprised of two sections. In the Master Class on GRI Reporting students will Learn About GRI and the GRI Reporting Framework. In the Master Class on Materiality and Stakeholder Engagement students will learn cutting edge skills to identify and prioritize material issues (social, environmental and economic) of concern to various stakeholders following the GRI reporting framework. These Master Classes are joint efforts by GRI's Certified Training Partners ISOS Group and BrownFlynn. This seminar is available to all graduate-level students as a one credit hour elective. In addition to one course credit, it also will result in an official Global Reporting Initiative (GRI) Certification. There is a fee of \$400.00 for the certification piece, which you will be required to pay in addition to the SLU graduate tuition rate. Payment of this fee will be handled through a separate registration site accessible through the Center for Sustainability homepage: <http://www.slu.edu/x35576.xml>. If you have questions, please contact us at (314) 977-3608 or sustainability@slu.edu.

MOS 550 - Future Issue US Rail Trans. (3)

The course will explore the enormous promise of expanded research and development focused on new U.S. rail systems and corridors and on the political and economic challenges involved in building them.

MOS 593 - Special Topics (3)

Special Topics course

MOS 596 - Master's Project (1-3)

Theoretical or practical fieldwork that leads to a project report and defense of the Project

MOS 597 - Research Topics (1-3)

Theoretical or practical fieldwork that is not part of a thesis or master's project

MOS 598 - Independent Study (0-3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

MOS 599 - Thesis Research (0-6)

Research that leads to a Master's Thesis and defense of the Thesis

Urban Planning & Development (UPD)**UPD 500 - Urban and Regional Development Theory (3)**

This course explores the literature on regional development theories. We will examine the factors that contribute to the growth or decline of city-focused regions. Readings pull from planning, economic geography, sociology, and urban studies to explain the spatial, industrial, and people-focused patterns of development in regions. (Offered every fall.)

UPD 501 - Research Methods (3)

In this class, we will explore the basic methods used in planning and policy analysis. Whether as an urban planner or private developer/consultant, we all encounter policy reports and documents and are required to decipher them at some point in our careers. Many of us will also write these reports or use them as source material for grant proposals or funding requests, thus understanding the methods is essential to our work. This course provides the foundation for planning and policy analysis, examining the basic methods used in addressing planning and development problems. (Offered every fall.)

UPD 510 - Local Economic Development Policy and Practice (3)

This course provides an introduction to the context, theory, process, and practice of local economic development planning. Topics covered include theoretical and conceptual explanations of the economic development process; international, national, and regional factors affecting local economic development; federal, state, and local roles; contrasting economic development approaches and methods for planning and practice; equity, participation, and partnerships in economic development; and financing tools for local economic development. (Offered every spring.)

UPD 525 - Infrastructure Planning and Process (3)

This course explores various systems and services that support a city and region and how function. How are they financed? How do they interact with other systems? These include all systems and services that engage in some planning function, including transportation, water, sewer, and schools. (Offered every spring.)

UPD 530 - Theory and Foundations of Planning (3)

This course introduces the multiple facets of city/urban/regional planning, examining the context, theory, process, and ethical practice of planning and policy. It considers the roles that urban planners play in analyzing and shaping cities and their component communities and the issues and dilemmas communities face when engaged in the planning process. Through this course, students develop a theoretical and practical understanding of urban spatial structure and the peculiar function of urban areas and an operational understanding of the urban planning process. While we will emphasize problems and challenges currently facing communities in metropolitan St. Louis, we will examine the broader issues affecting communities and regions across the US and the world. (Offered every spring.)

UPD 531 - Land Use Planning and Analysis (3)

This course provides students with an overview of how land use decisions are made and activities involved in land use planning. Starting with the history and theory of land use planning, this course develops a conceptual framework for how-the often controversial-decisions are made, exploring the issues from the perspectives of the public and the private sectors. Students examine values and objectives behind the different approaches to land management and the role that the local government plays in establishing a land use program. Students also consider the necessary information required to develop a land use plan, examining the different types of data and how they might be used. Students ultimately examine land use practices at the site level, exploring development issues for a series of specific land uses. Following this class, students will have the necessary analytical skills to examine a series of land use development issues. (Offered every spring.)

UPD 533 - Real Estate Finance (3)

The course provides practical working knowledge and capabilities in the methods and techniques used in the financial analysis of real estate development projects. We will spend the majority of our time understanding, practicing, and applying present-value mathematics, the concept of return, discounted cash flow analysis, project cost and benefits, and a complete financial analysis of a real estate development project. We will develop Excel spreadsheet capabilities and use them in all the analysis steps. Finally, we will review the loan process for commercial real estate projects. This course provides a hands-on approach to real estate finance and emphasizes the knowledge and analysis required for direct investment in real estate projects. This course will provide the skills necessary to evaluate potential opportunities in real estate. (Offered every fall.)

UPD 534 - Community Development Finance (3)

This course provides students with conceptual and practical tools needed to participate in the decision-making for and financing of projects, including commercial real estate, that relate to community development goals. The course introduces students to the policy and practice of community development finance, with an emphasis on the resources available to assist for-profit and not-for-profit private sector developers to undertake community development projects in markets and with populations outside of the financial mainstream. The course will include the fundamentals of decision-making about the financing of community development (i.e. real estate loan/investment underwriting), development goals, such as the building of affordable housing, community facilities, charter schools and commercial real estate development. Topics covered with include Community Development Block Grant, HOME Investment Partnership funding, Low Income Housing Tax Credits, Tax-Exempt Bond Financing, New Markets Tax Credits, and others.

UPD 544 - Planning and Development Studio (3)

The course provides practical working knowledge and capabilities in the methods and techniques used in the financial analysis of real estate development projects. We will spend the majority of our time understanding, practicing, and applying present-value mathematics, the concept of return, discounted cash flow analysis, project cost and benefits, and a complete financial analysis of a real estate development project. We will develop Excel spreadsheet capabilities and use them in all the analysis steps. Finally, we will review the loan process for commercial real estate projects. This course provides a hands-on approach to real estate finance and emphasizes the knowledge and analysis required for direct investment in real estate projects. This course will provide the skills necessary to evaluate potential opportunities in real estate. (Offered every fall.)

UPD 548 - Sustainability and the Built Environment (3)

In 1987 the World Commission on Environment and Development (aka the Bruntland Commission) was convened to address the growing concerns about environmental degradation in light of escalating human development. From that came the call to switch the world policy focus toward a more sustainable future. Sustainable development is most commonly defined as meeting the needs of our present generation while taking the needs of the future generation into consideration. The concept appears simply. Yet, the challenge lies in how we get there. What does it mean to meet the needs of our present generation? How do we define those needs? And what does it mean to take the needs of a future generation into consideration at the same time? What does all of that look like? There in lies the policy challenge. As we enter the second decade of the 21st century, the world looks vastly different from the time when these conversations about sustainable development began. Even within the past year, the policy frame has changed dramatically, suggesting that there is room for expanding the sustainable development discourse. In this course we explore those questions at the global, national, and local scale.

UPD 549 - Sustainable Site Planning (3)

This course covers fundamental sustainable site issues such as planning and policy strategies for sustainable communities; site planning with nature ¿ using site analysis to design with nature, not against it; urban agriculture ¿ growing food for sustainable cities and healthy people; soils ¿ protecting - enriching, and valuing soils and the life within them; hydrology and the water cycle - design for water cycling and water conservation; vegetation and landscaping - nutrient cycling, food, wildlife habitat, climate mediation

UPD 560 - Planning and Development in St. Louis (3)

This course examines the major demographic, economic and social trends that have characterized St. Louis . It will be relevant to those with an interest in city planning and community development, but also urban history, economic development, housing and related topics. Students will study plans and projects, some of which were implemented and some not. The intent is to examine the ingredients of successful plans, programs and projects; appreciation for the consequences (both intended and unintended) of development decisions; and a better understanding of the city and the region.

UPD 585 - Capstone (3)

Student selects a project to evaluate planning issues and design planning alternatives toward a development or redevelopment. The formal plan is accompanied by an analytical report. The report is presented in public forum. Offered every semester.

UPD 594 - Internship (3)

Students are required to complete an internship during their course of study. The internship must be approved by their program advisor and must involve at least six weeks of full-time work involving a planning or development related project. At the end of their internship students are expected to write a 2,500 word essay discussing their work/project and how it relates to planning and development. In this essay, students will apply classroom knowledge to the internship experience. (Offered as needed.)