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 anomalies 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 (1)
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 512 - Epidemiology (1)
Focuses on the role of epidemiology in dental research and graduate education. Uses dental and medical data to assess health conditions and public health problems. 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 (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 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-G516. 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 520 - 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 mini-screws 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.
ORTH 530 - Preclinical Teaching Practicum (0)
Supervised teaching participation in the instruction of undergraduate dental students in the preclinical endodontic technique course. Offered every year.

ORTH 531 - Clinical Teaching Practicum (0)
Supervised teaching participation in the clinical instruction of undergraduate dental students. Offered every year.

ORTH 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.

ORTH 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.

ORTH 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.

ORTH 552 - Amrcn Brd of Endodontics Review (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.

ORTH 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.

ORTH 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)

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 & Trtmt 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 treatment-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 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 - Orthodontics Journal Club (0)**
A consideration of recent developments and current literature in the orthodontic field and in related fields.

**ORTH 591 - Literature Review (0-1)**
A consideration of recent developments and current literature in the orthodontic field and in related fields.

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### 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 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 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 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 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)

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. This course can also fulfill the Cultural Diversity core requirement. 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 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 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 (1-3)
This course is designed to provide students with opportunities to engage in a field study experience within the African American community or with agencies and institutions that impact serve African American communities. Students will be encouraged to select placement in experiences that will provide a meaningful understanding of the specific populations served as well as the cultural contexts of the African American communities.

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 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.
**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.

**Art (ART)**

**ART 200 - Drawing I (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: Etching (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 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 - Visual Literacy (3)**
An exploration of various procedures and techniques associated with 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 280 - Monoprints (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. Satisfies core requirement in Fine Arts.

**ART 290 - Painting Studio II (3)**
A continuation and elaboration of Painting I with a greater opportunity to explore the relationship of image/idea with conceptual approaches to the medium. A lab fee is required.

**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 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 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 (3)**
Methods of constructing and carving in wood, stone, and metal will be explored. Differences in handling these materials will require the development of additional skills, both in manipulating the materials themselves and in the visual solutions possible in each material. 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 History (ARTH)

**ARTH 100 - Approaching the Arts (3)**
Present 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)**
Present 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 designs 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 111 - History of Western Art I (3)**
This course will present the development of western art and architecture from prehistoric 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 (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 192 - St. Louis Spaces (SLU Inquiry) (3)**
Introduces students to the study of architecture and the built environment through a case-by-case inquiry into the design of selected spaces in St. Louis. We shall examine how social, cultural, and political forces shape urban life, as well as explore the actual use and habitation of contemporary urban spaces in St. Louis.

**ARTH 208 - Artists & Their Art (3)**
Introduces students to a select number of prominent artists such as Raphael, David, and Warhol, and examines select works from their output in detail. The artists may be chosen from any period in the history of art. The artist will be studied from a variety of discipline-based methods, including formal, iconographic, reception, and/or social history.

**ARTH 215 - Saints in Art (3)**
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 the history of art, especially social history and iconography, in order to understand saints' diverse roles within the society.

**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 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 Ary 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 Gentilei, 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 - 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 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 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 301 - Women in Art (3)
Examines the role of women in art from multiple perspectives, including their role as symbols, artists, and patrons.

ARTH 313 - Pre-Columbian Art (3)
Major developments in Central and South American cultures in architecture, sculpture, painting, ceramics and pottery, especially Mexico and Peru where ancient civilizations reached their highest cultural level.

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 - Romanesque Art (3)
an examination of painting, sculpture, and architecture from the 8th through 12th centuries in Western Europe, focusing on the rise of monasticism and the spread of Christianity.

ARTH 341 - Gothic Art (3)
This course examines the relationship of the medieval viewer to the visual world of the 12th through the 14th centuries. Students will follow the "three estates" - the religious community, the nobility, and the peasantry - through the great age of cathedral building.

ARTH 350 - Early Renaissance Art & Culture (3)
A presentation of the major artists and patrons of the 14th 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)
A presentation of 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, Bramante, 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 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 Rembrant, 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 372 - Rococo To Romanticism (3)
Familiarizes students with the art and culture of Europe and America between approximately 1715 and 1848, beginning in "ancien regime" Europe, continuing through art produced during the French Revolution and the Napoleonic Empire, and concluding with an analysis of Romanticism.

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, Caliebotte, the course analyzes the concept of the avant-garde, plein air painting, modernity, and class and gender as they relate to art.

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)
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 401 - Christian Iconography (3)
An examination of the role of art in the service of the papacy with particular attention on the popes and patrons, especially in Rome after the return from Avignon.

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 450 - The Papacy & Art (3)
An examination of the role of art in the service of the papacy with particular attention on the popes and patrons, especially in Rome after the return from Avignon.

ARTH 450 - The Papacy & 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 465 - 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 Rembrant, Rubens and Vermeer. Emphasis will be placed on understanding the artworks within formal, theoretical, and historical viewpoints.

ARTH 470 - American Art: Colonial to WWII (3)
Examines American art from the colonial era through the nineteenth- and early twentieth centuries.

ARTH 471 - 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 472 - Rococo To Romanticism (3)
Familiarizes students with the art and culture of Europe and America between approximately 1715 and 1848, beginning in "ancien regime" Europe, continuing through art produced during the French Revolution and the Napoleonic Empire, and concluding with an analysis of Romanticism.

ARTH 473 - 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, Caliebotte, the course analyzes the concept of the avant-garde, plein air painting, modernity, and class and gender as they relate to art.

ARTH 480 - 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 482 - Modern Architecture (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 401 - Christian Iconography (3)
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ARTH 450 - The Papacy & Art (3)
An examination of the role of art in the service of the papacy with particular attention on the popes and patrons, especially in Rome after the return from Avignon.
American Studies (ASTD)

ASTD 110 - Introduction to American Studies (3)
This course is designed to examine various components of American culture and the disciplinary and interdisciplinary ways by which those components may be approached, e.g., historical, literary, political, sociological, etc. It explores the American experience from the Puritans to the 90s, focusing on specific formational ideas, concerns, and problem areas that have shaped American life and thought and on the methods and materials for determining those themes and their significance.

ASTD 201 - The American Experience (3)
This course will focus on different important themes in American life and thought and on the methods and materials for determining those themes and their significance.

ASTD 202 - 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 210 - Religion and Health in America (0-3)
This eight-week course focuses on the relationship between religion and health in order to give students an accelerated introduction to the interdisciplinary study of American culture. There are no pre-requisites to enrollment; first-year students welcome. We will explore a wide variety of cultural artifacts, such as empirical research, cartoons, sound recordings, novels, videos, histories, internet resources, theology, architecture, advertisements, popular magazines, autobiographies, and feature films. This course develops skills in critical thinking, close reading, textual analysis, quantitative and qualitative reasoning, and written and oral communication.

ASTD 301 - American Experience (3)
This course will focus on different important themes in American life and thought and on the methods and materials for determining those themes and their significance.

ASTD 302 - 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 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 315 - American Social Movements (3)
Survey of the origins and impact of major American social movements as they unfold since the end of the Civil War. Topics include the labor movement, populism, the women's movement, civil rights, student and anti-war protest, Black power and gay liberation, identity politics, community organizing, and the environmental movement.

ASTD 320 - Making the American City (3)
Introduction to the interdisciplinary study of American cities, suburbs, and metropolitan regions. Students examine the forces that have shaped urban America since the colonial era, with special attention to primary sources such as archival documents, court records, census data, maps, novels, essays, photography, painting, architecture, popular music, and film.

ASTD 322 - The Urban Crisis (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 342 - Evangelical America (3)
From the Great Awakening to the presidency of George W. Bush, evangelicalism has played a critical role in shaping American cultural and political institutions. This course explores causes and implications of evangelical influence. Topics may include revivalism, church and state, civil religion, and legislation regarding alcohol, slavery, abortion, and sexuality.

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 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 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 mediagraphies, 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 401 - Senior Seminar I (3)
Fall semester seminar for all American Studies majors. Sessions emphasize synthesis of knowledge and skills in the interdisciplinary study of American culture, and facilitate reading and research toward spring semester thesis or project.

ASTD 402 - Senior Seminar II (3)
Spring semester capstone for all American Studies majors. Students produce thesis or project and prepare for comprehensive oral examinations.

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 Mosiac: Literature of Diversity (3)
The goal of this course will be an expanded appreciation of the multiculturaal make-up of American society through reading and discussion of Asian-American, African American, Hispanic-American, and Native American novels, short stories, poetry, and essays. The works will be examined for both their regional emphasis and cross-cultural components. Art work, slides, and other media will be utilized to provide further identity and reflection.

ASTD 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.

ASTD 428 - History of Anti-Semitism (3)
This course seeks to acquaint the student with the history of anti-Semitism through a study of the phenomenon from its origins in early Christianity through the pogroms of the Middle Ages, and on through the secularization process in the West which changes anti-Semitism from a religious phenomenon to a pseudo-racial one. The anti-Jewish myths of the High Middle Ages and their continuations down to today are also examined. The course ends with a study of the Holocaust and its grounding in German history.

ASTD 479 - American Autobiography (3)
Because the autobiographical act itself is essentially an interdisciplinary one, to examine American autobiographies from the past several centuries can be an especially intimate way to get inside the ongoing reality of American culture. Contemporary theories of autobiography will be studied and critiqued in this course. Offered occasionally.

ASTD 500 - Intro to American Studies (3)
This course is a basic introduction to the scope and literature of American Studies. It emphasizes essential texts from America's cultural narrative, and examines various integrative approaches from the social sciences and the humanities. Offered every year.

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 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 527 - Anti-Black Racism (3)
This course examines the role and reality of the Black presence in the dominant white European/American culture of North America from the landing of the first African slaves in the British colonies in 1619 to the late twentieth century. Offered occasionally.

ASTD 529 - American Classics (3)
This course studies a selection of classic American texts (Jefferson, Franklin, Tocqueville, Parkman, Douglass, etc.) historically and analytically as a means of understanding American culture. The instructor selects texts for the course from the required reading list. Offered every other year.

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 536 - American Classics (3)
This course studies a selection of classic American texts (Jefferson, Franklin, Tocqueville, Parkman, Douglass, etc.) historically and analytically as a means of understanding American culture. The instructor selects texts for the course from the required reading list. Offered every other year.

ASTD 537 - America: Readings of Mid Passage (3)
Undoubtedly, all who experienced the Middle Passage were change 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 560 - Evangelical America (3)
From the Great Awakening to the presidency of George W. Bush, evangelicalism has played a critical role in shaping American cultural and political institutions. This course explores causes and implications of evangelical influence. Topics may include revivalism, church and state, civil religion, and legislation regarding alcohol, slavery, abortion, and sexuality.

ASTD 562 - Approches Crit Inq: Hist Mtd (3)
This course asks what western historians have in fact achieved through the past two millennia and what they think they have achieved. It examines various twentieth century philosophical and social science critiques of the idea and practice of writing history. Offered every other year.

ASTD 570 - History of the Book (3)
From colonial chapbooks and Revolutionary pamphlets to sentimental novels, sensational tabloids and the internet, the technologies and cultural practices of publishing, writing, and reading have shaped American cultural formation. Topics addressed may include democratization, women's literatures, historical fiction, genre theory, and popular culture.

ASTD 572 - Crss-Ctl 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 604 - Interdisciplinary Studies (3)
This course examines topics in American political/historical culture from an interdisciplinary perspective, e.g. topics of Civil War history and culture; American political popular culture. Offered every year.

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 advisor'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 630 - American Cultural Origins (3)
This course uses historical, literary, and political sources to examine the cultural influences that shaped Britain's American colonies, the American Revolution, and the formation of national identity between the seventeenth and eighteenth centuries. The course is organized thematically to consider the cultural meanings of race, religion, gender, print, and politics.

ASTD 639 - Race, Rights, & American Idnty (3)
Given that "race and rights [are] constitutive of Emerson's concept of American identity," this course examines Emerson's sermons, lectures, essays, and journal entries to discover the significance of race in his thinking. Topics include slavery and abolition, religion, individual rights, property, scientific racism, political responsibility, democracy, and national identity. Offered every other fall semester.

ASTD 640 - Sem in American Social Structr (3)
This course examines different aspects of social theory and social structure. Past and current issues studied in this course are: Modern American Social Theorists; Classical American Radicals; Popular Culture; Comparative Welfare Systems; Semiotics and Post-Structuralism. Offered every year.

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 655 - Sem in American Theology (3)
This course deals with topics related to the ideas that inform American culture through history. Topics vary: e.g. pragmatism, Dewey, Emerson, history and philosophy of American education. Offered every year.

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 662 - American Sacred Myth & Symbol (3)
This course studies American identity, the hero, sacred time and space, technology, and pluralism, making use of the perspectives of Mircea Eliade, Joseph Campbell and C.G. Jung. Art, literature, ritual, theology and popular culture are the sources used to discern the underlying mythic dimensions of American consciousness. Offered occasionally.

ASTD 666 - America & its Writers (3)
This course concentrates on literary movements in American culture. Past topics: Romanticism and the American Novel; Realism and Naturalism; The Expatriate Muse. 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 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.
Biology (BIOL)

BIOL 104 - Principles of Biology I (0-4)
Lecture three hours, laboratory three hours per week. First semester of a two-semester course covering the basic principles of biology. Course emphasizes origin and definition of life; cells, their organization, chemical composition, and metabolic activity; the basis of heredity; evolution.

BIOL 105 - Principles of Biology II (0-4)
Lecture three hours, laboratory three hours per week. A continuation of BIOL-104. Course emphasizes plant and animal development, ecology, behavior, structure and function of organ systems, and phylogeny.

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 196 - Inquiry-Based Principle of Biology II (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 209 - Our Living Environment (3)
Environmental problems treated within the framework of fundamental ecological principles. Satisfies the Science core requirement.

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 220 - 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. Other topics presented: population harvesting and the collapse of fisheries, the "destruction" of habitats by fire, pest outbreaks and control, lawn and garden decisions, and global warming; and how ecological principles apply to political and personal decisions. Satisfies the Science Core requirement.

BIOL 234 - The 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. Students will combine lectures and virtual exercises to understand how diversity is generated, maintained, and modified at all levels of the biological hierarchy. Important local, national, and international issues and policies relative to biodiversity and conservation will be discussed. 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 240 - 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. Satisfies the Science Core requirement.

BIOL 241 - Biological Basis of Health (3)
This SLU Inquiry course will examine the relationships that exist between basic biological information and today's wide range of health-related topics and issues. Topics include: the chemistry of life and nutrition; biologically important molecules; cells and metabolism; common diseases caused by bacteria, viruses, plants, and animals; effects of drugs; and the biology and the future of our species. Satisfies the Science Core requirement.

BIOL 245 - 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. Satisfies the Science Core requirement.

BIOL 251 - 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. Satisfies the Arts and Sciences Core Natural Sciences 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 261 - Molecular Cell Biology (4)
Lecture three hours, three hours of laboratory per week. Modern research laboratory topics and techniques will introduce the fundamentals of structure and biochemical function of mammalian cells in this entry-level course for BME students. Lecture and parallel laboratories will stress the determination of cellular function by membrane composition, specific intracellular organelles, intracellular signal transduction, extracellular matrix, and interactions between cells.

BIOL 264 - Microbes, History, and Society (3)
Microbes - unseen bacteria, viruses, fungi, and protozoans - have dramatically influenced history, and they are shaping the future of our society. This SLU Inquiry course will take an integrative/exploatory 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. Satisfies the Science Core requirement.

BIOL 270 - Plants & Cultural Diversity (3)
An introduction to economic botany and ethnobotany through the uses of plants in medicine, nutrition, religion, recreation, etc. in different cultures over time, including a minimum of three field trips to the Missouri Botanical Garden. Satisfies the Arts and Sciences Cultural Diversity and the Science Core requirement.

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 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 - Cellular Biochemistry and Molecular Biology (0)  
This course covers cellular organization and function at the molecular level; the structural building blocks of the cells (lipids, nucleic acids, amino acids, and carbohydrates) and their functional integration into macromolecules and organelle compartments. Also covered is DNA replication, RNA structure and function, and transcriptional and translational controls of protein biosynthesis. Fall semester.

BIOL 303 - Principles of Genetics (0-3)  
This course covers the basic concepts of the transmission and function of genes at the molecular, organismal, and population levels. Recombinant DNA technology and its utility in research and industry will also be covered.

BIOL 304 - Cellular Structure & Function (3)  
Detailed topics of this course include membrane structure/function, mitochondrial and chloroplast energy transduction and cellular thermodynamics, nuclear-cytoplasm information flow, protein sorting and modification in the ER and Golgi, the cytoskeleton framework, cell-cell signaling, cell cycle control, and the extracellular matrix and cell adhesion. Spring semester.

BIOL 306 - Cell Structure & Function Laboratory (2)  
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 (2)  
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 312 - Experimental Cell Biology (5)  
Lecture three hours, laboratory five hours per week. This SLU Inquiry course in the sophomore biology major series is designed to integrate lab and lecture experiences as they are applied to the study of cell biology. Research approaches that stress how core information in cell biology has been obtained and how novel techniques continue to enrich this discipline will be explored. This is a laboratory intensive course that will substitute for the required second semester BIOL-304 and BIOL-306 courses for biology majors.

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 340 - 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 342 - Comparative Anatomy (0-4)  
Lecture two hours, two-hour laboratory 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 346 - General Physiology (0-3)  
Cellular and molecular mechanisms underlying the regulation and function of human organ system physiology. Topics include: membrane biology; endocrinology; signal transduction; neurophysiology and nervous systems; smooth and striated muscle; cardiovascular, pulmonary, and renal physiology; and fluid and electrolyte homeostasis.

BIOL 347 - General Physiology Laboratory (2)  
Laboratory three hours per week. This laboratory course is designated to supplement and reinforce material presented in the BIOL-346; 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.

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 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 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 (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 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 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 to 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 (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. Emphasis will be placed on sight recognition of plant families and on identifying plant species using taxonomic keys. Taught at the Reis Field Station.

Biol 434 - Systematic Biology (0-3)
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 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, artic, high altitude, etc.).

Biol 444 - Vertebrate Histology: Structure and Function
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 446 - 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 emphasis on nutrition, energy metabolism, and endocrinology; and their relations to health.

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 effects 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 integration and cellular underpinning of human organ and systems physiology. Topics include neurophysiology, endocrinology, reflex control pathways, autonomic nervous system, skeletal muscle, cardiovascular, pulmonary and renal physiology and fluid/electrolyte balance. Prerequisite: BIOL 304 (Cellstructure and function).

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 460 - Developmental Biology (3)
This course explores the development of multicellular organisms from fertilization to the establishment of the adult body form. Topics include the key processes of animal embryogenesis, as well as the molecular and cellular mechanisms that control these developmental processes. Selected topics in plant development will also be considered. Textbook reading assignments will be supplemented by selected articles from the scientific literature.

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 476 - Plant Biochemistry (3)
A comparative survey of higher plant anabolic and catabolic processes. Topics include: carbohydrates, lipids, proteins, polyketides, terpenoids, aromatics, tetryroles and alkaloids.
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 530 - Prblms/Vertebrate Physiology (2-4)
Laboratory research on current problems in organ system physiology. Offered every semester.

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 - Prncpls of Phylogenetic System (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 546 - 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 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 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 565 - 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 571 - 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 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 - Cur Top:Ecol-Evol-Systmc (2)
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 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:Cmprtl 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)**

**BIOL 633 - Spec 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.

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**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 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 161 - Introduction to Chemistry I (0-4)**
Lecture three hours, laboratory three hours per week. The fundamental principles of chemistry, correlated lab work, important laws and theories basic to the science of chemistry.

**CHEM 162 - Introduction to Chemistry II (0-4)**
Lecture three hours, laboratory three hours per week. A continuation of CHEM-161.

**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

**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

**CHEM 165 - Introduction to Chemistry I - Laboratory Only (**
The laboratory portion of CHEM-161. Recommended only for students who have completed an adequate lecture course equivalent to CHEM-161.

**CHEM 166 - Introduction to Chemistry II-Laboratory Only (**
The laboratory portion of CHEM-162. Recommended only for students who have completed adequate lecture courses equivalent to CHEM-161 and CHEM-162.

**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 208 - Introduction to Research Methods in Chemistry
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 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 (2)
Laboratory six hours per week. For B.S. in Chemistry students. Fall semester.

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 Chemistry 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 (2)
This course introduces the basic operational techniques in the organic chemistry laboratory. Required for all chemistry and biochemistry majors. Co-requisite: Chemistry 346.

CHEM 349 - Organic Spectroscopy (2)
This lecture/laboratory course meets six hours per week and consists of a practical, hands-on approach to the use of various spectroscopic techniques for structure determination of organic molecules. The course will include high field NMR spectroscopy and mass spectroscopy with the emphasis on the former technique. Required of students in the B.S. in chemistry program. Other students may be admitted with permission of the instructor. Fall semester.

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 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)
Laboratory three hours per week. Inorganic prepartations, advanced laboratory methods. Spring semester.

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. Spring semester.

CHEM 422 - Analytical Chemistry III (1)
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. Spring semester.

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 462 - Survey of Biochemistry (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 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 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 homogenous 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 superconductivity. 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 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 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: chronopotentiometry, 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 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 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 surveyed 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 458 - 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 459 - Special Top-Organic Chemistry (3)**
Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

**CHEM 511 - 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 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 - Solid State Chemistry (3)**
This course gives students a through 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 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, checmometrics, electronic noise and noise reduction, and control charts are all discussed.

**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.

**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.

**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 - Introduction to Human Communication (0-3)**
An introduction to the field of human communication. Basic concepts, theories, and strategies are explained as they relate to interpersonal, small group, and mass communication processes.

**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 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 253 - Computer-Based Design (3)**
An introduction to media production and presentation. Includes computer graphics, desktop publishing, desktop presentation and other emerging presentation technologies.

**CMM 255 - Photographic Imaging and Digital Manipulation**
An introductory photography course for the student interested in creating good pictures. Includes technical, aesthetic and professional aspects of non-darkroom photography. Introduces digital imaging and manipulation in context of the history of photography.

**CMM 256 - Principles of Graphic Design (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 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 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 - Audio Visual Script Wrtng (3)
Teaches techniques for writing scripts for slide shows, radio ads, and videos. Topics covered include analyzing purpose and audience; coordinating voices, music, and special effects; and telling a story with sounds and images.

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 ones 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 322 - 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 323 - 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 324 - 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 353 - Multimedia Design and Production (3)
An introduction of multimedia design and production on Windows PCs. Students will design and produce a multimedia show that may include still images, video images, animation, audio, and special effects.

CMM 355 - Digital Imaging Studio (3)
An advanced course in photography and digital imaging. The course assumes basic knowledge of 35-mm photography, Windows computing, slide and flatbed scanning, and Adobe Photoshop and Pagemaker. Students will be given photographic assignments to gather basic images for digital enhancement and manipulation in the lab.

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 backgrouders, 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.
public conflicts over media form and content, the cultural consequences of covered include the role of the mass media in shaping group identity, social judgment, social movements, and advertising campaigns. The approach helps demonstrate how theories of persuasion can help guide the practice of human communication.

CMM 440 - Theories of Persuasion (3)
Focuses on contemporary persuasion theory and research. Covers a variety of perspectives on the subject, such as motivation theory, social psychology, and ethical persuasion. Examines debates over stereotyping and bias in the mass media.

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 - Problem Solving Small Groups (3)
Discusses major research and theories about small group communication. Topics include roles of participants in the small group process; ways to improve conflict management skills; goal setting, planning and presentation skills; and techniques for understanding, analyzing, evaluating, and improving small group/team communication skills.

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, Negotiation, and Bargaining
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 425 - Report Writing for Comm Prof (3)
Teaches techniques for researching, writing, and presenting effective reports. Topics covered include adapting documents to multiple audiences and purposes, using reference books and the Internet for research, organizing long documents for readability, writing abstracts and executive summaries, and integrating text and illustrations, charts, and tables.

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 440 - Mass Communication and Society (3)
Analyzes the significance of the mass media as social institutions. Topics covered include the role of the mass media in shaping group identity, public conflicts over media form and content, the cultural consequences of concentrated ownership, and the nature of media criticism.

CMM 442 - Theory of Free Expression (3)
Introduces free expression issues from philosophical and case law perspectives. Examines the theoretical basis for free expression and its manifestation in the legal system. Topics include libel, commercial speech, pornography, privacy, and broadcast regulation, but with an eye toward jurisprudence and the underlying free expression rationale for the court's position.

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 447 - Rhetoric of Political Campaign (3)
Introduces principles of communication in political campaigns. Course addresses both theoretical and practical dimensions of campaign communication, including advertising, image making and issue management.

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 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 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 (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 480 - Evaluation Methods in Organization (3)
Applies principles of social science research to evaluation practices of organizations. Topics covered include evaluation of motivation, communication competence, performance appraisal, job satisfaction and communication networks.

CMM 491 - Internship (1-3)
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 special 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 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 535 - Cultural Studies Res 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 humanism and 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 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 105 - Computing & Society (3)
Ethical, social, legal, and economic issues as they relate to the computer science profession; ethical theory; history of computing; impact of computers on society; computer professional's code of ethics; information privacy; information reliability; computer laws, crimes, punishments; intellectual property; ethical concerns relating from emerging technologies. Spring semester.

CSCI 110 - Human-Computer Interaction (3)
Introduction to the design, implementation, and evaluation of software user interfaces. Development of web-based multimedia applications. Security and encryption issues. Internationalization and localization.

CSCI 111 - Intr Programming w/ Fortran 90 (3)
Use of computers as problem-solving tools; construction and implementation of algorithms in the FORTRAN programming language; decision structures, loops, arrays, and modular, structured programming techniques are employed in assignments which cover a range of scientific and engineering applications. Credit will not be given for both CSCI-111, CSCI-140, or CSCI-150. Spring semester.

CSCI 115 - Elementary Discrete Structures (3)
Fundamental theoretical concepts of computer science. Set theory, graphs and digraphs, symbolic logic, number systems, basic counting, finite state machines, and algorithms. Fall and Spring semesters.

CSCI 140 - Intro To Computer Science (3)
A freshman inquiry seminar. 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. Note: This class may be taken concurrently with CSCI-150. Fall Semester. Prerequisite: 3 years of highschool math.

CSCI 145 - Scientific Programming (3)
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. Credit not given for both CSCI-145 and CSCI-150.

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 150 - Introduction to Object-Oriented Programming ()
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 higher.
CSCI 180 - 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.

CSCI 214 - Adv Data Struc & Algrims (3)
Advanced data structures and object-oriented design. Advance topics in searching and sorting, trees, heaps, graphs, algorithm and complexity analysis, advanced file processing and principles of databases.

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. Spring semester. Prerequisites: CSCI 150 and MATH 135.

CSCI 231 - Logic Design (3)
Digital logic design; boolean functions, encoding, logic gates, combinatorial circuits. Sequential circuits, memory, flip-flops. Design of registers and register transfer operations. Hardware and software tradeoffs. Design of a central processing unit and microcomputer organization. Offered Fall semester. Prerequisites: CSCI 115 and 125.

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.

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. Fall semester. Prerequisites: CSCI 150 or CSCI 145. Corequisite: CSCI 306.

CSCI 306 - Microprocessor Lab (1)
Laboratory experiments to emphasize material covered in CSCI 305. Fall semester. Corequisite: CSCI 305

CSCI 314 - Algorithms (3)

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. Fall semester. Prerequisites: CSCI 180 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. Offered occasionally.

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. Spring semester.

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. Offered occasionally.

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. Fall semester.

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. Spring semester. Prerequisite: CSCI 290.

CSCI 398 - Independent Study (0-3)
Prior approval of sponsoring professor and chairperson required.

CSCI 413 - Automata (3)

CSCI 414 - Algorithms (3)

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.

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 462 - Artificial Intelligence (3)
Technologies of knowledge representation, including neural networks and object-attribute-value triples; methods of inference, pattern matching techniques; inexact reasoning and fuzzy logic techniques; introduction to expert systems; advanced search techniques; individual AI projects.

CSCI 483 - Applied Combinatorics (3)

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 487 - Numerical Analysis (3)
Comm Sci & Disorders (CSDI)
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 (3)
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 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 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 (3)
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 semester.
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 599 - Thesis Research (0-6)
Permission of department chair required.
Earth & Atmospheric Sciences (EAS)
EAS 101 - Earth Systems I-The Solid Earth (3)
Lecture three hours per week. Provides an introduction to all aspects of the solid Earth: Origin and interior structure, plate tectonics, earthquakes, volcanoes, crustal evolution, rocks and minerals, ice and snow, surface and groundwater hydrology, erosion and deposition and Earth resources. Fulfills three hours of science requirement. Fall and Spring semesters.
EAS 102 - Earth Systems I Lab (1)
Two hours of laboratory per week. Provides introduction to classification and identification of minerals, rocks, ores; reading and use of topographic and geological maps. Fulfills one hour of science requirement. Fall and Spring semesters.

EAS 103 - Earth Systems II-Atmosphere and Ocean (3)
Lecture three hours per week. Provides an introduction to all aspects of Earth's oceans and atmosphere: physical properties of the oceans, ocean circulation, ocean currents and climatic influences; atmosphere, composition and structure, radiation, heat, pressure and humidity, winds, pollution, world climate and global change. Fulfills three hours of science requirement. Spring semester.

EAS 105 - Introduction to Oceanography (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 and Humankind in History (3)
Treatment of the interaction of early people with the atmospheric environment on the basis of existing paleoclimatological evidence. Interplay between climate and civilization; recent historical events as related to contemporaneous climates. Course developed around the notions of weather systems and climate of various scales. Fulfills three hours of science requirement. Fall semester.

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 Explosions (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 inquiry-based course will investigate the properties and distribution of water on earth, society's needs for clean water, and the causes for and consequences of flooding, drought, pollution, and potential future meltdown of ice caps. Two in-class sessions with lectures and class discussion per week and approximately five 3-hour field trips during the semester. 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 inquires about the mechanism. Fulfills 3 hours of science requirement.

EAS 137 - Meterological Aspects of Emergence Respons
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, Pacific Decadal Oscillation, teleconnections, and global warming) and the weather patterns over Missouri. Fulfills three hours of science requirement. Fall semester.

EAS 193 - Introduction to Earthquakes (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 natrual and man-made environmental hazards, their causes and possible solutions. Fulfills three hours of science requirement. Fall semester.

EAS 211 - Map & Chart Analysis (3)
Weather maps and diagrams plotted and analyzed; decoding of surface observation and numerical model codes. Basic concepts of meteorology examined qualitatively, requiring only a cursory knowledge of mathematics. Fall semester.

EAS 220 - Mineralogy (3)
Lecture three hours per week. Crystallography, physical, chemical, and descriptive mineralogy.
EAS 315 - Broadcast Meteorology I (3)
3.5 hours, combining lectures and hands-on experience. The principles of broadcast meteorology will be introduced. 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.

EAS 316 - Broadcast Meteorology II (3)
Develop a working knowledge and understanding of television weather computer graphics. Various aspects of television weather production will be explored, not only the concepts behind the presentation, but also practical applications. The ultimate goal for this course is the knowledge and experience necessary to obtain the first position in a television station and the understanding on how to advance one's career in the field of broadcast meteorology.

EAS 325 - Global Change (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 330 - Petrology (3)
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 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 350 - Computational Methods in Meteorology (3)
Computational techniques in meteorology is designed to introduce students to computational tools and techniques. These computational techniques will be discussed with specific, meteorological problems in mind. The course will concentrate on the benefits and drawbacks of the different numerical forecast methods and how they affect the interpretation of the results. During the course, the student will write a simple barotropic model. Each assignment will illustrate a numerical technique. This course assumes a background in Fortran and the use of a workstation.

EAS 370 - Mesoanalysis and Severe Storms (3)
The structure, dynamics and climatology of severe local storms are studied. Forecasting techniques for severe local storms are carried out. The tropical cyclone is studied with respect to its climatology, structure and forecasting techniques. Fall semester.

EAS 403 - Elements of Air Pollution (3)
Basic concepts in air pollution meteorology are discussed including sources of air pollution, atmospheric chemistry, air pollution inventories, Gaussian air pollution model, effluent control strategies and air pollution legislation; current topics include acid rain, ozone depletion, and global change. Alternate Spring semesters.

EAS 404 - Atmosphere and Ocean (3)
Thermodynamic and transport processes in the atmosphere and ocean; physical processes of climate changes. Spring semester.

EAS 405 - 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 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 410 - Sedimentology/Stratigraphy (3)
Study of the principle kinds of sedimentary deposits, Origin, transport, deposition and lithification of sediments; analysis and interpretation of textures, sedimentary structures, and composition of sedimentary rocks. Facies analysis and depositional environments. Principles of stratigraphy and methods of stratigraphic analysis. Lecture three hours per week. Spring or Fall semester.

EAS 411 - Sedimentology and Stratigraphy Laboratory (1)
The course will include the description and interpretation of sedimentary textures and structures; the examination and classification of the major sedimentary rock types in hand specimen, thin section, and outcrop; stratigraphic maps and correlation; and the paleographic analysis of stratigraphic successions. Extensive field work is required. Three hours of laboratory per week. Spring or Fall semester.

EAS 415 - Instrumentation and Remote Sensing (3)
Meteorological instruments will be studied from the viewpoint of performance characteristics, sensitivity, dynamical error, and sinusoidal and step response. Statistical treatment of output data; digital measurement systems; computerized data processing and retrieval as it applies to the synoptic laboratory and climatology. Spring semester.

EAS 420 - Synoptic Meteorology I (3)
Laboratory study of the structure and process of the atmosphere including the equations of motion and thermodynamics, Norwegian cyclone theory and the quasi-geostrophic theory. Diagnostic and prognostic meteorological charts will be used. Fall semester.

EAS 422 - Synoptic Meteorology II (3)
Those in the BS program should concurrently register for EAS 445. Topics include: Isentropic diagnostic analysis techniques, mesoscale meteorology and severe weather forecasting and numerical weather prediction (NMG, Eta models) including statistical products. Emphasis is placed on real-time map discussion and forecasts. Students must achieve a grade of C or better in EAS 420 (Synoptic Meteorology I) to take this course. Spring semester.

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, indentification 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 - Physical Meteorology I (3)
Physical principles underlying atmospheric processes: thermodynamics of dry and moist air, various thermodynamic diagrams, and formation of clouds and precipitation. Fall semester.

EAS 434 - Physical Meteorology II (3)
Principles of radiative transfer in the atmosphere; solar and terrestrial radiation; absorption and emission of radiation; theory and characteristics of Black-Body radiation. Energy transfer processes near the earth's surface; vertical fluxes of momentum; heat and water vapor in the boundary layer by turbulence; and energy budget at the earth-atmosphere interface. Refraction by water drops, and rainbow and atmospheric signal phenomena. Students must achieve a grade of C or better in EAS 433 (Physical Meteorology I) to take this course. Spring semester.

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. Spring or Fall semester.

EAS 444 - Principles of Dynamic Meteorology I (3)
Dynamic principles underlying large scale atmospheric motion: development of the primitive equations, horizontal wind approximations, thermal wind concept coordinate system transformations, kinematics, circulation theorem, and flow in the planetary boundary layer. Fall semester.

EAS 445 - Principles of Dynamic Meteorology II (3)
Introduction to numerical weather prediction, atmospheric inertial and gravity waves, and barotropic and baroclinic instabilities. Students must achieve a grade of C or better in EAS 444 (Principles of Dynamic Meteorology I) to take this course. Spring semester.

EAS 447 - Elementary Tropical Meteorology (3)
Tropical Climatology; Convergence Zones and Weather Systems; Trade Winds; El Nino, and Southern Oscillation; Hurricanes, Formation, Theories and Prediction; Monsoons; Global Tropical Forecasting; and Satellite Estimation of Precipitation. Every Fall semester.

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 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 (2)
Earth's gravity and magnetic fields, density and magnetic properties of rocks, gravity and magnetic methods of exploration. Spring or Fall semester.

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)
Students study and practice weather briefing techniques. Short-term (48 hours) weather forecasts are prepared for St. Louis and two distant sites where students must depend on the department data base. Aviation forecasts are prepared for both low altitude small aircraft flights and for long distance high altitude jet flights. One lecture hour, four laboratory hours per week. Offered Fall or Spring semesters.

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 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. Offered as needed.

EAS 512 - Time Series Analysis in Geophy (3)

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 is 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 is 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 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 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 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 Explornth 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 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)

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 a sponsoring professor and the Program Director.
ENGL 190 - ADVANCED STRATEGIES OF RHETORIC AND
Studies the more complex structures of language with respect to its logical and persuasive possibilities. This course emphasizes the development of the skills of analytical reading, critical thinking, and research methodology. The course seeks to help students integrate their own reasoned opinions with the fruits of reading and research in order to produce coherent, persuasive essays.

ENGL 190 - ADVANCED STRATEGIES OF RHETORIC AND
Studies the more complex structures of language with respect to its logical and persuasive possibilities. This course emphasizes the development of the skills of analytical reading, critical thinking, and research methodology. The course seeks to help students integrate their own reasoned opinions with the fruits of reading and research in order to produce coherent, persuasive essays.

ENGL 192 - 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 195 - Advanced Writing about Urban and Social Pro
Uses field and library research to examine processes involved in the breakdown of social order. Micah House program only. Prerequisite: ENGL-190, or equivalent. Co-requisite: Micah House section of PSY-101.

ENGL 202 - Introduction to Literary Study (3)
Introduces students to theoretical and methodological approaches to literary texts, including major terms, methods, and concepts.

ENGL 210 - Literary Studies: Methods of Inquiry and Resp
Introduces students to theoretical and methodological approaches to literary texts, including major terms, methods, and concepts. Offered occasionally.

ENGL 220 - Introduction to Poetry (3)
Introduces students to theoretical and methodological approaches to poetry, including major terms, methods, and concepts.

ENGL 230 - Introduction to the Novel (3)
Introduces students to theoretical and methodological approaches to the novel, including major terms, methods, and concepts.

ENGL 240 - Introduction to Drama (3)
Introduces students to theoretical and methodological approaches to drama, including major terms, methods, and concepts.

ENGL 250 - Introduction to the Essay (3)
Introduces students to theoretical and methodological approaches to the essay, including major terms, methods, and concepts. Offered occasionally.

ENGL 260 - Introduction to Short Fiction (3)
Introduces students to theoretical and methodological approaches to short fiction, including major terms, methods, and concepts. Offered regularly.

ENGL 294 - Advanced Introduction to Literary Study (3)
Advanced course in theoretical and methodological approaches to literary texts designed for students who plan to major in English or the Humanities. The second in a sequence of four courses (ENGL 194, 294, 394 & 494) Equivalent to ENGL 202. Pre-requisite: ENGL 194 or equivalent and permission of the department. Offered every semester.

ENGL 300 - Technical Writing (3)
Introduction to technical writing as a rhetorical activity that includes audience, purpose, and situation. Incorporates research in business and industry and requires varied writing exercises. Offered regularly.

ENGL 301 - Expository Writing (3)
Encourages students to practice reading and writing with rhetorical awareness, helps them develop effective strategies for linking rhetorical awareness to knowledge, and requires them to write several papers. Offered regularly.

ENGL 303 - CREATIVE WRITING: PROSE NONFICTION (3)
These are courses that build on and develop the student's writing and reading skills in a variety of areas, and include: courses that, through reading and writing, focus on different aspects and modes of prose fiction, e.g., journal writing, the personal essay, and the development of individual style.

ENGL 304 - 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 305 - Creative Writing: Poetry (3)
An introduction through reading and writing to common poetic forms. Offered regularly.

ENGL 306 - CREATIVE WRITING: LITERATURE and TRAN
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 307 - Creative Writing: Drama (3)
An introduction through reading and writing to the fundamentals of drama writing. Offered regularly.

ENGL 310 - Short Stories (3)
Studies short stories by nineteenth and twentieth-century authors, to show the unity and diversity of the form from the beginning to the present. Offered occasionally.

ENGL 311 - 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 312 - The Novel (3)
Studies novels to show the unity and diversity of the form from the beginning to the present. Offered occasionally.

ENGL 313 - American Fiction (3)
Examines American fiction from the 19th century to the present, including cultural trends and historical contexts. Offered occasionally.

ENGL 314 - LITERATURE of MYSTERY and INTRIGUE (3)
A survey of representative detective and international spy literature.

ENGL 315 - Science Fiction (3)
A survey of futuristic fantasies that emphasize science and technology.

ENGL 316 - Drama (3)
Enables students to develop critical perspectives on European and American drama, utilizing such theorists as Bakhtin, Aristotle, and Brecht. Students will "perform" segments of plays. Offered occasionally.

ENGL 317 - Modern American Drama (3)
Examines the development of American drama from the 19th century to the present, including cultural trends and historical contexts. Offered occasionally.

ENGL 318 - Film (3)
A study of selected films to show the diversity of films from the beginning to the present.

ENGL 320 - British Literary Traditions I: Beginnings - 1800
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 321 - British Literary Traditions II: 1800 - Present (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 322 - Women in Literature (3)
Reading and analysis of works authored by and about women; studied from a feminist perspective.
ENGL 323 - British Lit Trad: Spec Topics (3)
Special Topics in British Literary Traditions: content varies.

ENGL 324 - British Lit Trad: Spec Topics (3)
Special Topics in British Literary Traditions: content varies.

ENGL 325 - 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 327 - Special Topics: (3)
Cultural and Interdisciplinary Studies: This course will focus on literature as seen from special viewpoints and perspectives.

ENGL 328 - Special Topics (3)
Cultural and Interdisciplinary Studies: This course will focus on literature as seen from special viewpoints and perspectives.

ENGL 329 - American Literary Tradition II: 1865 - Present (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 332 - Literature and Film (3)
Weekly reading of literary works, viewing of films based on them, and discussions.

ENGL 333 - Literature of the African Diaspora (3)

ENGL 334 - 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 335 - 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 338 - American Literary Traditions: Special Topics (3)
Special topics in American literary traditions: content varies.

ENGL 339 - Literature and Media (3)
These courses, currently being developed by the English Department, study literature in the light of allied media.

ENGL 340 - World Literary Traditions I (3)
Studies selected literary works from the ancient world through the Renaissance. Offered occasionally.

ENGL 341 - 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 342 - World Literary Traditions III (3)
Studies selected fiction, drama or other topics from a diverse range of authors. Offered occasionally.

ENGL 347 - 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 349 - 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 350 - Modern Literature (3)
Studies the variety and range of modern contemporary literature. Offered occasionally.

ENGL 351 - Selected Major British Authors (3)
A study of several major British writers. Offered occasionally.

ENGL 352 - 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 353 - The Oxford Christians (3)
Introduces students to the works of Tolkien, Lewis, and Williams, examining their popularity, and their place in history. Offered occasionally.

ENGL 354 - 19th Century American Lit (3)
Examines the ways major poets and novelists of the century depicted the American experience. Offered frequently.

ENGL 355 - 20th Century American Literature (3)
Examines the ways novelists of the century depicted the American experience. Offered frequently.

ENGL 356 - American Literary Tradition (3)
Examines representative works and the major literary, historical, and cultural developments in American literature. Texts and themes vary from term to term. Gives special attention to students writing about literature.

ENGL 357 - NINETEENTH-CENTURY AMERICAN NOVEL (3)
An examination of the way in which novelists of the century depicted American experience.

ENGL 358 - American Short Story (3)
A study of selected short stories by Nineteenth and Twentieth-century authors, to show the unity and diversity of the form from the beginning to the present.

ENGL 361 - 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 362 - The Classics and Literature (3)
Examines classical epics, tragedies, comedies, lyrics and myths and their adaptations in English literature from the sixteenth to the twentieth centuries. Offered occasionally.

ENGL 364 - Engl as a World Literature (3)
A study of selected novels from several of the world's English language literatures outside of England and the United States (e.g., Australia, the Caribbean, India, Nigeria, Canada, etc.).

ENGL 365 - African Diaspora Writing (3)

ENGL 367 - Women in Literature (3)
Analyzes works authored by and about women; studied from a feminist perspective.

ENGL 368 - Film and Literature (3)
Examines works of literature and film. Offered regularly.

ENGL 369 - Literature and Film (3)
Examines how literature and film have represented war. Students will read literary, historical and journalistic texts, and will view films. Offered occasionally.

ENGL 370 - 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 371 - Journalism and Literature (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 372 - Film and Literature (3)
Examines works of literature and film. Offered regularly.

ENGL 373 - 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 374 - Medicine and Literature (3)
Examines literature dealing with medicine, medical issues, and the relationship between medicine and literature. Offered occasionally.

ENGL 375 - Nature and Literature (3)
Examines literary works reflective of the world of nature and the environment. Offered occasionally.

ENGL 376 - African American Literature (3)
Introduces students to the works of African American writers and what "ethnic" and "American" mean as concepts. Offered occasionally.

ENGL 377 - African Diaspora Writing (3)

ENGL 378 - 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 379 - Literature and Film (3)
Examines works of literature and film. Offered regularly.

ENGL 380 - Modern Literature (3)
Studies the variety and range of modern contemporary literature. Offered occasionally.

ENGL 381 - The Classics and Literature (3)
Examines classical epics, tragedies, comedies, lyrics and myths and their adaptations in English literature from the sixteenth to the twentieth centuries. Offered occasionally.

ENGL 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.
| ENGL 385 - POST-COLONIAL LITERARY TRADITIONS (3) | 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. |
| ENGL 386 - Eastern European Literature (3) | A study of literary reactions to and treatments of some of the most sweeping changes in Europe. |
| ENGL 389 - Writing About Literature (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. |
| ENGL 390 - British Culture and Travel (3) | Combines the study of selected literary works, along with travel to London (during Spring break). Spring semester and requires a $1500 travel fee. |
| ENGL 394 - 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 395 - British Culture and Travel (3) | A course combining the study of selected literary works, along with travel to London (during the Spring break). The works will be studied with particular emphasis on the importance of place, to tie in with the travel portion of the course. |
| ENGL 400 - Business and Professional Writing (3) | Explores the principles of effective writing in business, science, and other professions through letters, memos and reports. |
| ENGL 401 - Advanced Expository Writing (3) | A course focusing on the rhetorical strategies and writing techniques particularly useful in technical and report writing. |
| ENGL 402 - Introduction to Writing Instruction: Secondary | Examines the basic issues in rhetorical theory and writing pedagogy as they apply to secondary education in English. |
| ENGL 403 - Rhetorical Theory/History of Rhetoric (3) | Examines the rhetorical traditions that began in ancient Greece and have influenced present day communication practices. Offered regularly. |
| ENGL 404 - 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 405 - Advanced Creative Writing: Poetry (3) | Weekly poetry writing assignments based on weekly poetry reading assignments. Offered regularly. |
| ENGL 406 - 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 407 - Advanced Creative Writing: Drama (3) | A writer’s workshop focusing on skills and procedures for beginning playwriting in an attempt to build from a short sketch to one-actors towards a full-length drama. Offered regularly. |
| ENGL 408 - 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 410 - History of the English Language (3) | A survey of the main features of Old, Middle and Modern English. Offered regularly. |
| ENGL 411 - Introduction to Linguistics (3) | A survey of how the nature and structure of human language, focusing on English, are studied. Offered regularly. |
| ENGL 413 - Literary Theory (3) | Explores theories and movements of/about literature, with special emphasis on twentieth century literary theory. Offered regularly. |
| ENGL 415 - 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 417 - American Film Theory (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 418 - Film Theory (3) | Explores theories and movements of/about film, with special attention to twentieth century film theory. Offered occasionally. |
| ENGL 419 - Special Topics in Literary Theory, Cultural Studies (3) | Topics in literary theory, cultural studies and film studies: content varies. |
| ENGL 420 - Introduction to Old English (3) | Enables students to read Old English works in the original. At the end of the course students will be prepared to read Beowulf. Offered regularly. |
| ENGL 421 - 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 422 - 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 423 - 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 424 - 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 425 - 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 427 - Arthurian Literature: Medieval to Modern (3) | Examines the Arthurian legend from the Morte D’Arthur of Sir Thomas Malory to The Once and Future King of D.H. White. Films on the Arthur legend will be viewed. Offered regularly. |
| ENGL 428 - The Alliterative Tradition (3) | Examines early and late examples of alliterative poetry, centering on two major poets of the 14th century: the anonymous author of Gawain and William Langland. Offered regularly. |
| ENGL 429 - Topics in Medieval Literature (3) | Topics in Medieval Literature: content varies. |
| ENGL 430 - 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 431 - Early Shakespeare (3) | Examines Shakespeare's plays written during the 16th century, with attention to their variety and development. Fall semester. |
| ENGL 432 - Later Shakespeare (3) | Examines Shakespeare's plays written in the early 17th century, focusing on the great tragedies. Spring semester. |
ENGL 433 - Renaissance Drama (3)
Examines the plays written by Shakespeare's contemporaries, including Kyd, Marlowe, Jonson, Webster, Middleton, and Ford. Offered regularly.

ENGL 434 - Renaissance Poetry & Prose (3)
Explores selected issues, writers, and writing, exemplifying the literary concerns of the Renaissance. Offered frequently.

ENGL 435 - 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 436 - Milton (3)
Examines Milton's major poems and selected prose, with special attention to Paradise Lost. Offered regularly.

ENGL 437 - 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 438 - 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 439 - Special Topics in 16th and 17th Century Literature
Courses that focus on selected topics and areas in the period.

ENGL 441 - 18th Century Literature (3)
Explores such topics as the rise of a strong female literary voice, nation formation, and issues of race and identity in 18th century poetry, drama, novels and prose. Offered regularly.

ENGL 444 - Restoration and 18th Century Drama (3)
Examines major types of drama of the period: heroic drama in couplets, blank verse tragedy, comedy of wit and manners, and sentimental tragedy and comedy. Offered regularly.

ENGL 445 - 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 stylistics of the late century.

ENGL 447 - Crime and Punishment (3)
Explores novels depicting crime and criminals from 1689 to 1860, including Hogarth's "graphic" novels, Defoe's Moll Flanders, Fielding's Caleb Williams, Mary Shelley's Frankenstein, and Collins's Woman in White. Offered regularly.

ENGL 448 - Jane Austen and Her Predecessors (3)
Explores 5 of Jane Austen's novels as well as fiction by Charlotte Lennox and Fanny Burney with a view to understanding Austen's work in its social and cultural context.

ENGL 449 - STUDIES in RESTORATION and EIGHTEENTH
Courses that focus on special topics and areas in the period.

ENGL 450 - 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 454 - Victorian Fiction (3)
Examines the major British novelists and fiction writers from the 1830s through the 1890s, focusing on the urbanization of society and cultural dislocations of the city and the country. Offered regularly.

ENGL 455 - 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 457 - Victorian Satire (3)
Examines Victorian texts that satirically assess and expose middle class manners and mores. Authors examined include Tennyson, Thackeray, Trollope, Arnold, Dickens, Wilde and Conrad. Offered occasionally.

ENGL 458 - 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 459 - Special Topics: 19th Century Literature (3)
Courses that focus on special topics and areas in the period.

ENGL 460 - 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 461 - 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 462 - British Postmodernism (3)
Studies contemporary British fiction, drama, and poetry through appropriate readings in postmodern theory. Offered regularly.

ENGL 463 - 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 465 - Contemporary Irish Literature, Culture and Politics (3)
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 466 - Early 20th Century Postcolonial Literature and Culture
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 467 - Contemporary Postcolonial Literature and Culture
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 468 - 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 469 - Special Topics in 20th/21st Century British, Irish
Topics in 20th and 21st Century British, Irish and Postcolonial Literature and culture, content varies.

ENGL 472 - Contemporary American Literature (3)
Studies significant figures and trends that have shaped contemporary American literature. Offered regularly.

ENGL 473 - 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 474 - 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 475 - 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 477 - 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 confessionalists of the later century. Offered regularly.

ENGL 478 - 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 479 - 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 480 - American Short Story (3)
Surveys representative examples and major practitioners of the short story form from the 19th and 20th centuries. Offered regularly.

ENGL 481 - 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 483 - 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 484 - Native American Literature (3)
Examines how Native American authors read and write a "different" history, including how storytelling helps create community and a sense of home. Offered regularly.

ENGL 487 - The Adolescent in American Literature (3)
Examines literature which has adolescents and/or an ethnic minority as main characters, and which focuses on growing through adolescence into maturity. Satisfies the Secondary Education certification requirement.

ENGL 488 - 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 489 - Special Topics: American Literary and Cultural Studies (3)
Topics in American literary and cultural studies, content varies.

ENGL 490 - Interdisciplinary Studies (3)
Studies pertinent writings from an interdisciplinary focus relating literature to other media and other literature. Offered occasionally.

ENGL 494 - 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 495 - Senior Residency (0)
Required of all graduating seniors.

ENGL 498 - Adv Independent Study (1-3)
May vary from 1 to 3 hours. Prerequisite: Permission of Department Chair.

ENGL 500 - Methods of Literary Research (3)
Introduction to resources and methods of research central to the scholarly study of literature.

ENGL 501 - Teaching Writing (3)
Introduction to traditional and contemporary theories of rhetoric and composition, with special attention to their application in classroom practice.

ENGL 502 - Teaching Literature (3)
Introduction to the theories and practices of presenting literature in the college classroom.

ENGL 504 - Problems in Rhetoric (3)
Focused examination of a specific historical, theoretical, or practical issues in rhetoric and composition.

ENGL 510 - Literary Criticism: Aristotle (3)
Historical introduction to the significant epochs in the development of literary criticism from ancient to modern times.

ENGL 511 - 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 512 - 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 513 - 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 514 - Perspectives in Restoration/Brit (3)
Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 515 - Perspectv: 19th Cent Brtsh Lit (3)
Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 516 - Perspectv: 20th Cent Brtsh Lit (3)
Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 517 - Perspectives in American Lit (3)
Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 518 - Perspectives in Contemporary Lit (3)
Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 520 - 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 525 - Beowulf (3)
Translation and interpretation of the first English epic, with attention paid to the cultural context of the poem, its formal elements, and its place in the heroic tradition of Old English literature.

ENGL 526 - 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 527 - 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 534 - 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 540 - 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 550 - 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 604 - Rhet Thry Discourse Pedagogy (3)
Major rhetorical theories underlying discourse pedagogy, with special attention to the ways in which specific theoretical positions inform curricular practices.
ENGL 610 - Studies in Literary Theory (3)
Selected issues, developments, or schools in literary theory.

ENGL 615 - Genre Studies (3)
Selected writings and issues integral or peculiar to the definition of particular genres or subgenres.

ENGL 617 - Literary Themes (3)
Exploration of selected writers, writings, and issues associated by common themes.

ENGL 619 - Interdisciplinary Studies (3)
Selected figures, works, and issues studied from the perspective afforded by specific disciplines or media.

ENGL 625 - Chaucer: Canterbury Tales (3)
A study of Chaucer's writings with special attention to The Canterbury Tales.

ENGL 626 - 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 627 - Middle English Literature (3)
Selected issues or representative figures in Middle English literature.

ENGL 630 - 16th Cent Non-Dramatic Lit (3)
Non-dramatic figures or currents in the literature of Tudor England.

ENGL 631 - Renaissance Drama (3)
Renaissance dramatists other than Shakespeare.

ENGL 632 - Shakespeare (3)
Selected groupings of Shakespeare's works.

ENGL 635 - 17th Century Literature (3)
Figures or developments in English literature of the seventeenth century.

ENGL 636 - 17th Century Prose (3)
Groups or movements in English poetry of the seventeenth century.

ENGL 639 - Topics: Renaissance Literature (3)
Particular issues and developments in the literature and culture of the English Renaissance.

ENGL 640 - Restoration Literature (3)
Represtative figures, issues, and developments in English writing of the late seventeenth century.

ENGL 641 - Restoration & 18th Cent Poetry (3)
Significant figures and developments in English poetry of the Restoration and the eighteenth-century English literature.

ENGL 642 - Rstratn & 18th Cent Prose Fict (3)
The novel and prose fiction writing in Restoration and eighteenth-century English Literature.

ENGL 643 - Restoration & 18th Cent Drama (3)
Selected playwrights, plays, and issues in the English theater of the Restoration and eighteenth century.

ENGL 649 - Special Topics (3)
Particular issues and developments in Restoration and eighteenth-century English literature.

ENGL 650 - Romanticism (3)
Selected writers and works of the Romantic period in British literature.

ENGL 651 - 19th Century Prose Non-Fiction (3)
Selected writers and works of prose non-fiction in nineteenth-century England.

ENGL 652 - Victorian Poetry (3)
Selected figures, works, and issues in nineteenth-century British poetry.

ENGL 653 - Nineteenth-Century Novel (3)
Selected writers, works, and issues in nineteenth-century British fiction.

ENGL 659 - Topics in 19th Cent Engl Lit (3)
Studies in particular issues and developments in British literature of the nineteenth century.

ENGL 660 - Studies in Modernism (3)
Selected figures, movements, and developments representative of modernisms in English in the first half of the twentieth century.

ENGL 661 - Twentieth-Century Fiction (3)
Selected writers and works of fiction of the twentieth century.

ENGL 662 - Twentieth-Century Poetry (3)
Selected figures, movements, and developments in poetry of the twentieth century.

ENGL 663 - Twentieth-Century Drama (3)
Selected figures, epochs, and developments in literatures in drama of the twentieth century.

ENGL 666 - Topics in Lit of 20th Century (3)
Particular issues and developments in literatures in English of the twentieth century.

ENGL 670 - Early American Literature (3)
Significant figures, writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 671 - Nineteenth-Century Amer Lit (3)
Representative writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 672 - Nineteenth-Century Amer Poetry (3)
Central figures, works, and issues in American poetry in the nineteenth and early twentieth centuries.

ENGL 673 - 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 674 - Studies in Amer Modernism (3)
Significant figures, groupings, and developments that shaped American modernist writing.

ENGL 675 - Twentieth-Century Amer Fiction (3)
Writers and works of prose fiction of the twentieth century America.

ENGL 676 - Twentieth Cent Amer Poetry (3)
Writers and developments in American poetry of the twentieth century.

ENGL 677 - Twentieth Cent Amer Drama (3)
Playwrights, plays and issues in the theater of the twentieth century America.

ENGL 679 - Topics: 20th Cent Amer Lit (3)
Particular issues and developments in American literature of the twentieth century.

ENGL 680 - 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.

ENGL 685 - Studies in Comparative Lit (3)
Writers, works, and issues associated by particular genres or subgenres.

ENGL 688 - Studies in Comparative Lit (3)
Writers, works, 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 - Adv. Convo & Pronunciation (1)
This course provides a combination of pronunciation exercises and conversation models as well as free conversation on topics of interest to the students. Specific material covered depends on the needs of the student.

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 Stdsnt (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 Stdsnt (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 Grds (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.

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.

FREN 416 - French for the Professional (0-3)
For students interested in developing the proficiency needed in business-oriented activities.

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 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 QuCcKois 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 CICzio.

FREN 433 - French Prose: Rebels to 17th C (3)
Humanism, preciosity, 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, DuBellay, 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 Presnt (3)
Analysis of Symbolism and subsequent schools (from Naturism to Simultaneism). Apollinaire, Aragon, Breton, Cendrars, Charles, Saint John Perse, Senghor, Supervielle, Toulou. Taught in French.

FREN 451 - French Drama to 17th Century (3)
Nature of tragedy and comedy; seventeenth century drama in the context of classical theories and modern criticism. Corneille, Racine, and Moliere. In French.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 452</td>
<td>French Drama: 18th to Romantics (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 454</td>
<td>French Drama: 20th-Century (3)</td>
<td>Theatre of commitment, art, the absurd, cruelty and alienation. Taught in French.</td>
</tr>
<tr>
<td>FREN 461</td>
<td>French Cinema (3)</td>
<td>A history of French Cinema by movements and authors. MClas, Bunuel, Vigo, Gance, Renoir, Clouzot, Cocteau, Tati, Truffaut, Godard, Rohmer, Kury, Berri, Chatiliez, Tavernier. Taught in French.</td>
</tr>
<tr>
<td>FREN 462</td>
<td>Prose Literature of Quebec (3)</td>
<td>Examines 20th century QuCbCois Literature, focusing on the genres of the tale, the short story and the novel. Brulotte, Ducharme, HCbert, Godbout, Ferron. Taught in French.</td>
</tr>
<tr>
<td>FREN 464</td>
<td>Studies in Francophone Lit (3)</td>
<td>An overview of Francophone literature of Africa and the Caribbean, focusing on themes of imperialism, de-colonization, and Cgritude as seen in the works of authors such as CCsaire, Senghor, BE, Schwarz-Bart.</td>
</tr>
<tr>
<td>FREN 465</td>
<td>French Cinema II 80’s-90’s (3)</td>
<td>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, Kury), minority (Kassowitz) and foreign directors (Kieslowski).</td>
</tr>
<tr>
<td>FREN 466</td>
<td>Inter-Semester Study Abroad (0-3)</td>
<td>For elective credit and language majors. Summer semester.</td>
</tr>
<tr>
<td>FREN 500</td>
<td>Teaching College French (0)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 503</td>
<td>Advanced Oral Proficiency (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 504</td>
<td>Mthd &amp; Tech for Teaching Frnch (3)</td>
<td>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 &quot;Proficiency&quot; movement are some of the topics studied. Offered occasionally.</td>
</tr>
<tr>
<td>FREN 506</td>
<td>Studies in Contemp French Cltr (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 507</td>
<td>Studies in Francophone Culture (3)</td>
<td>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 &quot;politics&quot; of writing and identity are discussed. Offered occasionally.</td>
</tr>
<tr>
<td>FREN 510</td>
<td>Crit Writ, Ori Exprsn, &amp; Rsch (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 531</td>
<td>Love &amp; Honor in Early Mod Fran (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 533</td>
<td>French Prose: Origins - 17th C (3)</td>
<td>This course attempts to define the &quot;moralist&quot; 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.</td>
</tr>
<tr>
<td>FREN 534</td>
<td>Age of Enlightenment (3)</td>
<td>A study of the 18th-century French &quot;philosophes&quot; and their notion of society and the ideal citizen, followed by a look at the darker side of the Enlightenment, and in particular the &quot;anti-societies&quot; envisioned by Sade. Included is an examination of the role of Enlightenment ideology in the French Revolution. Offered occasionally.</td>
</tr>
<tr>
<td>FREN 535</td>
<td>19th Century French Novel (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 541</td>
<td>Eary Modern French Poetry (3)</td>
<td>Eustache Deschamps described poetry as &quot;natural music.&quot; This course will explore the ways in which the &quot;music&quot; 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.</td>
</tr>
<tr>
<td>FREN 542</td>
<td>19th Century French Poetry (3)</td>
<td>A study of poetic expression in France during the &quot;Romantic&quot; 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.</td>
</tr>
<tr>
<td>FREN 551</td>
<td>17th Century French Theatre (3)</td>
<td>Following an introductory overview of Medieval and Renaissance theater, this course focuses on the 17th century and its three &quot;grets&quot; 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.</td>
</tr>
<tr>
<td>FREN 554</td>
<td>20th Century French Theatre (3)</td>
<td>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.</td>
</tr>
<tr>
<td>FREN 560</td>
<td>Contem Wmn Wrters: Fran/Quebec (3)</td>
<td>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.</td>
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</tbody>
</table>
**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 100 - 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 & Citre (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 230 - Cross Section German-Amer Cult (3)**
This course focuses on the many encounters between German and American culture in the 20th century. In order to emphasize culture as an on-going process, not final product, this course emphasizes how modern cultures forge increasingly diverse traditions and meanings into a heterogenous configuration. Tracing the interfaces between things German and things American in the 20th century, the seminar explores, among others, issues such as Americanization, urbanization, gender relations, racism, and the emergence of mass culture. Special attention is given to the way in which both German and American culture have tried to work through the darkest chapter of German history, the Nazi period and the Holocaust. Taught in English. This course fulfills the College of Arts and Sciences Cultural Diversity component of the Core curriculum.

**GR 300 - Oral & Written Proficiency I (0-4)**
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 305 - Oral & Written Proficiency II (4)**
Continuation of GR 300. 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 (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 (0-3)**
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.

**Film Studies (FSTD)**

**FSTD 490 - Film Series Internship (3)**
This course may be used as a substitute for the FSTD-485 Capstone upon approval of the Film Studies Director.

**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 overview of Francophone literature of Africa and the Caribbean, focusing on imperialism, de-colonization and "negritude" as seen in the works of Ceesaire, Senghor, Ba, Schwartz-Bart. Offered occasionally.

**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 (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.

**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 230 - Cross Section German-Amer Cult (3)**
This course focuses on the many encounters between German and American culture in the 20th century. In order to emphasize culture as an on-going process, not final product, this course emphasizes how modern cultures forge increasingly diverse traditions and meanings into a heterogenous configuration. Tracing the interfaces between things German and things American in the 20th century, the seminar explores, among others, issues such as Americanization, urbanization, gender relations, racism, and the emergence of mass culture. Special attention is given to the way in which both German and American culture have tried to work through the darkest chapter of German history, the Nazi period and the Holocaust. Taught in English. This course fulfills the College of Arts and Sciences Cultural Diversity component of the Core curriculum.

**GR 300 - Oral & Written Proficiency I (0-4)**
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 305 - Oral & Written Proficiency II (4)**
Continuation of GR 300. 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 (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 (0-3)**
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 111</td>
<td>Origins of the Modern World to 1600 (0-3)</td>
<td>A developmental and conceptual approach to Europe as the confluence of civilizations. The course will cover ancient civilizations of the Mediterranean and the Near East, Greece, Rome, Islam, Byzantium and Germanic tribal society; the contributions of each to the European Middle Ages, Renaissance, European Expansion, Scientific Revolution, and Reformation.</td>
</tr>
<tr>
<td>HIST 112</td>
<td>Origins of the Modern World to 1600 (0-3)</td>
<td>A developmental and conceptual approach emphasizing increasing European awareness of and contact with the rest of the world. The course will cover transatlantic encounters, the Protestant and Catholic Reformation, the Scientific Revolution, Absolutism, the Enlightenment, the Industrial Revolution, Modernism, and Imperialism.</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of the United States to 1865 (3)</td>
<td>This survey course examines the development of the United States from its pre-Columbian origins through the Civil War. Required for majors.</td>
</tr>
<tr>
<td>GR 421</td>
<td>Language and Linguistics (3)</td>
<td>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.</td>
</tr>
<tr>
<td>GR 425</td>
<td>Business German (3)</td>
<td>Development of advanced language skills (reading, writing, listening comprehension and speaking) pertaining to business and economy. Taught in German.</td>
</tr>
<tr>
<td>GR 430</td>
<td>History of Germany Since 1815 (3)</td>
<td>Traces Germany's struggle for democracy and a nation state, its emergence as an ambitious European power under the Hohenzollern monarchy, the failure of the Weimer Republic, the origins and the world-historic impact of the Third Reich, the rebuilding of a new country after 1945, and the divergent courses of the two German States until their reunification in 1990. Taught in English.</td>
</tr>
<tr>
<td>GR 435</td>
<td>German Film (3)</td>
<td>An introduction to film theory, film analysis and cinema history within the German cultural context. Taught in German.</td>
</tr>
<tr>
<td>GR 493</td>
<td>Special Topics (1-3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIND 110</td>
<td>Communicating in Hindi I (0-3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIND 115</td>
<td>Communicating in Hindi II (0-3)</td>
<td>Prerequisites: Hindi I or instructor's permission. Development of Hindi vocabulary, oral comprehension, fundamentals of Hindi grammar, reading, writing and speaking capabilities. Introduction to Indian Culture.</td>
</tr>
<tr>
<td>HIND 210</td>
<td>Intermediate Hindi (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 270</td>
<td>China and Japan To 1600 (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 271</td>
<td>China Since 1600 (3)</td>
<td>Survey of Chinese and Japanese history since 1600.</td>
</tr>
<tr>
<td>HIST 300</td>
<td>Ancient Greece (3)</td>
<td>The history of the Greek people from the Mycenean period to the Hellenistic Age.</td>
</tr>
<tr>
<td>HIST 301</td>
<td>Roman Republic (3)</td>
<td>The political, social, and cultural history of Rome from the beginning to the time of Julius Caesar.</td>
</tr>
<tr>
<td>HIST 302</td>
<td>The Roman Empire (3)</td>
<td>The political, social, and cultural history of Rome from Augustus to Odoovacar.</td>
</tr>
<tr>
<td>HIST 303</td>
<td>The Byzantine Empire (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 304</td>
<td>The Middle Ages to 1100 (3)</td>
<td>Political, ecclesiastical, and cultural developments in Europe from the collapse of Rome in the West to the struggle of empire and papacy.</td>
</tr>
<tr>
<td>HIST 305</td>
<td>The Middle Ages 1100 to 1450 (3)</td>
<td>The High and Late Middle Ages from the fall of Constantinople.</td>
</tr>
<tr>
<td>HIST 306</td>
<td>The Crusades (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 307</td>
<td>Catholic Traditions to 1540 (3)</td>
<td>Theology, spirituality, church organization, religious art from the time of the Apostles to the Counter Reformation. Readings from classics.</td>
</tr>
<tr>
<td>HIST 308</td>
<td>Catholic Tradition Since 1540 (3)</td>
<td>Theology, spirituality, church organization, religious art from the Council of Trent to the Second Vatican Council and its effects.</td>
</tr>
<tr>
<td>HIST 309</td>
<td>The Age of Renaissance (3)</td>
<td>The political, social and cultural influences which brought the medieval period to a close and prepared the way for a new European society.</td>
</tr>
<tr>
<td>HIST 310</td>
<td>The Reformation Era (3)</td>
<td>The religious crisis of age against the background of political, economic and intellectual change, 1500-1600.</td>
</tr>
<tr>
<td>HIST 311</td>
<td>The Age of Absolutism (3)</td>
<td>The rise and fall of dynasties; the Scientific Revolution and Age of Reason; beginnings of Industrialization.1600-1789.</td>
</tr>
<tr>
<td>HIST 312</td>
<td>FRENCH REVOLUTION and NAPOLEON, 1789-1</td>
<td>The origins and history of the french Revolution; social, economic, intellectual, institutional, and constitutional changes; European War; the Napoleonic empire and its collapse.</td>
</tr>
<tr>
<td>HIST 313</td>
<td>THE AGE of INDUSTRIALISM and DEMOCRACY</td>
<td>The history of Europ from the Congress of Vienna to the First World War.</td>
</tr>
<tr>
<td>HIST 314</td>
<td>TWENTIETH CENTURY EUROPE: ERA of WOR</td>
<td>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.</td>
</tr>
</tbody>
</table>
### 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)
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 327 - Russia to 1905 (3)
Survey of Kievian, 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 328 - 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 from Metternich, Cavour, Bismarck, Disraeli, Salisbury, William H. Grey; Europes diplomacy in the century before World War I.

### HIST 331 - MODERN EUROPEAN DIPLOMATIC HISTORY, 1 How the destruction of World War 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 - ENGLISH HISTORY: THE TUDORS 1485-1603 (3)
A political, social, cultural and religious survey of the period.

### HIST 336 - ENGLISH HISTORY: THE STUARTS, 1603-1714 (3)
A political, social, cultural, and religious survey of the period.

### HIST 337 - ENGLISH HISTORY: THE INDUSTRIAL REVOLUTION
A study of the economic, social and political circumstances which made England the worlds first industrial nation.

### HIST 338 - ENGLISH HISTORY: THE VICTORIAN AGE, 1837-1901 (3)
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, DAnnunzio, Gramsci and Croce, Italy and the Holocaust, Christian Democracy, Italian Film, and Red Brigades.

### 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 - U.S. NATIONALISM and SECTIONALISM, 1816-1
Aftermath of the War of 1812; the age of Jackson; slavery; reform movement; the coming of the Civil War.

### HIST 348 - U.S. CIVIL WAR and RECONSTRUCTION, 1850-1865
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, 1890-1920 (3)
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 1920-1945 (3)
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 (3)
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 (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 - American Frontier (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 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.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>HIST 383</td>
<td>Modern Middle East (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 490</td>
<td>Seminar: European History (3)</td>
<td>A limited enrollment seminar exploring a specific topic in European history. Discussion format based on close reading of primary sources.</td>
</tr>
<tr>
<td>HIST 491</td>
<td>Sem: American History (3)</td>
<td>A limited enrollment seminar exploring a specific topic in American history. Discussion format based on close reading of primary sources.</td>
</tr>
<tr>
<td>HIST 492</td>
<td>SEMINAR: NON WESTERN HISTORY (3)</td>
<td>A limited enrollment seminar exploring a specific topic in Non-Western History. Discussion format based on close reading of primary sources.</td>
</tr>
<tr>
<td>HIST 493</td>
<td>Special Topics in History (3)</td>
<td>Various topical courses offered from time to time.</td>
</tr>
<tr>
<td>HIST 495</td>
<td>Senior Residency (0)</td>
<td>This course is required of senior History majors to indicate graduation.</td>
</tr>
<tr>
<td>HIST 496</td>
<td>Internship/History in Practice (1-6)</td>
<td>A practical application of history through an internship with a local historical institution.</td>
</tr>
<tr>
<td>HIST 500</td>
<td>Thry/Prac of Hist: An Intro (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 520</td>
<td>Ancient &amp; Byzantine History (3)</td>
<td>A general examination of the historiography and literature in late ancient and Byzantine history.</td>
</tr>
<tr>
<td>HIST 521</td>
<td>Adv Ancnt &amp; Byznt Hist (3)</td>
<td>An examination of the historiography and literature in specialized topics in late ancient and Byzantine history.</td>
</tr>
<tr>
<td>HIST 525</td>
<td>Perspectives-Anct &amp; Byzntn His (3)</td>
<td>Lectures and readings on historical events and wider trends in late ancient or Byzantine history.</td>
</tr>
<tr>
<td>HIST 530</td>
<td>Studies Medieval History (3)</td>
<td>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.</td>
</tr>
<tr>
<td>HIST 531</td>
<td>Adv Std: Medieval History (3)</td>
<td>An examination of the historiography, literature, and current trends in specialized topics in Medieval history.</td>
</tr>
<tr>
<td>HIST 535</td>
<td>Perspectives Medieval Hist (3)</td>
<td>Lectures and readings on historical events and forces affecting specific periods in Medieval history.</td>
</tr>
<tr>
<td>HIST 540</td>
<td>Stdys Renaissnc &amp; Refrmt Hist (3)</td>
<td>Study and discussion of secondary literature in Renaissance and Reformation (early Modern European) history.</td>
</tr>
<tr>
<td>HIST 541</td>
<td>Adv Stdys: Renssnc &amp; Refrmt (3)</td>
<td>Examination of the historiography, literature, and current trends in specialized topics in Renaissance/Reformation History.</td>
</tr>
<tr>
<td>HIST 545</td>
<td>Prspctvs Renssnc &amp; Rfrmtn Hist (3)</td>
<td>Lectures and readings on events and forces affecting specific periods in Renaissance/Reformation history.</td>
</tr>
<tr>
<td>HIST 550</td>
<td>Stdys Modrn European Hist (3)</td>
<td>An introduction to Modern European History from 1600 to the present.</td>
</tr>
<tr>
<td>HIST 551</td>
<td>Adv Studies Modrn European His (3)</td>
<td>Examination of the historiography, literature, and current trends in specialized topics in Modern European history.</td>
</tr>
<tr>
<td>HIST 555</td>
<td>Prspctvs Modern European Hist (3)</td>
<td>Lectures and readings on events and forces affecting specific periods in Modern European history.</td>
</tr>
<tr>
<td>HIST 560</td>
<td>Studies in American History (3)</td>
<td>An introduction to methodology and recent literature, and the study of United States history. Topics will range from colonial through contemporary American history.</td>
</tr>
<tr>
<td>HIST 561</td>
<td>Adv Studies American History (3)</td>
<td>Examination of the historiography, literature, and current trends in specialized topics in United States history.</td>
</tr>
<tr>
<td>HIST 565</td>
<td>Persptvs in American History (3)</td>
<td>Lectures and readings on events and forces affecting specific periods in United States history.</td>
</tr>
<tr>
<td>HIST 590</td>
<td>History Teaching Practicum (3)</td>
<td>Required of all graduate teaching assistants, this course covers teaching methods, lecturing, and other topics necessary to prepare an effective teacher.</td>
</tr>
<tr>
<td>HIST 680</td>
<td>Sem: Ancient/Byzantine Hist (3)</td>
<td>Advanced research on a specific topic in late ancient or Byzantine history. Introduction to source collections, library resources, and other research tools.</td>
</tr>
<tr>
<td>HIST 681</td>
<td>Seminar Medieval History (3)</td>
<td>Advanced research in a specific topic in Medieval history. Introductions to essential source collections, library resources, source criticism, archival methods, paleography.</td>
</tr>
<tr>
<td>HIST 682</td>
<td>Sem Rnssnce &amp; Reformatin Hist (3)</td>
<td>Introduction to research in Renaissance and Reformatin Europe. Students become acquainted with research tools in Renaissance and Reformation history, to learn paleographic and codicological skills.</td>
</tr>
<tr>
<td>HIST 683</td>
<td>Seminar in Mod European Hist (3)</td>
<td>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).</td>
</tr>
<tr>
<td>HIST 684</td>
<td>Seminar in American History (3)</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Honors (HR)**

HR 106 - Honors Intro 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.

HR 107 - Honors Intro to Anthropology (3)
This course emphasizes the nature of humans and culture. Human Prehistory, language, and other basic concepts are examined from a cross-cultural perspective.
HR 108 - HR Intro to Criminal Justice (3)
An examination of the police, courts, prosecution, and correctional systems to provide a basic understanding of their organization and operation; also, an exploration of major criminal justice issues facing America today, such as police effectiveness, plea bargaining and the contradictions of the prison system.

HR 171 - HR Intro to Communication (0-3)
An introduction to the field of human communication. Basic concepts, theories, and strategies are explained as they relate to interpersonal, small group, and mass communication processes.

HR 172 - Honors 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 others' public speaking performances.

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 drawn 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 253 - Honors Topics In Theatre (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 playwriting. Fulfills core fine arts requirement.

HR 289 - HR Intro of African Amer Studi. (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.

HR 305 - University Themes (3)
Topic changes every semester.

HR 309 - HR Topic in Electrical Eng (3)
Introduction to semiconductor materials and their electronic properties and applications to electronic devices. Introduction to P-N junction (diodes), bipolar junction transistors (BJTs), field effect transistors (FET). Analysis and design of analog circuits using diodes and transistors. Spring semester.

HR 315 - HR Topics in Electrical Eng (3)
Introduction to semiconductor materials and their electronic properties and applications to electronic devices. Introduction to P-N junction (diodes), bipolar junction transistors (BJTs), field effect transistors (FET). Analysis and design of analog circuits using diodes and transistors. Spring semester.

HR 363 - HR Intro: Mgt. Sci/Prod. Sys (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 decision.

HR 377 - HR Topics In Clinical Lab Sci. (0-4)
An introduction to the basic immunologic and genetic principles governing blood groups and blood transfusion practice.

HR 389 - HR Top. In African Amer Studi. (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.

HR 406 - HR Topics in Sociology (3)
The various forms of inequality will be analyzed from differing theoretical perspectives: structural functionalism, symbolic interaction, conflict theory, and Marxism. Examines the ways in which inequality permeates social forms as well as political and economic organizations and alternative ways of dealing with such inequalities.

HR 408 - HR Topics in Criminal Justice (3)
Examines community-based corrections and the role of probation and parole in the criminal justice system.

HR 415 - HR Topics in Electrical Eng (3)

HR 435 - HR Topics in Aerospace Eng. (0-3)
Application of aerospace engineering to the detail design of a flight vehicle, model design, fabrication testing, evaluation and analysis. Spring Semester.

HR 438 - HR Topic in Engineering Sci. (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.

HR 445 - HR Topics in Mechanical Eng. (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.

HR 460 - Econometrics (3)
Theory of economic statistics, development of statistical models applied to economic data. Probability theory, statistical criteria, hypotheses testing, correlation analysis; identification, multicolinearity and serial correlation.

HR 477 - HR Topics in Clinical Lab Sci. (3)
Experience in the basic principles of research design, data collection, data analysis and hypothesis testing. Completion of an Institutional Review Board proposal and a research paper to develop skills and appreciation of techniques in scientific investigation and writing. As an alternative to a wet research project, students may also choose to develop an educational module or perform a thorough literature review on a related scientific topic.

HR 478 - HR Topics in Community Hlth (3)
Experience in the basic principles of research design, data collection, data analysis and hypothesis testing. Completion of an Institutional Review Board proposal and a research paper to develop skills and appreciation of techniques in scientific investigation and writing. As an alternative to a wet research project, students may also choose to develop an educational module or perform a thorough literature review on a related scientific topic.

HR 496 - Honors Great Books (0-3)
Topics change every year.

Intergrated & Applied Sciences (IAS)
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.
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 (LATN)
LATN 110 - Reading Latin I (3)
Prereq: LATN 411. Fall semester.

LATN 115 - Reading Latin II (3)
Prereq: LATN 110. Development of fluency and accuracy in reading Latin prose.

LATN 410 - Intro to Post-Classical Latin I (3)
This course is an introduction to the language and culture of the Roman Empire.

LATN 411 - Medieval Latin Readings I (3)
Readings of selections of medieval prose and poetry from Late Antiquity to the High Middle Ages.

LATN 412 - Medieval Latin Readings II (3)
Continues the study of medieval Latin prose and poetry.

LATN 413 - Medieval Latin Readings III (3)
Continues the study of medieval Latin prose and poetry.

LATN 415 - Oral Comm. in Italian I (0-3)
Development of fluent oral expression through communicative activities.

LATN 420 - 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.

LATN 425 - Middle Ages to Renaissance (0-3)
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.

LATN 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 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 425 - Middle Ages to Renaissance (0-3)
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.

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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.
MATH 113 - Elementary Algebra II (2)
MATH 112 and MATH 113 together cover the same material as MATH 114, but in two semesters. Credit not given for both MATH 113 and MATH 114. Fall and Spring semesters. Pre-requisite: Grade of "C-" or better in Math 112.

MATH 114 - Intermediate Algebra (3)
Radicals, exponents, first degree equations, simultaneous equations, quadratic equations, functions, graphs, logarithms, polynomials. Credit not given for both MATH 114 and any of the following: MATH 112, MATH 113. Fall and Spring semesters.

MATH 120 - College Algebra (3)
Polynomials; rational functions; exponential and logarithmic functions; conic sections; systems of equations; and inequalities. Intended for students needing more preparation before taking MATH 132, MATH 141, or MATH 181. Credit not given for both MATH 120 and MATH 117. Fall, Spring and Summer.

MATH 122 - Finite Mathematics (3)
Linear equations and straight lines, matrices, sets and counting, probability and statistics, the mathematics of finance, and logic. Offered occasionally.

MATH 124 - Mathematics and the Art of M.C. Escher (3)
A SLU2000 freshman seminar. In this course we will discover how M.C. Escher created some of his artwork. The art of M.C. Escher will be used to explore such topics as: polygons, transformations, tessellations, and wallpaper patterns. Taught in a computer classroom. Fall and Spring semesters. (An understanding beyond MATH 114 is needed.)

MATH 125 - Math Thinking in Real World (3)
A SLU2000 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. (An understanding beyond MATH 114 is needed.)

MATH 126 - Statistics Including Sports and Politics (3)
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.

MATH 132 - Survey of Calculus (3)
Introductory differential and integral calculus, optimization and rate problems, calculus of rational, exponential and logarithmic functions, partial derivatives and applications. Fall, Spring and Summer.

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.

MATH 141 - Pre-Calculus (3)
Trigonometric functions, graphing, identities, solving triangles, inverse trigonometric functions, polar coordinates, complex numbers, and analytic geometry. Credit not given for both MATH 141 and MATH117. Fall and Spring semesters.

MATH 142 - Calculus I (0-4)
Elementary functions; differentiation and integration from geometric and symbolic viewpoints; limits, continuity; applications. Credit not given for both MATH 142 and MATH 152. Offered Fall and Spring semesters.

MATH 143 - Calculus II (4)
Symbolic and numerical techniques of integration, indeterminate forms, infinite series, power series, Taylor series, differential equations; polar coordinates, applications. Credit not given for both MATH 143 and MATH 153.

MATH 160 - Computer Prob and Stat (3)
Elements of statistics: presenting data, mean, median, and mode; standard deviation; counting methods, the binomial theorem, probability, conditional probability, distributions, and hypothesis testing.

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 167 - Statistics and Computers (3)
Introduction to data analysis and hypothesis testing; distributions, sampling, estimation, confidence intervals; t-test, analysis of variance, correlation, and regression; crosstabulations and chi-square; use of a statistical package such as SAS, the Statistical Analysis System. Spring semester.

MATH 181 - Informal Geometry (3)
An informal introduction to geometry for Education majors. Does not satisfy the Arts and Sciences requirement in mathematics. Spring semester.

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. Credit not given for both MATH 244 and MATH 254. Fall and Spring semesters.

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.

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. Spring semester.

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.

MATH 355 - Differential Equations I (3)
This course is a continuation of MATH 351. Topics covered include Laplace transform, systems of linear differential equations, power series, boundary value problems. Spring semester.

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; combinational algorithms: resource scheduling, bin-packing: algorithmic analysis and NP completeness.
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.

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.

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.

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.

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.

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.

MATH 421 - Intro to Analysis (3)
Real number system, functions, sequences, limits, continuity, differentiation, integration and series. Fall semester.

MATH 422 - Metric Spaces (3)
Set theory, metric spaces, completeness, compactness, connected sets, category. Spring semester.

MATH 425 - Theory of Numbers (3)
Fundamental concepts in number theory, with applications to solutions of diophantine equations of the first and second degree. Offered occasionally.

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.

MATH 447 - Non-Euclidean Geometry (3)
The rise and development of the non-Euclidean geometries with intensive study of plane hyperbolic geometry. Offered occasionally.

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.

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.

MATH 455 - Nonlinear Dynamics and Chaos (3)
Bifurcation in one-dimensional flows. Two-dimensional flows, fixed points and linearization, conservative systems, index theorem, limit cycles. Poincare-Bendixson theory, bifurcations. Chaos, the Lorenz equation, discrete maps, fractals, and strange attractors.

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.

MATH 465 - Cryptography (3)
Classical cryptographic systems, public key cryptography, symmetric block ciphers, implementation issues. Related and supporting mathematical concepts and structures.

MATH 495 - Senior Residency (0)
Required for graduating seniors.

MATH 496 - 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 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)

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 (3)
The topology of the reals, Lebesque and Borel measurable functions, properties of the Lebesque integral, differential of the integral. Offered every Fall semester.
**MATH 522 - Real Analysis II (3)**
Compact and locally compact spaces, the Stone Weierstrass theorem, measure theory, Radon Nikodym Theorem, the Lp-spaces, product invariant measures. Offered every Spring semester.

**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, force 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 630 - Algebraic Topology (3)**
Homotopy theory, homology theory, exact sequences, Mayer-Vietoris sequences, degrees of maps, cohomology, Kunneth formula, cup and cap products, applications to manifolds including Poincare-Lefshetz duality. Offered every other year.

**MATH 633 - Topology of Manifolds (3)**
Examples of manifolds, the tangent bundle, maps between manifolds, embeddings, critical values, transversality, isotopies, vector bundles and tubular neighborhoods, cobordism, intersection numbers and Euler characteristics. May be taught in either the piecewise-linear 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 100 - Theological Foundations (3)**
Integrated with MH A100, the course examines the foundations of Christian Theology by exploring the origins and development of the Jewish and Christian Scriptures. Offers examples and perspectives that lead to an understanding of God and the human person as connected in a covenant of just relationships. Concludes by interpreting Greek and Biblical notions of justice and applying that integration to issues of social injustice in our own time.

**MH 110 - Historical Intro to Greek Phil (3)**
This course, taught with MH A110, focuses primarily on the writings of Plato and Aristotle as central figures in the historical period when Western humanity first began to use reason to develop systematic philosophy. Careful attention is given to texts on the human person and the concept of justice. Concludes, as A-100 does, by interpreting Greek and Biblical notices of justice with application to current issues of social injustice.

**MH 140 - General Psychology (3)**
Paired with MH-A190, this course provides an overview of the discipline of Psychology as presented in a standard introductory textbook. Class discussion and papers, however, give particular attention to themes of justice and peace. Examines Psychology as a form of folk wisdom, as a branch of philosophy, as a humanistic discipline, as a healing art, and as a social and biological science.

**MH 190 - Adv Writ: Urban & Soc Probs (3)**
Drawing on psychological concepts taught in MH A140, the 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.

**MH 195 - Advanced Writing: Urban & Soc (3)**
Continues the development of skills in analytical reading, critical thinking, persuasive argument, and research stressed in ENGL 190. Students employ both field investigation and library research to examine the personal and psychological processed involved in major breakdowns in social order.

**MH 215 - Ethics (3)**
Undertakes a systematic analysis of the fundamental problems 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 right, and the relationship between religion and morality. Students will reflect on moral issues experienced daily in American cities.

**MH 285 - Fields of Action in Social Wrk (3)**
Provides an overview of the Social Work profession, considering values, history, fields of practice, and issues of social welfare, social justice, and vulnerable populations. Explores current controversies, future trends, and career opportunities.

**MH 305 - Social Justice (3)**
Focuses principally on Catholic social teaching as developed by the popes and the National Bishops Conference. Among other subjects, takes up issues of peace and justice involving minorities and other residents of the American city.

**MH 322 - The Urban Crisis (3)**
This course, taught with MH 190 or MH 195 for Micah House freshmen, examines the roots and dimensions of the urban crisis that has transformed America 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.
MH 345 - Urban Sociology (3)
Explores the sociology of the city and the metropolis. Considers processes of change and resistance to change in the urban community; ethnic and racial groupings; and the affects of varying social policies. Includes field experience in the Shaw neighborhood.

MH 397 - Metropolitan Environment (3)
This is 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 that exists in society.

MH 433 - Psychology of Oppression (3)
Considers the mechanisms that undermine the appreciation of multiculturalism and other forms of diversity in society. Emphasizes ways in which 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.

MH 434 - African American Psychology (3)
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.)

MH 490 - Senior Practicum (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.

MH 490 - Senior Practicum (2)
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 ROTC (2)
Make your first new peer group at college one committed to performing well and enjoy the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments.

MILS 102 - Introduction to Leadership (2)
Learn/apply principles of effective leading. Reinforce self-confidence through participation in physically and mentally challenging exercises with upper division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to the effectiveness of a leader.

MILS 201 - Innovative Team Leadership (3)
Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning of events, coordination of group efforts, advanced first aid, land navigation and basic military tactics. Learn fundamentals of ROTC’s Leadership Development Program.

MILS 202 - Individ/Team Military Tactics (3)
Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper division ROTC students. Learn techniques for training others as an aspect of continued leadership development.

MILS 301 - Leading Small Organizations I (3)
Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit defensive tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leading.

MILS 302 - Leading Small Organizations II (3)
Continues methodology of MS301. Analyze tasks, prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance.

MILS 401 - Ldrshp Challenges & Goal-Setng (3)
Plan, conduct and evaluate activities of the ROTC cadet organization. Articulate goals, put plans into action to attain them. Assess organizational cohesion and develop strategies to improve it. Develop confidence in skills to lead people and manage resources. Learn/apply various Army policies and programs in this effort.

MILS 402 - Transition to Lieutenant (3)
Continues methodology from MS 401. Identify and resolve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as relate to leading as an officer in the Army. Prepare for a future as a successful Army lieutenant.

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.

Modern Language (MLNG)
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.

Occupational Therapy (MOT)
MOT 541 - Human Environ Adaption II (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.
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.

MP 490 - Manresa Capstone Course (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).

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 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.

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 126 - Class Piano I (2)
A course for novices at the keyboard, open to both music and non-music majors. Beginning keyboard and musicianship skills are learned, including reading and playing in bass and treble clefs, simple rhythm symbols and patterns, major and minor five-finger patterns, major scales and arpeggios, and basic chord progressions. Repertoire includes song arrangements with simple accompaniment patterns and elementary-level piano repertoire. Beginning work in harmonization, sight-reading, and transposition is included. Taught in small group setting.

MUSC 127 - Class Piano II (2)
A continuation of MUSA 127. Second course in class piano, for both majors and non-majors at the late-elementary or early-intermediate level of performance. Course work includes minor scales and arpeggios, seventh chords and inversions, more extensive chord progressions, and more advanced repertoire. The study of sight-reading, harmonization, transposition, and collaborative skills is continued.

MUSC 140 - Lower Division Class Music (0-3)
Brass, Voice, Strings, Piano, Guitar, Woodwinds. An Applied Music Fee is required. Class instruction in voice or instruments.

MUSC 141 - Applied Music (1-2)
Brass, Guitar, Organ, Percussion, Piano, Strings, Voice, Woodwinds. An Applied Music Fee is required. Private studio lessons on voice or an instrument; fourteen half-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of teachers is required.

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. NOT an entry-level course: 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 250 - Class Piano III (2)
A continuation of MUS-A127. Class Piano III is a course at the early-to-mid intermediate level of piano training. It is the third in the series of four class piano levels designed to develop basic skills and techniques at the keyboard. These skills are applicable to all musical styles, including classical, jazz, and popular music, and the series culminates, for the music major, in achievement of the piano proficiency requirement required for the degree in music. However, class activities and assignments are structured to accomodate both music majors and adult amateurs who are learning an instrument for pleasure and enrichment.

MUSC 251 - Class Piano IV (2)
A continuation of MUS-A250. Class Piano IV is a course at the mid-to-late intermediate level of piano training. It is the last in the series of four class piano levels designed to develop basic skills and techniques at the keyboard. These skills are applicable to all musical styles, including classical, jazz, and popular music, and the series culminates, for the music major, in achievement of the piano proficiency requirement required for the degree in music. However, class activities and assignments are structured to accomodate both music majors and adult amateurs who are learning an instrument for pleasure and enrichment.

MUSC 252 - Counternpoint (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 tetrachord, modes, Neapolitan and augmented sixth chords, enharmonic modulations, serialism, parallelism, aleatoric works, pandiatonicism, etc.

MUSC 330 - History of Music I (3)
The study of classical musical styles, genres, and masterworks from antiquity through Middle Ages, Renaissance, Baroque eras, ending with the music of J.S. Bach in 1750.

MUSC 331 - History of Music II (3)
Continuation of MUSC330. The study of classical musical styles, genres, and masterworks, from the <i>gallant</i> of 1750 through Romantic, Impressionist, and Twentieth-Century styles to the present day.

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 341 - Applied Music (0-2)
Brass, Guitar, Organ, Percussion, Piano, String, Voice, Woodwinds. An Applied Music Fee is required. Private studio lessons on voice or an instrument; fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of teachers is required.

MUSC 342 - University Chorale (1-2)
Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude.

MUSC 344 - University Mastersingers (0-1)
Highly selective small vocal ensemble; frequent public performances of early choral music and <i>a capella</i> works. Entrance by audition only, generally on the last Thursday of the Spring semester.

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 - Intern 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 anthropologies, philosophy of God, religion and ethics. Criticisms of metaphysics by Hume, Kant, recent thinkers.

PHIL 325 - Philosophy of God (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 Human Nature (3)
Systematic or historic-ro-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 330 - Philosophy of the Human Person (3)
Systematic or historic-ro-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 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 380 - Language & Critical Thinking (3)
The aim of this course is to impart awareness of language, its pitfalls, and its importance for sound thinking as well as communication, and to develop some skill in dealing with the problems of language occasions. Illustrative materials drawn from varying disciplines and sources. Fall semester.

PHIL 404 - Modern Logic (3)
Methods of symbolic logic. Propositional and quantification theory of relations and identity; structure and properties of formal axiomatic deductive systems; philosophical issues of logic. Offered Spring semester.

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 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 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 420 - Survey of Metaphysics (3)
Through an examination of contemporary authors, this course surveys classic problems concerning the most fundamental aspects of reality. The topics covered may include: universals; individuation of concrete particulars; propositions, facts, and events; necessity and possibility; persistence through time; realism-versus-anti-realism; vagueness; personal identity; free will; material constitution. Prerequisites: PHIL 105 and 205.

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 440 - History of Greek Philosophy (3)
This course engages central problems of philosophy as they were conceived by the founders of Western thought, emphasizing Plato and Aristotle, but possibly including some of their early Greek predecessors and Hellenistic successors. Prerequisite: PHIL 105 and 205.

PHIL 440 - Topics in Ancient 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 445 - Ancient Medieval Pol. Thought (3)
Reading and evaluation of texts from ancient and medieval thinkers such as Plato, Aristotle, Cicero, Augustine and Aquinas who have provided intellectual foundations for later Western thought on such issues as the nature of civil society, role of law in this society and laws relation to morality and religion. Prerequisite: PHIL105 and PHIL205

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 - Thomistic Phil: Systematic Srvy (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 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 465 - Ren & Mod Political Theories (3)
Political and social thought of the period covering transition from feudalism and medieval city states to the growth of capitalism and modern state. Problems of morality and political necessity, contract theory of the state; nature and relationship of sovereignty and freedom; social change and stability.

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 Thinkers (3)
Offered Spring semester.

PHIL 476 - Spanish Phil: Unamuno & Ortega (3)
Systematic analysis of two 20th century Spanish philosophers: Unamuno y Gasset and Unamuno. Major themes in Unamuno: the tragic sense of life, the polarities: life vs. death, reason vs. will; and personal immortality. Fall semester.

PHIL 477 - Phenomenology: Person & Sciety (3)
An examination of intersubjectivity and societal problems from the viewpoint of the philosophies of Husserl, Scheler, Sartre, Merleau-Ponty, Levinas, and Schutz.

PHIL 478 - Catholic Social Teaching (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.
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 - Probs & Topics in Epistemology (3)
Examination and analysis of philosophical problems concerning the nature and validity of human knowing. Course offered at Departmental discretion.

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 485 - Advanced Ethics (3)
Specific issues and topics to be determined by instructor. Course offered at Departmental discretion.

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 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 Phlspher 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 Phlsphr 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 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)
Lectures, demonstrations, and laboratory in mechanics and heat. Fall semester.

PHYS 124 - General Physics II (0-4)
Lectures, demonstrations and laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. Spring semester.

PHYS 131 - Physics I (3)
Lectures and demonstrations in mechanics and heat. Fall semester.

PHYS 132 - Physics I Laboratory (1)
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. Spring semester.

PHYS 134 - Physics II Laboratory (1)
Laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. 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.

PHYS 136 - Aviation Physics II (0-4)
Topics in sound, electricity, magnetism, and optics are covered at an introductory level with emphasis on aviation examples. For Aviation Science students. Prerequisite: PHYS 135. Co-requisite: PHYS 124-36 General Physics II Lab. Credit cannot be awarded more than once for PHYS 136 and PHYS 124, 133, or 164.

PHYS 151 - Physics I with Calculus (3)
The calculus approach is used to develop concepts of mechanics, heat and wave motion. Fall semester.

PHYS 152 - Physics I with Calculus Laboratory (1)
Laboratory experiments illustrating lectures of PH-P151 on mechanics, heat and wave motion. Fall semester.

PHYS 153 - Physics II with Calculus (3)
The calculus approach is used to develop the concepts of sound, optics, electricity and magnetism. Spring semester.

PHYS 154 - Physics II with Calculus Laboratory (1)
Laboratory experiments illustrating the lectures of PH-P153 on sound, optics, electricity and magnetism. Spring semester.

PHYS 161 - Engineering Physics I (3)
Calculus and vector approaches to study of kinematics, statics and dynamics; fluid mechanics; work and energy; impulse and momentum; circular motion and gravity; rotational motion and equilibrium; vibrations, waves and sound; statistical mechanics; solid state physics; nuclear and particle physics; elasticity. Fall and Spring semesters.

PHYS 162 - Engineering Physics I Laboratory (1)
Laboratory experiments to illustrate and supplement material in PH-P161. 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; atomic physics; relativity. Fall and Spring semesters.

PHYS 164 - Engineering Physics II Laboratory (1)
Laboratory experiments to illustrate and supplement material in PH-P163. Fall and Spring semesters.

PHYS 261 - Modern Physics (3)
At the level of Beiser's Concepts of Modern Physics. 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. 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.

PHYS 312 - Advanced Classical Mechanics (3)
Continuation of PH-P311, continuum mechanics and introduction to the analytical methods of Lagrange and Hamilton.

PHYS 332 - Optics Laboratory (1)
The fundamental experiments of modern optics are repeated in this course. Three hours per week.

PHYS 341 - Thermodynamics and Statistical Mechanics (3)
At the level of Zemansky's Heat and Thermodynamics.

PHYS 351 - Analog & Digital Electronics (0-4)
Fundamentals of digital circuits with applications to computers. Operational amplifiers. Interfacing of computers with experimental equipment for data collection and control.

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. 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. Offered every semester.

PHYS 401 - Topics in Modern Physics (3)
Special theory of relativity; quantum theory; wave properties of particles; theory of the atom; introduction to nuclear and particle physics; introduction to solid state physics.

PHYS 421 - Electricity & Magnetism I (3)
At the level of Lorrain and Corson's Electromagnetic Fields and Waves. Spring Semester.

PHYS 422 - Electricity & Magnetism II (3)
Electromagnetic Fields at an advanced level, a continuation of PH-P421. Fall semester.

PHYS 461 - Quantum Mechanics (3)
At the level of Park's Introduction to the Quantum Theory. Fall semester.

PHYS 462 - Application of Quantum Mechanics (3)
Quantum mechanics applied to topics from particle physics, nuclear physics, low temperature physics, solid state physics and chemistry. Spring semester.
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. 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. Offered every semester.

Pre-Law Studies (PLS)
PLS 290 - Mock Trial Practicum (0-3)
This course is a continuation of the Introduction to Trial Advocacy (PLSA293) and includes participation of students assigned to teams to compete in several regional meets and in the annual national intercollegiate Mock Trial Competition.

PLS 291 - Foundations of Law (3)
This is a seminar conducted by the faculty of the School of Law. A final paper and class participation are the major determinants for the students' grade.

PLS 292 - Law: Service Learning (3)
A team teaching experience between undergraduate and volunteer law students to magnet high school students focusing on law as a career. Teaching planning sessions will take place on Wednesday. We will teach at the school on Friday. Student transportation to a local area high school provided.

PLS 293 - Introduction to Trial Advocacy (0-3)
This course is taught as a preparation for the National Intercollegiate Mock Trial Competition held each Spring in Des Moines, Iowa. The course is designed to teach students the fundamentals of trial performance and includes several mock trials. The theory and practice of courtroom procedures in the United States are thoroughly surveyed. Conducted by two attorney adjunct faculty.

PLS 294 - Intro. to Appellate Advocacy (1-3)
Moot Court will provide students with an understanding of appellate procedure and assist students in preparation and delivery of an oral argument which will be performed during the AMCO regional competition.

Political Science (POLS)
POLS 150 - Introduction to Comparative Politics (3)
This course introduces student to the logic, method, and theoretical approaches of the comparative study of political systems and processes. It examines the institutions and processes of government in various kinds of political systems around the world, particularly liberal democratic systems in advanced industrial countries, communist, systems and the process of transition out of communism, and developing countries. It also investigates the process of political change, particularly pressures on the welfare state, state-building and modernization, democratization, and revolution.

POLS 160 - Introduction to International Politics (3)
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)
Tracing of the development of a distinctive political realm in the history of Western political thought, from the ancient to the modern era. The class approaches political realm in the history of Western political thought, from the ancient to the modern era. The class approaches political theories as more-or-less coherent systems fo thought that assuem often unexplored social underpinnings. The goal is to illuminate the relationship between politics and society in these theories. 1st and 2nd yr students only, others by permission of the Chair.

POLS 210 - American Constitution:The Original American

POLS 211 - American Constitution: Civil Liberties (3)
Continuation of POLS210. The Bill of Rights and the Fourteenth Amendment; transdisciplinary approach, using theories of law, history, philosophy, sociology, psychology, political science.

POLS 218 - American Presidential Election (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.

POLS 220 - Introduction to American State and Local Gov
Government and administration of states and their subdivisions; states constitutional position; federal-state, federal-city, state-city relationships.

POLS 250 - Asian Miracles (3)
Examines governmental institutions and political processes. Emphasis is on nationalism and independence types of civilian regimesm, institutions and bureaucratic features of individuals. Among other topics, the class examines religious influence, the presence of Islam, the role of and contributions of different theories to the understanding of African politics.

POLS 253 - Soviet and Post Soviet Politics (3)
This course aims to explain the process of change currently underway in the former Soviet Union. The class examines the legacy of Marx and Lenin's ideas, the Production of revolution, and the Stalin period. It also investigates pressures for change and the processes of reform under Gorbachev and his successors.

POLS 254 - Ethnicity and Internal War (3)
This course investigates causes and process of ethnic conflict, that is, of conflicts based primarily on collective ethnic identity and cultural and personal features of individuals. Among other topics, the class examines religious conflict in Northern Ireland, racial conflict in South Africa and the United States, and national conflict in Yugoslavia.

POLS 255 - Political Systems of the Sub-Sahara (3)
Examines governmental institutions and political processes. Emphasis is on nationalism and independence types of civilian regimes, institutions and bureaucracies, political modernization, the role of the military and transition to democracy.

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 legacym 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 260 - Introduction to International Political Economy
Explores the interaction of economic and politics in global affairs by examining Realist, Liberalists, 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 dept, multinationals, international development, and regional economic organizations.

POLS 261 - Introduction to Diplomacy (3)

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 of the states of the region in their historical context. Discussion of current trends.

POLS 300 - Methods in Political Science (3)
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 311 - Women/Political Leadership (3)
This course will examine 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.

POLS 312 - The American Presidency (3)
An examination of the institution of the presidency, an the ways the President marshals his political resources to provide leadership to American society.

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 publics opinions to policy-making. Offered occasionally.

POLS 316 - Electoral Behavior: Polls, Candidates and Elections
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 317 - The Legislative Process (3)
Structure, role, procedures, of the national lawmakers body, presidential leadership, congressional officers; committee system, investigating committees; party discipline; rules; proposals for change; comparative practices in Great Britain and state legislatures. Use of primary sources.

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 329 - State Legislative Internship (1-6)
Student interns participate in the offices of state legislators either at the state capitol or in the St. Louis area. Students usually work in Jefferson City in the spring, in St. Louis in the fall. Readings in legislative process; permission of instructor required; at least one course in American Politics preferred.

POLS 340 - Introduction to 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 principals; 4. public administration and public affairs; 5. future challenges in public administration.

POLS 341 - Government Decision-Making: Organization Behavior (3)
Application of organization behavior theory to the decision-making process of governmental administrative agencies; impact of organization on governmental policies.

POLS 342 - Introduction to 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 350 - Russian Political Culture (3)
This course examines the fundamental political beliefs and orientations of the Russian people from the nineteenth century to the present. Topics include traditional authoritarian political attitudes under the tsars, the effect of the Bolshevik Revolution on the popular mind, current controversies in Russian social thought, and recent public opinion studies.

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 (3)
This course explores the political ideas which affected Communist political systems and which continue to inspire efforts at social change. The class investigates both the philosophical background of communism and concrete efforts to put those ideas into practice, both the promises and the pitfalls of reorganizing society.

POLS 353 - Comparative Revolutions (3)
This course is a theoretical examination of the nature of revolutions, their origins, important factors in their progress, and the variety of their results. For most semesters, special focus will be given to the Bolshevik, Chinese Nicaraguan, and Iranian revolutions, and to recent political transformations in Poland.

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 is it 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 Management
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 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 Devlpmt 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 371 - Ancient and Medieval Classics in Political Tho
Development of Western political thought from its beginnings in the Greek city-state to end of the Middle Ages. Special attention to Plato, Aristotle, Cicero, Roman Law, Church-state controversies. Aquinas and Scholasticism.

POLS 372 - Renaissance and Modern Political Theories (3)
Political impact of 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.

POLS 373 - Contemporary Political Ideologies (3)
Development of modern political ideologies from mid-nineteenth century to mid-twentieth. Emphasis on Marxist and other social movements, anarcho-syndicalism, neo-Hegelianism, expanding role of the state, nationalism, racism and welfare liberalism.

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 and 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 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.

POLS 397 - Metropolitan Environment (3)
An interdisciplinary course presenting the political, social, economic, educationa, 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 414 - Political Parties and Interest Groups (3)
Major political organizations-parties and interest groups linking public opinion with formal political power agencies. Emergence and development of political organizations; party and group cohesion and strength; goals of parties and interest groups; techniques employed; nominating, campaigning, propagandizing, lobbying, attempting to govern, functions of political organizations in the political system.

POLS 418 - Legal Internship (1-6)
Interns work in law firms, or 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 legal career.

POLS 419 - 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.

POLS 440 - Abuses of Administrative Power (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.

POLS 449 - Administrative Internships (1-6)
Students who have satisfied course Prerequisites in public administration employ classroom administrative theory while actually working in a public administration agency under the direction of experienced administrators.

POLS 451 - Seminar: 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. Prerequisite: junior-level standing or permission of the instructor.

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 - Seminar: International Organization-The Mana
International organization as a new dimension of international relations. The course examines the structure and politics of organizations; how they address current international problems: International security, environmental degradation, the protection of human rights, economic and social development. Prerequisite: junior-level standing or permission of the instructor.

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 - Seminar: Asymmetric Warfare in Two Eras: VI
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 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 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 475 - American Political Thought (3)
From 1765 to the present. Eighteenth century consensus, nationalism versus sectionalism, nineteenth century reform movements, pragmatism and progressivism, current liberal and conservatism.

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 489 - Federal Government Internship (1-6)
Interns serve in Federal Agencies (legislative or executive) located in Washington or in St. Louis, depending upon availability. These internships provide excellent insight in the functioning of the Federal bureaucracy.

POLS 490 - Research Design (3)
An independent research project under a project director in any of the subfields of Political Science. For members of the Political Science Honors Program only. A requirement for this program. Senior standing required. Permission of the Department Chair and project Director required. Fulfills the Senior Inquiry.

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 496 - 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 and essay relating their experiences to assigned readings on gender justice and the role of women in public policy.

POLS 511 - 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 562 - International Organizations (3)
Internation organization as a new dimension of international relations. The course examines the structure and politics of organizations; how they address current international problems: International security, environmental degradation, the protection of human rights, economic and social development.

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 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 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 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.

Pre-Professional Health Std (PPHS)
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.

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 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 - Fndtns of Res Meth & Stats (0-4)
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 Meths/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 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 322 - 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 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 - Physiological Psychology (3)
Neural basis of behavior, including sensory and motor systems, ingestive behaviors, sleep, aggression, learning, and psychological disorders.

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 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 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 - Advanced Experimental Methods (3)
Consideration of philosophy of science as background for the methodological paradigms of psychology. Includes discussions of operational definitions, reliability, validity, research design (experimental and correlational), observation and measurement of behavior and mental processes, and types of experimental control.

PSY 509 - Quasi-Experimntal/Correlational Me (3)
Methods of theorizing and data collection, comparison on general research methods, validity of measurement devices, artifacts and ethical problems in applied research. Quasi-experimental designs field research, convergent and discriminant validity and the social psychology of psychological research discussed.

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 operand 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 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, inter-group 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 de-sensitization, 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 580 - Clincl 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 - Clincl Assessment Practicum II (0)
Supervised clinical experience in the administration, scoring, and interpretation of objective and projective psychological tests.

PSY 584 - PRC: General-Experimental Psy (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 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 examines 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 620 - 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 - Multivariate Statistical Analy (3)
Discussion of multivariate statistical techniques with emphasis on applications and on broad interpretative principles rather than specific mathematical details. Techniques covered include multiple regression, canonical correlation, principal components, factor analysis, discriminant function analysis, MANOVA, and MANCOVA.

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 663 - Cnsltatn Skills: Theory/Practi (3)
Theoretical and empirical literature pertaining to psychodynamic orientations in various modes of psychotherapy.

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: Psychopathology (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, crime 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 410 - Introduction to Inferential Statistics (3)
Survey of basic statistical methods including descriptive statistics, z- and t-tests of means and proportions, chi-squared analyses, correlational and regression analyses. Intended as possible terminal course for upper division undergraduates and as a background for graduate level course in the program. Offered every semester.

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 520 - General Research Methods (3)
Survey of the techniques, methods and tools of research in the behavioral sciences and social sciences. General discussion of the research process followed by examination of several different study designs such as observational, experimental, descriptive and sample survey. Overview of different methods of data collection and analysis frequently used in research literature. Offered every semester.

RMET 530 - Applied Regression Models (3)
Offers comprehensive knowledge and skills of multiple regression models and logistic regression analysis. Emphasizes the application of techniques as well as a detailed examination of model estimation and problem solutions. Students will analyze data sets using SPSS and write up results in journal formats. Course covers partial correlation, incremental model change, dummy coding, nonlinear transformations, and path analysis. Offered every Spring semester.

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 575 - Inter. Qualitative Research (3)
This course is designed as an intermediate course in qualitative research; that is, it is expected that students have already taken at least one course in qualitative research. The primary purpose of this course is to provide students with the skills needed to conduct qualitative research in their areas of interest. An additional goal is to provide students with reference materials that will be useful to them in their future work. Offered every Spring semester.

RMET 580 - Sample Survey Methods (3)
Planning, execution, analysis and interpretation of sample surveys. Numerous examples of sample surveys are utilized to illustrate concepts. Topics covered include types of surveys, survey objectives, sampling frames, sampling procedures, instrumentation, practical and ethical issues in data collection, estimation procedures, and quantitative data analysis. Students will be required to participate in an actual survey project. Offered every Spring semester.

RMET 589 - Reading Stats in Research (3)
Provides background in statistical techniques toward judging the legitimacy of an author's claims based upon statistical results. Focuses on understanding what a given technique accomplishes statistically, the types of conclusions which conclusions that can be reached using a technique, and how the results are reported in research articles and dissertations. Studies from areas such as Education, Sociology, Public Policy Analysis, Hospital Administration, Nursing and Allied Health, Social Service, Business, Medicine, and Biology will be utilized. 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 606 - Nonparametric/Cat Analysis (3)
Survey of some basic rank order nonparametric procedures and basic categorical data analytic methods. Reliability of instruments producing nominal and ordinal data is also discussed and an introduction to loglinear models to handle higher order contingency table analysis is provided. Students will learn first hand computation of most of the techniques along with the corresponding computer analysis using SPSS. Emphasis placed on interpreting articles that use nonparametric methods. 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 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.
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 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 - Russian Lit & Film: 19th Centu (3)
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 410 - Fluency in Russian (0-3)
Further practice in speaking, listening comprehension, reading, and writing to achieve fluency. Fall or Spring semester.

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 (3-4)
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 120 - Introduction to Anthropology (3)
This course emphasizes the nature of humans and culture. Human Prehistory, language, and other basic concepts are examined from a cross-cultural perspective.

SOC 190 - Intro to Criminal Justice (3)
An examination of the police, courts, prosecution, and correctional systems to provide a basic understanding of their organization and operation; also, an exploration of major criminal justice issues facing America today, such as police effectiveness, plea bargaining and the contradictions of the prison system.

SOC 199 - Fundamentals of Social Science (Honors) (3)
Broad introduction to social sciences in terms of theory and methodology. Emphasizes the role of the social sciences in seeing the "bigger picture"-the patterns and processes of everyday life.

SOC 318 - 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.

SOC 320 - Introduction to Forensic Science (3)
This course is an overview of forensic science, including its function in the criminal justice process, background, development, and career opportunities. As an introductory course for the Forensic Science certificate, the course provides an overview to the work of forensic scientists and criminal investigators.

SOC 321 - Demography: Population Characteristics and Tr
Characteristics, trends, projections, and implications of the composition and growth of the population of the US and the world; analysis of population policies.

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 325 - Primate Social Behavior (3)
Examines the natural history of nonhuman primates from an evolutionary, ecological, and social perspective. Topics include: the behavior and social organization of wild prosimians, monkeys, and apes; ecology and conservation; dominant theories in the field of primatology; and the methodology used to study social behavior and ecology.

SOC 327 - Anthropology of Conservation Latin America (3)
Examines conservation efforts in Latin America. Topics include: sociopolitical histories of individual Latin America countries; the role of foreign countries in Latin American conservation efforts; effects of agricultural practices; ecotourism; conservation organizations; and the role of indigenous human populations in protection and management of wildlife and natural resources.

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 332 - Social Control (3)
Examines efforts at social control from a cross-cultural and historical perspective. The motives, for consequences of, and reactions to social control are examined.

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 and ideology as well as that of social identification and meaning on collective action are examined.

SOC 336 - Racial and Ethnic Relations (3)
Impact of racial, cultural, national and religious differences on social processes. Emphasis on current data.

SOC 337 - Social Change (3)
Cross-cultural examination and analysis of social change theories, trends, and processes in relation to growth, development, and globalization.

SOC 338 - Political Sociology (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 340 - 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 341 - Physical Anthropology (3)
Examines humans within an evolutionary context to better understand ourselves as part of the natural world. Topics include: the history of evolutionary thought; molecular and population genetics; human variation and adaption; living and extinct primates; the hominid fossil record and; and biological and cultural strategies of humans through the time.

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 344 - Third World Development (3)
Issues of human well-being in the Third World countries are examined in relation to modernization, globalization and nation-building. Socialist, capitalist and mixed approaches to economic development are explored with special reference to theories of development and underdevelopment. The influence of geographic and demographic factors on developing countries, as well as the nature of multi-national corporations are examined.

SOC 345 - The Society of Development: Latin America (3)
This course is designed to help students gain an understanding of social and economic development processes in Latin American nations; reformist, and revolutionary modes of development are considered. The current role of the Catholic Church.

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 347 - Political Economics of Aviation Safety (3)
Inequalities in the availability of air-travel safety forms the major theme of this course which examines the social organization of aviation in America. The roles of values and government policies such as deregulation of aviation industry are examined.

SOC 349 - 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, crossnational comparisons of health systems.

SOC 352 - Clinical Sociology (3)
Introduction to various forms of sociological practice. The methods presented range from work with individuals to work with the larger community.

SOC 355 - Delinquency (3)
Analysis of the process by which certain acts and persons are designated delinquent; the social response to such actions and actors; sub-cultures and youth gangs; punitive and rehabilitative strategies.

SOC 356 - Corrections (3)
An overview of the corrections field, to include courts, detention, sentencing, adult institutions, probation, parole, and emerging policy issues. It will include an analysis of the theories and practices behind correctional operations, and examine trends to project future policy developments.

SOC 357 - Theories of Crime (3)
Introduction to the sociological examination of criminal behavior, both cross-culturally and historically. Analysis of the various forms and treatment of such behavior, as well as consideration of some of the major theories in the social sciences which attempt to explain it.

SOC 358 - Sociology of Deviant Behavior (3)
Analysis of the main theoretical perspectives in the sociology of deviance. Includes an examination of the role of norms; the process of acquiring, maintaining and transforming a deviant identity; subcultures; problems of social control. Includes field experience.

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.
Theories have been developed within the context of industrialization, poverty, unemployment, housing and transportation. Economic considerations relevant to selected urban problems such as morgues, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

Fieldwork in governmental agencies, as well as business and private social service organizations. Approval of the instructor required.

Provides an overview of the role law enforcement plays in the criminal justice system. Topics included are the history and organization of the police, patrol, and other law enforcement activities, police community relations, police discretion, and legal issues in policing.

The course acquaints the student with social issues that are current and which generate public discussion regarding the issues in question, helping the student to synthesize the information collected so that a coherent argument can be developed around the issue.

Examines the political, economic and historical forces that have shaped religion in the African-American community. The various roles religion plays in the African-American community as well as its ideological dimensions are analyzed.

The course focuses on increasing general knowledge and understanding of human sexuality.

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.

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. Approval of the instructor required. Every Semester.

Continuation of fieldwork in criminal justice at corrections, probation, parole, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

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.

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.

Fieldwork in governmental agencies, as well as business and private social service organizations. Approval of instructor required. Every Semester.

Analysis of the factors determining economic growth of urban areas. Economic considerations relevant to selected urban problems such as poverty, unemployment, housing and transportation.

The rise of modern social science, particularly sociology, will be traced through various periods of history. Both classical and modern social theories have been developed within the context of industrialization, popular ideologies, democratic movements, and the globalization of a world community.

Explores methods and theories which contribute to understanding urban neighborhoods and communities and addresses the question, “how people do community.”

Examination of analytic approaches to communities and neighborhoods utilizing census and socio-demographic data.

This course describes the criminal procedure and legal requirements for conviction of a criminal offense. A requirement in the Forensic Science certificate, the course lays a foundation for understanding how evidence is used in the prosecution of criminal laws.

This course provides the student an understanding of the processes available to criminal investigators to collect evidence necessary for a criminal prosecution as well as the types of evidence used as evidence in criminal cases.

The various forms of inequality will be analyzed from differing theoretical perspectives: structural functionalism, symbolic interaction, conflict theory, and Marxism. Examines the ways in which inequality permeates social forms as well as political and economic organizations and alternative ways of dealing with such inequalities.

Approaches knowledge as socially constructed, simultaneously a social product reflecting political and economic arrangements and a social force influencing the society from which it emerges.

Examines community-based corrections and the role of probation and parole in the criminal justice system.

The sociology of religious institutions, the emergence, maintenance and influence of religious groups, and the impact of religion on society. The course considers the sociological significance of religious beliefs and practices in understanding both religious phenomena as well as the role of religion in historical and contemporary society.

The sociology of Religion (3)

The sociology of religious institutions, the emergence, maintenance and influence of religious groups, and the impact of religion on society. The course considers the sociological significance of religious beliefs and practices in understanding both religious phenomena as well as the role of religion in historical and contemporary society.

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The sociology of Religion (3)
Arts and Sciences, College of

SOC 532 - Correctional Administration (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 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 561 - Terrorist Challenge to America (3)
This course identifies the history and operations of terrorist groups, identifies the key targets of terrorist activities in America, and describes the preventative strategies and responses regarding terrorist attacks. Offered annually.

SOC 562 - Probln, 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 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 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 (0-3)
To prepare for comprehensives or to do more in-depth study of a specific criminal justice area.

Spanish (SPAN)
SPAN 110 - 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 115 - Communicating in Spanish II (0-3)
Continuation of SP-A110. Prepares the student to function in simple situations related to personal interests and daily life.

SPAN 210 - Inter Spanish: Lang & Culture (0-3)
Continued practice in all skills. Readings in and discussion of Hispanic Culture.

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 310 - 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 315 - Oral Communication (0-3)
Development of fluent oral expression through communicative activities stressing listening comprehension, structural accuracy and systematic approach to vocabulary expansion.

SPAN 410 - Fluency in Spanish (0-3)
Continuation of SP-A310. Description, narration and exposition in topics of particular interest and special fields of competence.

SPAN 415 - Advanced Oral Communication (0-3)
Continuation of SP-A315. Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

SPAN 416 - Business & Prof Spanish (0-3)
Application of language skills and cultural awareness to specific business and professional practices.

SPAN 417 - 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 orginal language use.

SPAN 418 - 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 419 - Three in One: Hispanic Exp (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 421 - 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 422 - Language Acquisition (3)
This course is designed to engage language teaching professionals in the classic debate between grammar-based approaches to language teaching and more communicative schools of thought. The historical framework questions basic assumptions about tradition and innovation. The course also addresses important questions such as what it means to teach communicatively, what are proper rules of input and output in the classroom, how do learners read and write in a second language, and what approaches to testing and evaluation are appropriate for the communicative classroom. The course examines the roles of teachers and learners in the classroom, discusses theoretical and research issues relating to instructed second language acquisition. The discussion of Task-Based Instruction reformulates the basic question-and-answer paradigm found in many, if not most, language textbooks into interactive tasks that place communication in the hands of learners. The purpose of the course is to challenge language teaching professionals to reflect on their own teaching practice in light of Second Language Acquisition theory and research. Taught in English.

SPAN 423 - Span Phonetics & Phonology (2-3)
Theoretical and practical approaches 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 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 course is an interdisciplinary approach which confronts stereotypes about Latin American cultures. It involves a vast array of experiences that have established differences, stigmas and separations in Latin America.

SPAN 426 - Latin American "Modernism" (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 - Themes in Lat-Am Literature (3)
Exploration of specific themes and topics of current debate in Latin America. Offered occasionally. Content will vary. Consult the instructor.

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 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 womens 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 441 - Spanish Literary Culture (3)
History of the merger of Christian, Arabic and Jewish influences on Spanish literary culture. Offered occasionally.

SPAN 442 - Goden 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 Alarcon, Agustin Moreto, and Pedro Calderon.

SPAN 455 - 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 - Western Sephardi Diaspora (3)

SPAN 461 - Spanish Romanticism (2-3)
Doctrinaire romanticism compared and contrasted with authentic Spanish romanticism.

SPAN 462 - 19th Century Spanish Novel (3)
Costumbrianism, naturalism and social revolution illustrated in works by Fernan Caballerio, Jose Maria de Pereda, Emilia Pardo Bazan, Juan de Valera, Benito Perez Galdos, and Blasico Ibanez, and Leopoldo Alas.

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 Sema.

SPAN 467 - 20th Century Spanish Thought (2-3)
Major contributors to contemporary Spanish social, philosophical, political and literary thought: Miguel de Unamuno, Jose Ortegay Gasset and F. X. Zubiri, P. Lain Entraigo. 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 (3)
Ideological themes and aesthetics of Camilo Jose Cela, Carmen Laforet, Ramon Sender, Juan Goytisioio, 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 Bueno 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 Gimferrer, 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 495 - Senior Residency (0)
Required for graduating seniors.

SPAN 501 - 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. Offered every semester.

SPAN 502 - Survey of Applied Linguistics (3)
An overview of the field of applied linguistics with an emphasis on psycholinguistics and second-language acquisition. Not a methods course, but rather, a course on applied linguistics as it pertains to language teaching and learning.
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 - Method & Tech: Teaching Span (3)
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 once a year.)

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 - 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 509 - 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 (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 525 - 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 (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 - Contemp Latin American 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". (Offered occasionally.)

SPAN 531 - Contemp Latin American Drama (3)
Survey course that analyses the development of Latin American Theater through the XX century. Different schools and trends will be discussed. Occasionally this course will focus on specific issues or groups of authors i.e. women playwrights etc. (Offered occasionally.)

SPAN 532 - Themes in Latin Amer Lit (3)
This course examines the literary contributions of Afro-Hispanic writers from Spanish American 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 course 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.

SPAN 533 - 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". (Offered occasionally.)

SPAN 535 - Latin American Testimony (3)
This course examines the diverse strategies used by Latin American testimonial literature in order 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. (Offered occasionally.)

SPAN 537 - Latin Am Literature & Film (3)
A 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. (Offered occasionally.)

SPAN 538 - Cultural Stereotypes: Lat Amer (3)
This course aims at developing in students a critical attitude of Latin American cultural stereotypes along with the linguistic learning process. Students will be exposed to an array of knowledge and experiences in sociolinguistics, literature, politics, film and art. (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 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 - Seventeenth-Century Prose (3)
Don Quijote: prime example of baroque sensibility and baroque style. (Offered occasionally.)

SPAN 553 - 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". (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 AlarcOn, Pedro Calderon de la Barca. (Offered occasionally.)

SPAN 555 - Western Sephardi Diaspora (3)
Iberian Jewry in the Middle Ages and after the expulsion from Spain in 1492 and the forced conversions of Portugal in 1497. Study of the social, intellectual and religious words of the Sephardi communities in western Europe. Responses to rabbinic Judaism: Uriel d’Acosta, Spinoza, Isaac Cardoso and Orbio de Castro. (Offered Occasionally)
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)
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 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 (3)
The study of a selection of the most representative poetic production in Spain since 1965. This study will create awareness of how Spanish poetry has recorded the different political, social, and cultural changes in the country during the final one-third of the twentieth century. (Offered occasionally.)

SPAN 574 - Spanish Poetry 1965-Present (3)
The study of a selection of the most representative poetic production in Spain since 1965. This study will create awareness of how Spanish poetry has recorded the different political, social, and cultural changes in the country during the final one-third of the twentieth century. (Offered occasionally.)

SPAN 575 - Spanish Novel After 1970 (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 form 1975 until the end of the century. (Offered occasionally.)

SPAN 577 - Cont Women Poets of Spain (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: Coronado, Castro, Zardoya, Fuertes, Atencia, Rossetti, among others.

Theological Studies (THEO)

THEO 100 - Theological Foundations (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 themes, the problems modern thought poses for it, and its permanent significance.

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 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 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 302 - History of Anti-Semitism (3)
This course seeks to acquaint the student with the history of anti-Semitism through a study of the phenomenon from its origins in early Christianity through the pogroms of the Middle Ages, and on through the secularization process in the West which changes anti-Semitism from a religious phenomenon to a pseudo-racial one. The anti-Jewish myths of the High Middle Ages and their continuations down to today are also examined. The course ends with a study of the Holocaust and its grounding in German history.

THEO 304 - 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 320 - History of Anti-Semitism (3)
This course seeks to acquaint the student with the history of anti-Semitism through a study of the phenomenon from its origins in early Christianity through the pogroms of the Middle Ages, and on through the secularization process in the West which changes anti-Semitism from a religious phenomenon to a pseudo-racial one. The anti-Jewish myths of the High Middle Ages and their continuations down to today are also examined. The course ends with a study of the Holocaust and its grounding in German history.

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 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 - Buddhism: Religion & 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 Buddhist 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 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 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 351 - Marriage & Christian Vocation (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 354 - Evil and the Demonic (3)
Why bad things happen to good people (theodicy), why bad spirits happen to good people (demonology), why being a good person might be important in the long run (eschatology), and why good people are routinely fascinated by evil and the demonic (popular culture). No lab.

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 - 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 dialogue with each other. The student will be able to support his/her position with knowledge gained in biblical scholarship, basic biology, complexity theory, critical-analytical reading of creationism-based refutations of evolution, and modern theology. Credit not given for both THEO-356 and BIOL-256. Prerequisite: 6 hours of theology.

THEO 361 - Social Justice (3)
A study of Christian social ethics that covers Catholic social teachings as well as selected writings of Christian social activist and theologians. Community service is required.

THEO 362 - Love, Justice, and Mercy: Practicing Family Life
This course looks at the ethics of marriage and family by examining the virtues of love, justice and mercy. Emphasis will be placed on ethical issues arising in every day life. Students should leave with an awareness of theological debates about family and the ability to form their own theological vision. Prerequisite: THEO 100.

THEO 363 - Christian Decision-Making (3)
This course aims at providing practical as well as theoretical knowledge of how to make a good decision according to Christian principles, with major emphases upon the roles of love, conscience, prayer, discernment, and scripture in this process.

THEO 365 - Feminist Ethics (3)
A study of religious feminist approaches to ethical issues.

THEO 366 - Christian Morality & Business (3)
This course will study the principles of Christian morality and their application in the lives of people engaging in business. It will focus on the responsibilities of individuals, of economic structures and businesses, and the mutual relationship involved. Catholic social teaching will be highlighted.

THEO 368 - 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 372 - Theology of Sexuality (3)
Nature and principles of Christian sexual morality; special contemporary questions.

THEO 375 - Theology of Suffering & Death (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 383 - Christian Spiritual Tradition (3)
Studies in the major spiritual trends and key figures within the Catholic, Eastern Orthodox, and Protestant traditions.

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 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 themse, 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 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 421 - Early Christian Apocalypses (3)
Current theological insights of Protestant theologians and churches.

THEO 432 - Christian Relation to Non-Christian (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 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 442 - 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 450 - Theology of God (3)
The historical and contextual study of human understanding of God and personal, pastoral implications.

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 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 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 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 490 - Senior Seminar I (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 the aim of illuminating the communal and public dimensions of theological inquiry. Required of all majors.

THEO 491 - Senior Seminar II (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 the 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)

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)

THEO 544 - Christology (3)
Meaning of Jesus Christ in the Bible, in Christian tradition, and contemporary theology. Offered occasionally.

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 theologicans 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 577 - 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 584 - Spe Topic: Religious Education (3)
Offered occasionally.

THEO 589 - Spe Topic: Religious Education (3)
Offered occasionally.

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 Christian 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 609 - Early Church Seminar (3)
A study of specific author or school of theology in Christian antiquity. Offered every semester.

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 (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 hear 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 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 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 playwriting. 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 (3)
Study in the principal theories of realistic acting is balanced with practice in experiencing character creation. Principals 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 & Prfrmnc (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 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.

THR 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.

THR 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.

THR 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.

THR 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.

THR 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.

THR 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!

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 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 (3)
Special Notes: <i>Theatre Majors/Minors Only</i> Faculty guided experience in University Theatre Productions. This course is repeatable. Pass/Fail only.

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 450 - Costume Design (3)
Objectives: 1. To help students see collaborative options for unifying 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 explore 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 456 - Directing (3)
Objectives: 1. To discuss with students the evolution of Directing as a craft in the theatre over the last 100 years, particularly the reasons for its emergence in the late 19th century and the rapid development of its practices; 2. To instruct students in the responsibilities of the Director as a collaborator with audience members and with the actors and designers; 3. To teach the value of imaginative flexibility coupled with attention to detail; 4. To guide students through the process of directing from conceptualization through rehearsal with actors, and finally, performance before an audience. Activities will include individual student-directed plays.

THR 457 - Advanced Acting (3)
This course will provide introductory knowledge of the basic acting theories espoused some 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 461 - Multi-Cultural Survey of Theatre (3)
This course is

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 dramas, stage combat, etc.

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 with 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.

Women's Studies (WSTD)

WSTD 197 - Intro to Women's Studies (3)
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.

WSTD 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.
WSTD 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.

WSTD 431 - Contemp Women Writrs in France (3)
20th-Century Women's fiction in French, examined in light of French and Quebeocois feminist theory. De Beauvoir, Duras, Sarraute, Brossard, Maillet, Cixous, Irigaray, Redonnet, etc. Taught in French.

WSTD 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.

WSTD 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.

WSTD 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.

WSTD 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.

WSTD 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.

WSTD 458 - Studies in 19th Century Lit (3)
Focus on women writers in the Nineteenth Century. Explore the evolution of the woman 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.

WSTD 461 - Female Modernism (3)
An exploration of the innovative work on gender that is central to radically changing concepts of modernism.

WSTD 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.

WSTD 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 María Victoria Atencia.

WSTD 481 - Feminist Philosophy (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.

WSTD 485 - Women's Studies: Capstone (3)
The synthesizing course; students do an independent study, research paper or practicum. Every semester.

WSTD 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.

WSTD 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.

WSTD 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.

WSTD 502 - 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.

WSTD 560 - 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 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.

WSTD 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.

WSTD 659 - 19th Century English Lit. (3)
Studies in particular issues and developments in British literature of the nineteenth century.

WSTD 669 - Irish Gothic (3)
Studies in particular issues and developments in British literature of the nineteenth century.

WSTD 822 - Employment Discrimination (3)
This course will provide an in-depth study of current problems in 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. An emphasis is placed on the real-world environment of business and the use of financial accounting information for management decision-making.

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.

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.

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 prerequisite to making informed decisions.

ACCT 322 - Cost Management (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.

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.

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.

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 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.

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). The course is also intended to provide a base for the student's future study of advanced tax topics.

ACCT 432 - Federal Income Tax II (3)
Understanding the complexities of the Internal Revenue Code in defining, organizing, and computing the tax liabilities of corporations; economic ramifications of alternative approaches to corporate taxation.

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.

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.

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 614 - Sem in Acct and Society (3)
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)

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 Indiv. & 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 637 - 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 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 (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.

Decision Sciences (DSCI)
DSCI 207 - Intro: Business Statistics (3)
Introduction to descriptive statistics for displaying and summarizing business data; the use of probability 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.

DSCI 305 - Intro: Mgt. Sci./Prod. Sys (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 decision.

DSCI 360 - Intro to Glbl Supply Chain Mgm (3)
The goal of this course is to make students aware 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 statement, global outsourcing and security issues in supply chain integration.

DSCI 501 - Operations Management (3)
The objectives of this course are (1) to 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 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 and Process Mgt (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.

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.
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 416 - History-Economic Analysis (3)
Origins and development of modern economic thought, from ancient time, through the 19th century. Pre-requisite: ECON 312 & ECON 314 or permission of department chair.

ECON 420 - Money and Banking (3)
Impact of the U.S. Treasure, the Federal Reserve System, commercial banks and other financial institutions on economic variables such as employment, prices and the balance of payments.

ECON 430 - International Trade (3)
Economic determinants of trade between nations and regions. Efficiency and distributive effect of trade; theory of tariffs and other impediments to international transactions. Balance of payments analysis, domestic international income interactions; international economic adjustment under different foreign exchange rate systems.

ECON 431 - Exchange Rate and Global Econ (3)
Basic international economic principles and goals as they relate to industrial policy and the determinants of trade deficits, and the short-run and long-run determinants of nominal and real exchange rates, particularly the effects of government spending, money and productivity on the exchange rate. This course examines international finance theory and applies it to a nation's economic circumstances. It is designed to ask and answer important questions of current international macroeconomic issues.

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.

ECON 456 - Economic Development (3)
Topics include: the political economy of the Third World; review of comparative historical and theoretical approaches to growth and development; and analysis of population change, migration, education, the role of private and public capital, and international linkages.

ECON 460 - Public Finance (3)
The economics of public finance examines 2 key functions of government - taxation and expenditures. These government functions are evaluated based on efficiency and equity criteria. Topics include externalities, public goods, Social Security, Medicare and the personal income tax are examined.

ECON 477 - Econometrics (3)
Theory of economic statistics, development of statistical models applied to economic data. Probability theory, statistical criteria, hypotheses testing, correlation analysis; identification, multicolinearity and serial correlation.

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.

ECON 501 - Economics for Managers (3)
Focuses on the economic decisions made by managers and 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 - Managerial Economics (3)
Basic tools for analyzing markets and economic decision making by households and businesses. Evaluation of market price movements and buyer/seller sensitivity, household spending and earning decisions, business production decisions, production costs, and business behavior in output and input markets.

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 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 war; 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 & Intl 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 - Econ of Govt-Fed Sector (3)

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.

Finance (FIN)
FIN 301 - Principles of Finance (3)
Basic financial management of business firms involving procurement, allocation and control of funds according to profitability and liquidity objectives. Emphasis on concepts of business finance, legal form, financial structure, flow of funds, security and credit instruments, analysis of investment and profit performance. The financial system and major institutions including international finance.

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, ratemaking and financial operation of carriers; risk exposure, loss prevention, combating of risks, insurance administration.

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.

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.

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 that they trade in. Securities studies 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.

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.

FIN 363 - Equity Securities & Markets (3)
Principles of investing in fixed income, equity and derivative securities; types of investments; analysis of securities markets and the mechanics of trading; principles of diversification and portfolio analysis; security analysis and equity valuation, including economy, industry and company analysis; valuing fixed income securities; managing a fixed income portfolio; mechanics and valuation of options and futures; portfolio performance evaluation.

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.

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.

FIN 433 - Financial Analysis/Modeling (3)
This course will develop a solid understanding of financial analysis using electronic spreadsheets, and the ability to integrate an electronic spreadsheet in 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.

FIN 453 - Advanced Financial Mgt (3)
In-depth study of finance topics applicable to the firm. 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.
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, we do not presume 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 that were not covered in FIN 363. Requires instructor permission.

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.

FIN 600 - Financial Management (3)
In-depth studies of principles of corporate finance to develop the theoretical knowledge and the practical judgment 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. Pre-requisites: ACCT 501 and ECON 501.

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 616 - Equity Securities & Markets (3)
Study of equity securities and the markets in which they trade. Basics of equity valuation and market efficiency; analysis of equity trading strategies, with an emphasis on what current finance research says about the likely success of these strategies.

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 628 - 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 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 underlying 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.

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 in Latin America.

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 style 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.

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 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.
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.

IB 496 - Study Abroad Session (3)
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.

IB 501 - Business Economics (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 Trade Policy (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 content language, relationship versus transaction-based negotiation, time orientation, etc.

IB 545 - Acct Prob of Multinat'l Enter (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 - Latin Amer Bus Ctry Cases (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 555 - European Bus Ctry Cases (2)
This course provides an applied study of business and economic environments of Westen Europe using country cases as examples. Countries of focus include members of the European Economic Community.

IB 561 - Latin Amer Bus Ctry Cases (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 Mkgt 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 Europe. Topics include socio-historical case studies, the rise and future of the European Community and European economic trends.

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, 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.
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 affect 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 502 - Quant Methods/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.

MBA 503 - Emerging Bus Issues III (1)
Current and emerging business issues and practices that revolve around strategy. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 504 - 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. Students exercise 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 505 - 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.

MBA 506 - 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 510 - 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 515 - 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 Tech in Organizati (1)
This course focuses on the management of information technology in organizations. Foundational concepts regarding information technologies will be covered including how IT has evolved since the invention of the computer, what components they are comprised of and elemental nature of how systems work. Further study will examine: (1) the role and function of the IT department in organizations; (2) the nature of information in business intelligence and decision making, transaction processing, and as part of the organizational product or service; (3) the make-buy decision and how new IT is developed; (4) outsourcing and managing processes that ought not be outsourced and (5) trends in emerging technology.

MBA 622 - Operations Management (1)
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 623 - Supply Chain Management (1)
The objective of this course is to introduce students to an integrated enterprise approach of flow of goods, services and information from suppliers to customers (supplier relationship, procurement/strategic sourcing, operations management, inventory control, logistics and transportation, distribution, customer service and information technology). 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. Accordingly, "system thinking" is the underline theme for this course. Wherever appropriate, financial aspects of supply chain management will be introduced and discussed.

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 enterprise 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 & Team Management (2)
Managing in a diverse, constantly changing global environment driven by technology requires a different manager than the past century. Technical skills are simply not enough to insure managerial and personal effectiveness. This course will be based on the premise that understanding yourself will make you more effective in dealing with others. Personal leadership will lead to both team leadership and an understanding of the complexities of managing people in a rapidly changing organizational world.

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 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, 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 view of how factors impact the operation of international business from the view points of political, economic, financial, cultural, legal, and business practices.

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, 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, an international travel component, and the development of a practical project to demonstrate 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.

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.

MGT 310 - Mgt of Human Resources (3)
Overview of contemporary HR problems and practices as related to the management of individual firms; major topics: employee selection, training and development, personnel appraisal, organizational morale and discipline, compensation administration, employee benefits and services, organizational communication.

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.

MGT 320 - Entrepreneurship (3)
Identification, development, and growth of the entrepreneur and the firm within the free enterprise system; exploration of small business in terms of risk, difficulties, achievement, orientation, rewards, and satisfaction; Operating problems within selected business opportunities at varying stages of growth and development; interaction between students and entrepreneurs in the classroom and in the actual work environment.

MGT 400 - Strategic Mgt and Policy (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.

MGT 411 - Employ, Place, Personnel Plan (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.

MGT 413 - Compensation (3)
The purpose of compensation administration is 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. Presentation of the principles and concepts essential to establishing and maintaining adequate and equitable compensation for employees.

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.

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.

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 nonunion settings, discrimination in employment, and health and safety issues.

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 analysis, 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.

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.

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.

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.

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 regulations.

MGT 605 - Strategic Management (3)

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 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 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. Pre-requisites: MGT 600 and MGT 620 or MGT 623.

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. Pre-requisites: 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.

Mgmt Information Sys Bus (MIS)

MIS 200 - Intro to Mgt Info Systems (3)
This course introduces students to the development, implementation and use of information systems in organizations. This course is intended to prepare students for living and working in an information-rich, networked world and to introduce students to the profession of MIS. Students in the course will use a variety of computer software towards fulfilling the objectives of the course. Major topics include: 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.

MIS 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.

MIS 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.

MIS 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, recovery and resources 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 a major DBMS package such as Oracle.

MIS 345 - Web Site Design & Dev (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 the concepts of developing a web site. The basics include a working knowledge of HTML and Internet protocols. Students will learn to use a web site 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 home page and publish it on a web server. Students will also learn advanced navigation and presentation techniques in the development of a design portfolio. When completed, students will be prepared to design, implement and manage a basic web site.
MIS 350 - Info Security Management (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 the 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.

MIS 360 - Global Information Mgt (3)
This course addresses issues in global information management. The
central issues facing IT managers and general managers working with IT on
a multinational basis will be the focus of this course. 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.

MIS 410 - 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.
Projects will require the student to use process modeling techniques to
assist in the analysis and design process.

MIS 435 - Data Comm & Networking (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.

MIS 450 - Web-Based App & Archit (3)
Capstone MIS 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.

MIS 480 - MIS 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.

MIS 600 - Managing Info Tech (3)
This course will provide the student with a broad based understanding of
the management of information technology in order to prepare the student
to manage change as the technology is implemented in the organizational
environment. It will also make the student aware of current technological issues and how they will impact his or her ability to manage.

MIS 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.

MIS 625 - E-Commerce Appl Develop (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.

MIS 630 - Database Mgt Systems (3)
Course provides an overview for understanding database techniques,
begining 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.

MIS 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.

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; overview of career
opportunities in the marketing field.

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, physical logistics to achieve channel policies;
social, governmental, economics, and competitive aspects affecting
channels.

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.

MKT 360 - Marketing Research (3)
Problem-solving in marketing through assimilation and interpretation of
information; secondary sources and techniques of surveying and
experimentation examined; statistical tools applied to research design and
interpretation.

MKT 430 - Retail Management (3)
Retailing operations within the marketing systems; the management,
organization and control of retail establishments; retail buying practices,
pricing, control of inventories, personnel publicity, advertising, store
location.

MKT 440 - Buyer Behavior (3)
Concepts and theories explaining the cognitive, behavioral, and
experimental 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.

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.
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.

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.

MKT 465 - Marketing Decision Models (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 (by students who have achieved senior standing). 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.

MKT 490 - Marketing Policy (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; examine managing marketing mix decisions with special attention given to communication (personal and mass), price practices, channels of distribution, and product policy.

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. Pre-requisite: 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 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.
**Counseling & Family Thrpy (CFT)**

**CFT 500 - Foundations of Guidance: Elem (3)**
Theories and practice in guidance, survey of Missouri Model Guidance Program, professional role and function of the counselor at the elementary school level. Offered every other Summer semester.

**CFT 501 - Foundations of Guidance: Sec (3)**
Theories and practice in guidance, survey of Missouri Model Guidance Program, professional role and function of the counselor on the secondary school level. Offered every other Summer semester.

**CFT 520 - Counseling & Career Development (3)**
Theories of career development; counseling approaches for decision-making, integrating personal values, career interests and life-style planning, vocational and career information resources. (Offered every Summer)

**CFT 522 - Becoming a Counselor (3)**
Introductory course for Master's degree students in Counseling. The person of the counselor; helping relationship skills; responding to differences among clients, including gender, culture, social class, exceptionality and generation; professional identity issues; ethical and legal standards. (Offered every Fall)

**CFT 530 - Counseling Theory (3)**
Theories of counseling and therapy and how techniques evolve from those theories and from the personality of the theorist. Applications to school and agency settings for dealing with both normal and exceptional needs through the life cycle. (Offered every Fall semester and Summer.)

**CFT 532 - Group Counseling Theory/Pract (3)**
Theories and practice in leadership, interpersonal communication, group dynamics; experiential activities in the formation, development, evaluation of a group designed to develop effective new human relations skills. Offered every Spring. Prerequisites: CFT 522 and CFT 530 or 671.

**CFT 533 - Assessment Methods in Cnslg (3)**
Psychological tests and standardized methods of assessing interest, personality, aptitude, achievement and intelligence traits of individuals; attributes of tests; uses in school guidance, counseling, therapy, personnel work, and school psychological testing; DSM-IV. The student will take, administer, score and interpret several different standardized tests. (Offered every Spring semester.)

**CFT 534 - Assessing Person/Context Inter (3)**
Methods and tools of assessing systemic individual/environment interactions, related stressors and adjustment issues; student/classroom, employee/workplace and individual/family interactions emphasized; staffing strategies to promote individual and systemic growth; case studies, case notes, confidentiality; the assessment role of counselors as change agents. (Offered occasionally.)

**CFT 535 - Family/School Consultation (3)**
Issues related to consulting within contexts which have primary responsibility for fostering the development of children. Counseling and consulting skills for responding to both normal and exceptional needs of children in family and school settings. (Offered occasionally.)

**CFT 538 - Nonverbal Behavior (3)**
Cognitive and experiential inquiry into the components of non-verbal behavior which may have communicative significance in interpersonal relationships. (Offered occasionally.)

**CFT 540 - Practicum in Counseling: Beg (3)**
Supervised experience in individual counseling. By permission of Instructor only. Offered every Spring semester.

**CFT 541 - Practicum in Counseling: Adv (3)**
Supervised experience in individual counseling. By permission of Instructor only. (Offered every Fall and Spring semesters.)

**CFT 544 - Internship in Counseling: Beg (3)**
A supervised experience in individual and group counseling within a school, institutional or agency setting. By permission of Instructor only. Offered every semester.

**CFT 545 - Internship in Counseling: Adv (3)**
Prerequisite: CFT-544. By permission of Instructor only. Advanced supervised experience in individual and group counseling within a school, institutional or agency setting. (Offered every semester.)

**CFT 547 - Enrichment/Prevention Programs (3)**
Enrichment and Prevention Programs in Family and Human Systems. Ways to conceptualize, design and deliver programs which facilitate the normal development, growth and enrichment of individuals, couples and families and the prevention of dysfunction and pathology in human systems. (Offered every other Fall semester.)

**CFT 550 - Social, Cultural & Gender Issues (3)**
Social, Cultural and Gender Issues in Counseling and Family Therapy. The impact of social, cultural and gender role expectations on counselor-client interactions in individual, group or family therapy. Characteristics of skillful counseling in such contexts. (Offered every Spring semester.)

**CFT 555 - Diagnosis & Appraisal in CFT (3)**
Kinds of consultative relationships, stages of consultation, identification of client status, contextual implications of the consultation process. (Offered occasionally.)

**CFT 556 - Process Consultation Practices (3)**
Kinds of consultative relationships, stages of consultation, identification of client status, contextual implications of the consultation process. (Offered occasionally.)

**CFT 557 - Ethical & Legal Issues in CFT (3)**
An intensive and case-focused investigation of standards of professional practice in counseling and family therapy. Topics will vary. Offered every Summer semester.

**CFT 560 - Issues in Counseling & Fam Thera (3)**
Examination of current themes and issues relevant to the professional practice of counseling and family therapy. Topics will vary. Offered every Summer semester.

**CFT 562 - PRC: Ind Counseling (Beg) (3)**
The impact of social, cultural and gender role expectations on counselor-client interactions in individual, group or family therapy. Characteristics of skillful counseling in such contexts. (Offered every Spring semester.)

**CFT 565 - Diagnosis & Appraisal in CFT (3)**
Interpersonal, object relations and family systems perspectives on traditional, clinical diagnostic classifications and related assessment methods and instruments. Offered every other Summer semester.

**CFT 566 - Integrating Systems Therapies (3)**
The initial family therapy course includes the theoretical basis for systems theory and an overview of the various family therapy approaches. Offered every Fall semester.

**CFT 567 - Counseling & Vocational Behavior (3)**
Prerequisite: CFT-520. Advanced readings in counseling for career development and career decision making. (Offered occasionally.)

**CFT 570 - PRC: Ind Counseling (Int) (3)**
Beginning supervised doctoral experience in individual therapy. By permission of Instructor only. (Offered occasionally.)

**CFT 572 - PRC: Ind Counseling (Adv) (3)**
Intermediate supervised doctoral experience in individual therapy. By permission of Instructor only. (Offered occasionally.)

**CFT 576 - Adv Couple and Family Therapy (3)**
Prerequisite: CFT-671. Special issues in the treatment of marital and family systems. (Offered every other Fall semester.)
CFT 661 - Introduction to Couple & Family Studies (3)
Theory and research on the family life cycle, family transitions, couple relationships, and healthy family development. Offered every summer.

CFT 667 - Group Counseling (Adv) (3)
Prerequisite: CFT-532. Advanced seminar on the current literature and practices of counseling in group setting. (Offered occasionally.)

CFT 669 - PRC: Supervision of Grp Work (3)
The theory and practice of clinical supervision in family therapy. Offered every fall semester.

CFT 670 - Couple Interaction & Therapy (3)
Theories and techniques of couple therapy, couples' decision-making, sexuality and conflict resolution. Specific techniques for enhancing relationships are included. Offered every spring semester.

CFT 671 - Family Systems Theory & Therapy (3)
This initial family theory course includes the theoretical basis for systems theory and an overview of the various family therapy approaches. (Offered every fall semester.)

CFT 672 - PRC: Beg Couple/Family Therapy (3)
Beginning supervised practical experience in couple and family therapy. By permission of instructor only. Offered every fall semester.

CFT 673 - PRC: Int Couple/Family Therapy (3)
Intermediate supervised practical experience in couple and family therapy. By permission of instructor only. Offered every spring semester.

CFT 674 - PRC: Adv Couple/Family Therapy (3)
Advanced supervised practical experience in couple and family therapy. By permission of instructor only. Offered every summer semester.

CFT 675 - PRC: Spv of Cnsrls/Fam Ther (3)
Experience in conducting supervisions of counselors or therapists in training: individual, group or marriage/family therapy. By permission of the instructor only. (Offered every fall and spring semesters.)

CFT 676 - Family Issues in Therapy (3)
Prerequisite: CFT-666 or permission of instructor. Reading and discussion about the major issues currently experienced by families, with a focus on implications for family therapy and intervention approaches. (Offered every spring semester.)

CFT 677 - Social Ecology (3)
Interactions of culture and gender within family, legal, political, health care, education and therapy systems. Offered every other summer.

CFT 682 - The Self in Theory & Therapy (3)
Prerequisite: One semester of doctoral practicum. The system of therapy relationships including contextual and personal influences on the selection and application of theories of therapy. Offered every spring semester.

CFT 684 - PRC: Teaching in Counseling (3)
Doctoral experience assisting in the teaching of a beginning counselor education course. Permission of instructor only. (Offered occasionally.)

CFT 685 - Clinical Supervision (Beg) (0)
One-to-one beginning supervision of work with clients. Must be currently enrolled in CFT-662 or CFT-672. (Offered every semester.)

CFT 686 - Clinical Supervision (Int) (0)
One-to-one intermediate supervision of work with clients. Must be currently enrolled in CFT-663 or CFT-673. (Offered every semester.)

CFT 687 - Clinical Supervision (Adv) (0)
One-to-one advanced supervision of work with clients. Must be currently enrolled in CFT-664 or CFT-674. (Offered every semester.)

CFT 697 - Research Topics in CFT (3)
Study of qualitative and quantitative methods and design applicable to research in counseling and family therapy. (Offered every fall semester.)

CFT 698 - Graduate Reading Course (1-3)
Prior permission of guiding professor.
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 500 - 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 501 - 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 510 - 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 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 Spring 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 531 - 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 535 - Development of American Higher Education (3)  
The historical development of higher education in the United States with an emphasis on the goals, characteristics, and problems of contemporary American universities. Offered every Fall semester.

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 545 - Law and Higher Education (1)  
A study of the legal environment in which higher education operates. The course will explore the legal issues confronting higher education and will provide a survey of recent and current developments in higher education law. (Offered occasionally.)

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 554 - 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 560 - Student Personnel Admin (3)  
Survey of patterns, problems and trends in student personnel. (Offered every Fall semester.)

EDA 561 - Sem: Student Personnel Admin (3)  
Supervised experience in appropriate student personnel administrative offices. Permission of Instructor required. (Offered every Fall and Spring semester.)

EDA 562 - Internship: College Teaching (3)  
Supervised experience in teaching a college course. Permission of instructor required. (Offered every Fall and Spring semester.)

EDA 563 - The Principalship (3)  
A study 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 565 - Sem: Student Personnel Admin (3)  
In-depth analysis of selected topics involving the law of higher education. (Offered occasionally.)

EDA 566 - 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 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 574 - The College Student (3)  
A study of college life and the student experience from a variety of points of view concerning policies and practices of American colleges and universities. (Offered every Fall 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 576 - The College Student (3)  
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A study of college life and the student experience from a variety of points of view concerning policies and practices of American colleges and universities. (Offered every Fall semester.)

EDA 579 - The College Student (3)  
A study of college life and the student experience from a variety of points of view concerning policies and practices of American colleges and universities. (Offered every Fall semester.)

EDA 580 - 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 581 - 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 582 - 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 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 annually.)

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. Foci 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 every Spring semester.)

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 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 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 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.)
Europe since the Sixteenth Century as related to the times in which they occurred. (Offered occasionally.)

EDF 630 - Studies: Catholic Education (3)
A study of selected writings now considered classics in the field of Catholic education. (Offered occasionally.)

EDF 631 - SEM: Catholic Education (3)
An investigation of selected educational developments as related to the history of the period. (Offered occasionally.)

EDF 640 - History Euro Ed Thru 16th Cent (3)
An intensive study of selected problems and issues related to Catholic educational programs. (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 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 661 - SEM: Philosophy of Education (3)
Investigation of relationships between education and society or education and problems that arise. (Offered occasionally.)

EDF 611 - SEM: Comparative Education (3)
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 698 - Graduate Reading Course (1-3)
Prior permission of guiding professor.
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. Offered every Fall semester.

EDH 600 - Org & Admin of Higher 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.

EDH 658 - Financial Admin in Higher Educ (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 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.

EDI 200 - 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 202 - 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 203 - Pre-Teaching Lab, Early Child (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 - Intcntl 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 of and international students in student-led conversation groups and extracurricular activities. Meets new core curricular actovoties.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 - Elem Meth of Teach Reading (2)
Instructional techniques and classroom materials suitable at the elementary school level. May include Practicum experience. Various approaches to teaching reading. Every semester.

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. Include Practicum experience. Fall semester.

EDI 309 - Elem Meth Teaching Lang. Arts (2)
Focus on the elements in language arts program. Includes development of children 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.
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 370 - 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 373 - Obs & Student Teach Sec (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 380 - 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 444 - Assessment 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). Incorporation of 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 - Organization/Mgmt 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 - Home School & Comm Res EC (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 philosophical, curricular, 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 488 - Senior Inquiry (0-3)
Senior inquiry. Offered every semester.

EDI 492 - Pro Dev EC,Elem,SpEd, ECSE (2)
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 (2)
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 EDII-431.

EDI 495 - Senior Residency (0)
Education Instruction. Every semester.

EDI 497 - Portfolio Development IV (0-1)
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 EDII-297 & EDII-397.

EDI 524 - Sem: Innov in Elem Math Meth (3)
A seminar in mathematics education including the following topics: New techniques of teaching 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 Teachers (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 the 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 functions. 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 demands 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 occasionally).

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 schedule 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 (2-3)
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 (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 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 (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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDL 530</td>
<td>School Law (2-3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EDL 563</td>
<td>The Principalship (3)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 573</td>
<td>Prof Staff Dev and Evaluation (2-3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EDL 581</td>
<td>Intern: Ed Admin - Elementary (2-6)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 582</td>
<td>Intern: Ed Admin - Mid School (2-4)</td>
<td></td>
<td>Students work in middle/junior high school under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester).</td>
</tr>
<tr>
<td>EDL 583</td>
<td>Intern: Ed Admin High School (0-6)</td>
<td></td>
<td>Students work under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester).</td>
</tr>
<tr>
<td>EDL 584</td>
<td>Intern: Ed Admin-Superintendent (3-6)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 598</td>
<td>Graduate Reading Course (1-3)</td>
<td></td>
<td>Prior permission of guiding professor.</td>
</tr>
<tr>
<td>EDL 600</td>
<td>Prof Writing in Ed Leadership (3)</td>
<td></td>
<td>Provides the doctoral student with an introduction to the principles and practices of professional writing. Semester projects include writing professional journal articles, developing a book prospectus, and developing a proposal to present a paper at a professional conference.</td>
</tr>
<tr>
<td>EDL 610</td>
<td>Theory of Administration (3)</td>
<td></td>
<td>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, leadship, and communication. (Offered every Fall semester).</td>
</tr>
<tr>
<td>EDL 611</td>
<td>School District Administration (3)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 614</td>
<td>The Politics of Education (2-3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EDL 620</td>
<td>Ethics of Ed Leadership (3)</td>
<td></td>
<td>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.)</td>
</tr>
<tr>
<td>EDL 630</td>
<td>Advance School Law (2-3)</td>
<td></td>
<td>Prerequisite: EDAI-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)</td>
</tr>
<tr>
<td>EDL 640</td>
<td>Sem: Human Resources Admin (2-3)</td>
<td></td>
<td>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.)</td>
</tr>
<tr>
<td>EDL 647</td>
<td>School Facilities (2-3)</td>
<td></td>
<td>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.)</td>
</tr>
<tr>
<td>EDL 650</td>
<td>School Finance (2-3)</td>
<td></td>
<td>Principles of taxation, developing school finance formulas, and role of federal, state, and local governments in financing education. (Offered every Fall semester.)</td>
</tr>
<tr>
<td>EDL 660</td>
<td>Higher Ed Curriculum (3)</td>
<td></td>
<td>Survey of practices and problems in the development of curricula in American colleges and universities. (Offered occasionally.)</td>
</tr>
<tr>
<td>EDL 669</td>
<td>School Business Administration (2-3)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 670</td>
<td>College Teaching (3)</td>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>EDL 677</td>
<td>Sem: Academic Administration (1-3)</td>
<td></td>
<td>In-depth study of several selected problems in the area of academic administration of colleges and universities. (Offered occasionally.)</td>
</tr>
<tr>
<td>EDL 697</td>
<td>Research Topics in Higher Ed (3)</td>
<td></td>
<td>Discussion of theories of research and the process of hypothesis development. (Offered every Spring semester.)</td>
</tr>
<tr>
<td>EDL 698</td>
<td>Graduate Reading Course (1-3)</td>
<td></td>
<td>Prior permission of major professor required.</td>
</tr>
<tr>
<td>EDR 396</td>
<td>Quant. &amp; Qual. Meth in Res (3)</td>
<td></td>
<td>This course will begin with an introduction to the philosophial 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.</td>
</tr>
<tr>
<td>EDR 496</td>
<td>Action Research for Educ (1)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>EDR 540</td>
<td>Qual Research in Education (3)</td>
<td></td>
<td>Students will learn the qualitative research paradigm, data collection and analysis techniques and report writing. Offered every fall and spring semester.</td>
</tr>
</tbody>
</table>
EDSP 401 - Law and the Handicapped (1)
Discussion of local, state and federal laws pertaining to the disabled. Every semester.

EDSP 402 - Beh Mangmt EC, EL, ECSE (2)
Overview of the principles of behavior management applicable to early childhood, elementary and special education classrooms. Techniques will include various theories. Focus will be on both prevention and intervention.

EDSP 425 - Beh Mngmt Mid, Sec, SpEd (2)
Overview of the principles of behavior management applicable to middle, secondary and special education classrooms. Techniques will be included from various theories. Focus will be on both prevention and intervention. Every 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 EDLSI-424.

EDSP 427 - Beh Mgmt 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 EDLSI-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 EDLSI-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 EDLSI-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 EDLSI-453 and admission to teacher certification program.
EDSP 438 - Supv Pract in EC Sp Ed Prac (6-10)
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, 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 with disabilities. Included field work. Prerequisite EDSI-431.

EDSP 448 - Teach Meth Incl Clal 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 EDSI-431.

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)
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 EDSI435.

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/Moderate 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 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 467 - Ob/ST Mild/Moderate (10)
Full day, full-time teaching experience. Candidates will demonstrate 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 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 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 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)

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: Mental Retardation (3)
Prerequisite EDSI443 or equivalent. A gradute 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: ECESpEd (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)
Special 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 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.

Public Policy Studies (PPS)
PPS 200 - Goverment 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 Goverment (3)
Government organization, operation, politics and policies of states and their subdivisions are covered. Offered Spring.

PPS 300 - Current Urban Political and Governmental Prolbe
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 and economic perspectives on urban 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.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPS 420</td>
<td>Urban Ecology: Communities and Neighborhoods</td>
<td>Explores methods and theories which contribute to understanding urban neighborhoods and communities and addresses the question how people do community. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 425</td>
<td>Urban Classics (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 426</td>
<td>The Census and Neighborhood Analysis (3)</td>
<td>Examination of analytic approaches to communities and neighborhoods utilizing census and other socio-demographic data. Offered Spring semester.</td>
</tr>
<tr>
<td>PPS 430</td>
<td>Administrative Law (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 435</td>
<td>Intro to GIS (3)</td>
<td>Focus on Geographic Information Systems analysis of the politics and legal issues involved in selected functional categories of urban public policy. Offered Fall semester.</td>
</tr>
<tr>
<td>PPS 460</td>
<td>Law, Courts &amp; Urban Change (3)</td>
<td>Analysis of law courts and the legal process as instruments of urban social, economic and physical change. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 464</td>
<td>Probation, Parole and Community Corrections (2)</td>
<td>An examination of the policies designed to limit the reliance on the institutionalization of offenders. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 465</td>
<td>Urban Criminal Justice Policy (3)</td>
<td>Various actors in the criminal justice system and analysis of their decision-making processes. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 490</td>
<td>Field Service (3-6)</td>
<td>By permission of chair only.</td>
</tr>
<tr>
<td>PPS 500</td>
<td>The Metropolis (3)</td>
<td>Seeks to impart an understanding of the political and governmental process at the local levels of American government (city, county, special district and metropolitan area). Utilizes problematic topical areas (e.g., fiscal problems, political behavior, socio-demographic change) as organizing themes for study and seminar discussion. Offered every Fall semester.</td>
</tr>
<tr>
<td>PPS 501</td>
<td>Research Methods (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 502</td>
<td>Issues in American Public Adm (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 503</td>
<td>Special Topics:Urban/Adm Theor (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 506</td>
<td>Qualitative Res &amp; Eval Methods (3)</td>
<td>Descriptive research methods including participant observation, oral history, and photography and their application to program evaluation and policy analysis. Offered every Spring semester.</td>
</tr>
<tr>
<td>PPS 508</td>
<td>Legal Research (2-3)</td>
<td>An introduction to the tools for conducting legal research and finding legislative intent. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 510</td>
<td>Urban Economic Development (3)</td>
<td>Factors determining business, industrial and commercial location. Techniques used in analyzing metropolitan economic growth and methods used by industrial development organizations to attract business firms. Offered every Fall semester.</td>
</tr>
<tr>
<td>PPS 512</td>
<td>Intro to Public Sector budgeti (3)</td>
<td>Public budgeting at all levels of government; economic and political aspects of budgeting. Features in-class budget simulation. Offered every Fall semester.</td>
</tr>
<tr>
<td>PPS 515</td>
<td>Economics of the Public Sector (3)</td>
<td>Introduction to economics of the public sector. Specific issues regarding welfare economics, expenditure programs, and taxation. Offered every Spring semester.</td>
</tr>
<tr>
<td>PPS 518</td>
<td>Public Personnel Administratio (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 520</td>
<td>Crime, Justice and Public Pol. (3)</td>
<td>Socio-political parameters of crime and society's policy response to it. Offered every other year.</td>
</tr>
<tr>
<td>PPS 525</td>
<td>Infrastructure Plan. &amp; Process (3)</td>
<td>Focus is on provision of urban infrastructure services. The course covers the planning, technical, and financial aspects of transportation, water supply systems, sanitation, and sewage. Includes the discussion of regional needs assessment, impacts, and the development of regional management systems. Offered every year.</td>
</tr>
<tr>
<td>PPS 530</td>
<td>Planning the Metropolis (3)</td>
<td>The urban planning process and the evolution of comprehensive planning. Theory and practice combined with an actual exercise in preparing a community plan. Offered every Fall semester.</td>
</tr>
<tr>
<td>PPS 531</td>
<td>Land Use Planning &amp; Anal. (3)</td>
<td>Skills, issues, and policies involved with site analysis and design in both new development and redevelopment contexts. Offered every Spring semester.</td>
</tr>
<tr>
<td>PPS 535</td>
<td>Intro to GIS (3)</td>
<td>An overview of conceptual, technical, and procedural aspects of Geographical Information Systems (GIS). Introduction of three major types of GIS, data models, and applications. Creation of a GIS product stressing the conceptual context of the technical and mechanical activities as a major component of laboratory activity. GIS principles applied to spatial information-analysis and problem-solving. Offered each Fall semester.</td>
</tr>
<tr>
<td>PPS 536</td>
<td>Science, Tech, &amp; Public Policy (3)</td>
<td>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.</td>
</tr>
</tbody>
</table>
PPS 537 - Intermediate GIS (3)
Focuses on implementing and managing Geographic Information Systems (GIS). Training in ArcView GIS Extensions and involving data management, spatial analysis, network, operations, and three-dimensional analysis. Exploration of organizational issues and implementation. A GIS user's needs-analysis is developed and conducted. The proposal and management of a GIS project. Offered annually.

PPS 538 - Advanced GIS Concepts (3)
Using remote sensing to acquire and reduce natural and cultural data into geographic information. How remote-sensing technology provides data that yields geographic information. Sources of remotely sensed data. Algorithms and methods for geographic information exploitation of remotely sensed data are studied and practiced. Offered annually.

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. Topic 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 543 - Environmental Plan/Risk Mngmnt (3)
Course focuses on understanding the impact of development on the natural environment as well as on the challenges of managing environmental risks. Offered every year.

PPS 544 - Planning/Development Studio (3)
Studio experience for the UPRED program. Focus is on developing and refining research, analytic, and graphic presentation skills in relations to actual development projects. Offered every Spring semester.

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 560 - Law, Courts, & Urb Soc. Change (3)
Seminar on the role of law, courts, and the judicial process on urban social, economic and physical change. Offered occasionally.

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/Project (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 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)

PPS 612 - Financin 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPS 630</td>
<td>Power/Coalition &amp; Decision-Making (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 635</td>
<td>Judicial Policy Making (3)</td>
<td>The role of the judiciary in the policy making process is examined and compared with the roles of legislators and policy implementors. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 636</td>
<td>Econ of Govt-State &amp; Local Sect (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 639</td>
<td>Contemporary Issues in Soc. Psych. (3)</td>
<td>Advanced seminar in newly developing areas of social psychology. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 649</td>
<td>Topics: Organizational Change &amp; Development (3)</td>
<td>Advanced seminar in newly developing areas of organizational psychology. Offered annually.</td>
</tr>
<tr>
<td>PPS 650</td>
<td>Intro to the Nonprofit Sector (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 663</td>
<td>Consultation Skills (3)</td>
<td>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.</td>
</tr>
<tr>
<td>PPS 670</td>
<td>Seminar in Law &amp; Society (3)</td>
<td>Examination of the complexities and concerns inherent in sociological and legal understanding of the relationship between law and society. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 678</td>
<td>Corrections Policy (3)</td>
<td>In the context of public policy planning and analysis, community-based corrections are examined. Emphasis on methods to evaluate various correctional innovations. Offered occasionally.</td>
</tr>
<tr>
<td>PPS 681</td>
<td>Policy Implementation Theory (3)</td>
<td>Focuses on 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.</td>
</tr>
<tr>
<td>PPS 689</td>
<td>Research Topics (3)</td>
<td>Research seminar with varying topics offered on an occasional basis.</td>
</tr>
</tbody>
</table>
Aerospace Engineering (AENG)

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.

AENG 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.

AENG 297 - Co-op in Aerospace Eng. (0)
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, symmetrical bending. Spring Semester.

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.

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.

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.

AENG 322 - Astroergodynamics (3)
Space environment; two-body problem and introduction to orbit mechanics; rigid body dynamics; satellite dynamics, rocket performance; re-entry dynamics. 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.

AENG 355 - Heat Transfer (3)
Heat Transfer by conduction, convection and radiation and combinations of these modes.

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.

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.

AENG 410 - Propulsion (3)
Ramjet, turbojet, turbofan and turboshaft cycle analysis; component analysis and matching; turbojet off-design performance. Aircraft/engine integration.

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.

AENG 414 - Hypersonics (3)
Introduction to hypersonics. Newtonian and Busemann Theory; slender body theory; shock expansion theory; small disturbance theory and supersonic similuite; blast wave theory. Thin shock layer theory.

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 gases including effects of dissociation and ionization. Introduction to free flow molecular flow.

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.

AENG 420 - Stability and Control (3)
Static stability and aircraft control; equations of motion, dynamic stability; closed loop control. Fall semester.

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.

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.

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.

AENG 425 - V/STOL Vehicles (3)

AENG 430 - Aerospace Structures II (3)
Joint 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.

AENG 432 - Aeroelasticity (3)

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.

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.

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.
AENG 450 - Flight Vehicle Analys & Dsgn I (0-3)
Application of aerospace engineering to the design methodology of a flight vehicle. Fall Semester

AENG 451 - Flight Vehicle Analys & 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.

AENG 452 - Hypersonic Propulsion & Design (3)
Application of aerodynamics, 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 the approach.

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.

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.

AENG 476 - 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 or part-time as required by the industry sponsor. Grading system is determined by department offering course.

AENG 493 - Special Lec. in Aerospace Eng. (3)
Selected topics of special interest to aerospace engineering majors.

AENG 498 - Special Topics in AENG (1-3)
Credit to be arranged. Independent study on an aerospace engineering topic under the direction of a faculty member.

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 gas dynamics, viscous flow and potential flow. Method of characteristics, slender body theory. (Offered every semester.)

AENG 502 - Found. of Aerospace struct. Ana (3)

AENG 503 - Flight Mechanics and Control (3)
General equations of motions of a flight vehicle including the effects of buoyancy, variable mass and structural flexibility, quasi-steady analysis. Effects of aerodynamic and propulsion system characteristics on flight dynamics. Stability and flying qualities analysis. Application of classical and modern control theories in flight control synthesis for aircraft, missiles and space vehicles. (Offered every semester.)

AENG 511 - Structural Dynamics & Control (3)
A study of discrete and continuous systems under vibration and linear system control. Emphasis is given on various solution techniques. Undamped and damped system response. System analysis under random vibration. (Offered every other Fall, odd years.)

AENG 512 - Energy Methods in Mechanics (3)
Development and use of the various energy theorems in solving problems in mechanics. Study of elastic beams and frames. Calculus of variations applied to energy methods. Castigliano's Theorem. Unit load method and Raleigh-Ritz method. (Offered every other Fall, even years.)

AENG 513 - Aeroelasticity (3)
A study of the various aeroelastic problems encountered on flight vehicle structures. Static and dynamic aeroelasticity of fixed wing. Aeroelastic coupling of rotary wing. Ground resonance. Servo aeroelasticity. Survey of testing methods. (Offered every other Spring, odd years.)

AENG 514 - Finite Element Analysis (3)
An introduction to the finite element technique and its use in static and dynamic stress and structural analysis. Includes consideration of matrix/equation solving techniques and modeling methods. (Offered every Fall semester.)

AENG 515 - Elastic Stability (3)
A treatment of the basic techniques used to determine the buckling loads of elastic structures, with applications. Buckling of beam-columns, bars and frames. Torsional buckling. Buckling of plates and shells. (Offered every other Spring, odd years)

AENG 516 - Comp. Structural Mechanics (3)
A study of the numerical methods used in the Structural Mechanics and actual application of the computational methods to analyze the elastic structures. An emphasis is given to stress analysis, eigen-solution techniques, and elastic stability of aerospace structures. (Offered every other Spring, even years.)

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 - Ideal Aerodynamics (3)
Introduction to the physical concepts and mathematical analysis of ideal fluid flow. Applications in meteorology, wing and turbo machinery aerodynamics will be emphasized. (Offered every other Spring, odd year.)

AENG 533 - Comp. Fluid Dynamics (3)
Fundamentals of finite difference techniques for solving various classes of partial differential equations that arise in fluid dynamics. Error control and stability considerations will be discussed and demonstrated. (Offered every Spring semester.)

AENG 534 - An Intro to Turbulence (3)
Nature and origins of turbulence. Turbulent transport of momentum and heat. Dynamics of turbulence. Wall-bounded shear flows and spectral dynamics. Statistical description of turbulence. (Offered every other Fall, even years.)

AENG 536 - Shock Wave Interactions (3)

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 - Linear Systems (3)
Introduction to system theory, state variables and state space description to dynamic systems, linear vector space and dependence. Jordan canonical forms, analysis of continuous and discrete time linear state equations, functions of square matrices, Cayley-Hamilton theorem, system stability, controllability and observability, relation between state-space and transfer function models. (Offered every Fall semester.)
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 problems with constraints, classical multiplier and gradient methods, energy modeling, application to flight and control of aerospace vehicles. (Offered occasionally.)

Aerospace Studies (AES)
AES 101 - Found. of the U.S. Air Force (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. Classroom activity, two hours 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 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. Classroom activity, two hours 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)
Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for AES-202 Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours 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 (2)
Survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Featured topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to ethics and values, introduction to leadership, group leadership problems, and continuing application of communication skills. Leadership Laboratory is mandatory for AES-202 Air Force ROTC cadets, and it complements this course by providing cadets with their first opportunity for applied leadership experiences discussed in class. Classroom activity, two hours 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 301 - Air Force Leadership & Manag. (3)
The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory leadership laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity 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. 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)
The study of leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. A mandatory leadership laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving students the opportunity 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. 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)
Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity 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. 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 AET-219.

AET 221 - Powerplant Analysis (0-3)
This course includes the basic theory, construction, and design principles of reciprocating and gas turbine engines, and propeller components and systems, maintenance, inspection, and servicing.

AET 222 - Powerplant Analysis Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET-221.

AET 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.

AET 301 - Advanced Aircraft Systems (3)
This course includes the theory, analysis, maintenance factors and procedures of hydraulic and pneumatic aircraft power systems; ice and rain protection systems; cabin atmosphere systems; and fire protection systems. Included are topics involving the operation, maintenance, servicing, and inspection of aircraft reciprocating and gas turbine engines.

AET 302 - Advanced Aircraft Systems Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET-301.

AET 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.

AET 376 - Internship with Industry (0-6)
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.

AET 401 - Dsgn & Repair 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.

AME 201 - Concepts of Aerodynamics (3)
Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military potential as measured against field training standards. Motivation and as a profession, officermanship, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communications skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity 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. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual department.

AME 302 - Advanced Aircraft Systems Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET-301.

AME 402 - Prep. for Active Duty (3)
Examines the national security process, regional studies, advanced leadership ethics, Air Force doctrine. Special topics of interest focus on the military potential as measured against field training standards. Motivation and as a profession, officermanship, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to refining communications skills. An additional Leadership Laboratory complements this course by providing advanced leadership experiences, giving students the opportunity 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. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual department.

AME 420 - Powerplant, Piston (3)
This course includes the basic theory, construction, and design principles of aircraft reciprocating engines, and propeller components and systems, maintenance, inspection, and servicing.

AME 422 - Powerplant Analysis Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET-221.

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.

AME 476 - Internship with Industry (0-6)
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 490 - Senior Project I (2)
The second course of a two-course sequence intended to demonstrate the student’s mastery of prior coursework and serves 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.

AME 491 - Senior Project II (3)
The second course of a two-course sequence intended to demonstrate the student’s mastery of prior coursework and serves 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.

AME 498 - Spec Topics in Aerospace Tech (0-6)
Independent or lecture based study in an appropriate engineering technology subject area under the direction of an ET faculty member.
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-airframe 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-airframe maintenance majors.

AME 220 - 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 222 - 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.
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Engineering, Aviation and Technology, Parks College of Engineering, Aviation and Technology, Parks College of

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.

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.

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.

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.

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.

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.

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.

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 (3)
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 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.

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 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 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. Offered every semester.

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 300 - Air Carrier Systems - Turboprop (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.

ASCI 320 - Fundamentals of ATC (3)
A study of the history and function of the ATC system. Theory of ATC is taught in the classroom will be reinforced by 10 hours of “hands-on” instruction on the ATC radar simulators.

ASCI 325 - Applied Professional Ethics (3)
This course will provide a review of ethical theory as it relates to ethical decision-making. The student will examine the question of professionalism and the moral issues that relate to the work environment. The student will make practical application to his/her specific career interests through case study development.

ASCI 350 - Air Carrier Systems - Jet (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.
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.

In this course, the student 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: MATH141

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.

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.

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, judgement, and decision-making strategies. The student will make direct applications to the work environment. Prerequisites: PSY101

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.

This course includes an expansion of Crew Resource Management principles emphasizing human factors theory. Leadership styles along with other elements of a multicrow environment are the foundation subject areas. A practical application of the principles involved may be offered in a small group setting.

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.

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. Prerequisites: PP260, Corequisite: FSCI425

This is the capstone course in Aviation Science. It will be presented as a lecture and practicum for the application of air carrier flight crew techniques. 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.

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.

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.

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.

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.

Analysis of current safety issues facing management in various segments of the aviation industry. Specific areas include safety issues affecting the airline industry and general aviation using case studies to illustrate practical problems.

Practical application and research of aviation and aerospace safety databases.

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.

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.

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.

Avionics (AVN)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVN 100</td>
<td>Introduction to Avionics</td>
<td>1</td>
<td>Fall semester</td>
<td>An introductory course to familiarize the freshman student with the Avionics field.</td>
</tr>
<tr>
<td>AVN 103</td>
<td>Digital Tech. Familiarization</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 105</td>
<td>Fundamental Circuits Analys I</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 106</td>
<td>E. C. Analysis I Lab</td>
<td>1</td>
<td>Fall semester</td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-105.</td>
</tr>
<tr>
<td>AVN 131</td>
<td>Electricity &amp; Electronics</td>
<td>5</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 132</td>
<td>Electricity &amp; Electronics Lab</td>
<td>3</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-131. Summer semester.</td>
</tr>
<tr>
<td>AVN 133</td>
<td>Electronic Comm. and Avionics</td>
<td>5</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 134</td>
<td>Electronic Com. &amp; Avionics Lab</td>
<td>3</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-133. Summer semester.</td>
</tr>
<tr>
<td>AVN 155</td>
<td>Circuit Layout, Fab. &amp; Install</td>
<td>1</td>
<td></td>
<td>Layout and fabrication of printed wiring boards, and chassis assemblies, wiring harness and cables, multi-pin and coaxial connectors and associated hardware. Spring semester.</td>
</tr>
<tr>
<td>AVN 201</td>
<td>Electrical Circuits</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 202</td>
<td>Electrical Circuits Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-201. Fall semester.</td>
</tr>
<tr>
<td>AVN 205</td>
<td>Fundamental Cir. Analysis II</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 206</td>
<td>Fund. Cir. Analysis II Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-205. Spring semester.</td>
</tr>
<tr>
<td>AVN 275</td>
<td>Co-op with Industry</td>
<td>0</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 293</td>
<td>Electronic Devices I</td>
<td>3</td>
<td></td>
<td>The course covers diode theory and circuits, bipolar transistors, field-effect transistors (FET), JFETs, MOSFETs, circuits and applications. Fall semester.</td>
</tr>
<tr>
<td>AVN 294</td>
<td>Electronic Devices I Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-293. Fall semester.</td>
</tr>
<tr>
<td>AVN 295</td>
<td>Electronic Devices II</td>
<td>3</td>
<td></td>
<td>The course covers bipolar transistors, field-effect transistors (FET), JFETs and MOSFETs amplifiers, operational amplifiers, circuits parameters, and wave shaping circuits. Spring semester.</td>
</tr>
<tr>
<td>AVN 296</td>
<td>Electronic Devices II Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-295. Spring semester.</td>
</tr>
<tr>
<td>AVN 297</td>
<td>Internship With Industry</td>
<td>0-3</td>
<td></td>
<td>Opportunities to gain experience as offered by interested companies. On demand.</td>
</tr>
<tr>
<td>AVN 299</td>
<td>Co-op Education with Industry</td>
<td>0</td>
<td></td>
<td>Alternating periods of work and study with participating companies. On demand.</td>
</tr>
<tr>
<td>AVN 301</td>
<td>Electronics</td>
<td>3</td>
<td></td>
<td>Diodes; bipolar junction transistors; silicon controlled rectifiers; electronic circuits; multistage and large-signal amplifiers; operational amplifiers; digital logic, digital circuits. Spring semester.</td>
</tr>
<tr>
<td>AVN 302</td>
<td>Electronics Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize materials covered in lectures of AVN-301. Spring semesters.</td>
</tr>
<tr>
<td>AVN 305</td>
<td>Digital Circuits/State Machine</td>
<td>3</td>
<td></td>
<td>Number systems, logic gates, Boolean algebra, multivibrators, counters and registers, multiplexers and memories, and state machine design. Fall semester.</td>
</tr>
<tr>
<td>AVN 306</td>
<td>Digital Cir/State Mach. Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVNP305. Fall semester.</td>
</tr>
<tr>
<td>AVN 307</td>
<td>Microprocessors/controlers</td>
<td>3</td>
<td></td>
<td>Number systems, microprocessor basics, computer arithmetic, programming, microprocessor architecture, timing, microcomputer interfacing and applications. Spring semester.</td>
</tr>
<tr>
<td>AVN 308</td>
<td>Microprocessors/Controlers Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in lectures of AVN-307. Spring semester.</td>
</tr>
<tr>
<td>AVN 351</td>
<td>Electronic Communications</td>
<td>3</td>
<td></td>
<td>Principles of electronic communications, noise considerations, frequency synthesis modulation and demodulation. Fall semester.</td>
</tr>
<tr>
<td>AVN 352</td>
<td>Electronic Comm. Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments to emphasize material covered in AVN-351. Fall semester.</td>
</tr>
<tr>
<td>AVN 353</td>
<td>Adv Dig Comm Systems</td>
<td>3</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>AVN 354</td>
<td>Adv Dig Comm Systems Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments designed to emphasize material covered in AVN-353. Spring semester.</td>
</tr>
<tr>
<td>AVN 355</td>
<td>Elec Nav &amp; Surveillance Sys</td>
<td>3</td>
<td></td>
<td>A continuation of AVN-353, with emphasis on automatic direction finding, distance measuring equipment, transponders, and microwave landing systems, and global positioning systems. Fall semester.</td>
</tr>
<tr>
<td>AVN 356</td>
<td>Elec Nav &amp; Surveillance Sys Lab</td>
<td>1</td>
<td></td>
<td>Laboratory experiments designed to emphasize material covered in AVN-355. Fall semester.</td>
</tr>
</tbody>
</table>
AVN 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.

AVN 376 - Internship 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.

AVN 391 - Avionics Radar (3)
Introduction to radar principles and applications. The technology necessary to understand radar operations. Basic microwave measurements and techniques are introduced. Microwave devices are reviewed. The course covers all functions of a radar system.

AVN 392 - Avionics Radar Lab (1)
Laboratory experiments to accompany the course material covered in AVN-391. Laboratories designed to provide integral instruction in the operation and maintenance of radar equipment and systems.

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.

AVN 451 - Advanced Avionics System (3)
Advanced topics in avionics systems, including automatic test equipment. On demand.

AVN 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.

AVN 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.

AVN 490 - Senior Project I (1)
Principles of engineering design. Study of unified, methodical approaches to engineering design under faculty supervision. Fall semester.

AVN 491 - Senior Project II (3)
Implementation of the principles of engineering design. Development, analysis and completion of detailed design project in Avionics under faculty supervision. Spring semester.

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.

Biomedical Engineering (BME)

BME 101 - BME Introduction (1)
(1 semester hour) Continuation of BME100. Discussion of BME-related topics that involve math, chemistry, biology, physics, and engineering. Prerequisites: Freshmen standing or consent of instructor.

BME 201 - Biomedical Engineering I (1)
Introduction to various areas of biomedical engineering, seminars by biomedical engineers, laboratory tours and demonstrations. Fall semester.

BME 202 - Biomedical Engineering II (1)
Continuation of fall course, introduction to BME literature, group discussions.

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. Offered every semester.

BME 305 - Measurements (3)
(3 semester hours) 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 and Systems (3)
(3 semester hours) 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: BME200, EENG201 & 202, MATH 355.

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 modes; and an introduction to viscoelasticity. Prerequisites: PHYS 161, MATH 143, BIOL 106, CHEM 162

BME 340 - Materials Science (3)
(3 semester hours) Material 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: ESCI210, ESCI310

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. Offered every semester.

BME 376 - 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 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.

BME 395 - Design of BME Lab Experiments (0-2)
(3 semester hours) 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: MATH 303 and/or consent of instructor.
BME 396 - Experimental Design & Analysis (0-2)
(0-2 semester hours) 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: BME395 and/or consent of instructor.

BME 401 - Biomedical Signals I (3)

BME 402 - Biomedical Signals II (3)
Continuation of BME 401, with emphasis on digital signal processing, and extension to two-dimensional images.

BME 405 - Biomedical Instrumentation (3)
(3 semester hours) 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: BME305, BIOL260

BME 410 - Biomedical Signals (3)
(3 semester hours) Physiological origins of measured signals. Digital processing of 1-dimensional (1D) and 2-dimensional (2D) biosignals. Digital processing of bioimages. Computational tools in 1D & 2D. Relating signal properties to physiological parameters. Prerequisites: BME310, BIOL260

BME 420 - Biomechanics (3)
(3 semester hours) 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: BME320, BME340, BIOL260

BME 425 - Prosthetic Systems (3)

BME 430 - Rehabilitation Engineering (3)

BME 431 - Special Topics (3)
(3 semester hours) 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 435 - Tissue Engineering (3)
Protein-surface interactions, regeneration substrates, fluid shear stress effects on cell function, mass transfer in tissue microenvironment, materials for 5-50 micron size. Application to liver, kidney, striate muscle, cartilage, nerve tissue, bone marrow.

BME 440 - Biomaterials (3)
(3 semester hours) 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, MATH403.
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 593 - Special Topics (1-3)
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 630 - Continuum Biomechanics (3)
The course will cover the fundamentals of continuum mechanics, the theory of linear elasticity, and the theory of plasticity. The course will also introduce the theory of solid mechanics and the theory of fluid mechanics. Offered every spring semester.

BME 660 - Continuum Biomechanics (3)
The course will cover the fundamentals of continuum mechanics, the theory of linear elasticity, and the theory of plasticity. The course will also introduce the theory of solid mechanics and the theory of fluid mechanics. Offered every spring semester.

EENG 101 - Introduction to Electrical Engineering (0-3)

EENG 200 - Electrical Engineering Laboratory (1)
Laboratory experiments to emphasize materials covered in EE-P201. Every semester.

EENG 201 - Electrical 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.

EENG 202 - Electrical Engineering Laboratory (1)
Laboratory experiments to emphasize materials covered in EE-P201. Every semester.

EENG 205 - Digital Design (3)

EENG 206 - Digital Design Lab (1)
Laboratory experiments to emphasize materials covered in EE-P205. Every semester.

EENG 210 - Engineering Circuits I (3)

EENG 211 - 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. Every semester.

EENG 212 - Electrical Science Laboratory (1)
Laboratory experiments to emphasize materials covered in EE-P210 and EE-P211. Every semester.

EENG 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.

EENG 297 - Co-Op in Electrical Engineering (0)
An optional supervised work experience with an agency, firm or organization which employs engineers. Every semester.

EENG 301 - Signals & 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. Every semester.

EENG 302 - Electromagnetic Fields (3)

EENG 303 - 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.

EENG 304 - Microprocessors (3)
Review of number systems. Microprocessor/microcomputer structure, input/output. Signals and devices, computer arithmetic, programming, interfacing and data acquisition.

EENG 305 - Microprocessors Lab (1)
Laboratory experiments to emphasize materials covered in EENG305.

EENG 306 - Microprocessors (3)

EENG 307 - Electronic Circuit Design (3)
Introduction to semiconductor materials and their electronic properties and applications to electronic devices. Introduction to P-N junction (diodes), bipolar junction transistors (BJTs), field effect transistors (FETs). Analysis and design of analog circuits using diodes and transistors. Spring semester.

EENG 308 - Electronics Laboratory (1)
Laboratory experiments to emphasize materials covered in EE-P308. Spring semester.
EENG 311 - Computer Systems Design (3)
Organization and design considerations of the computer; performance and cost analysis, representation of data and instructions; register transfer operations, instruction set format and design and its effect on the internal microengine, computer arithmetic; hardware implementation of processors and ALUs, hardware and microprogrammed control design, comparative architectures. On demand.

EENG 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.

EENG 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.

EENG 401 - 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.

EENG 402 - Filter Design (3)

EENG 403 - Communications Systems (3)

EENG 404 - Automatic Control Systems (3)

EENG 405 - Microprocessors (3)

EENG 406 - Microprocessors Laboratory (1)
Laboratory experiments to emphasize materials covered in EE -P405. Spring semester.

EENG 407 - Transmission Lines & Waveguide (3)

EENG 408 - Antenna Engineering (3)

EENG 409 - Radar Systems (3)

EENG 410 - Microwave Theory & Techniques (3)

EENG 415 - 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.

EENG 416 - Modern Control Theory (3)

EENG 417 - Microcomputer-Based System Design (3)
Study of 16-bit microprocessors architecture, programming, and interfacing. On demand.

EENG 418 - Physical Electronics (3)
Introduction to the physics of solids via quantum mechanics. Physical principles of existing semiconductor devices such as diodes, bipolar and field effect transistors. On demand.

EENG 419 - Digital IC Design (3)

EENG 420 - Advanced Filter Design (3)

EENG 421 - Image Processing (3)

EENG 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.

EENG 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.

EENG 490 - Electrical Engineering Design I (0-3)
Principles of engineering experimentation and design. Development of engineering design proposal. Every semester.

EENG 491 - Electrical Engineering 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. Every semester.

EENG 493 - Special Lectures in Electrical Engineering (3)
Selected topics of special interest to electrical engineering majors. On demand.

EENG 498 - Special Topics in Electrical Engineering (1-3)
Independent study on any electrical engineering topic under the direction of a faculty member. On demand.

EET 210 - Srvry Electricity & Electronics (3)
This course is a survey of electricity and electronics for non-majors. DC and AC circuit analysis, and electromagnetism; electronics, diodes, transistors (BJT and JFET) and applications; operational amplifiers, digital concepts.

EET 211 - Srvry Elecrtcy & Eletronic Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in EET210.
Engineering Sciences (ESCI)

ESCI 101 - Freshman Engineering I (2)
An introduction to the philosophy of engineering and engineering design. Introduction to the various laboratory and computing facilities on campus. Topics in engineering design and problem solving and team projects. Introduction to engineering drawing and computer aided drafting techniques.

ESCI 102 - Computer Aided Design (1)
Further topics in the philosophy of engineering and engineering design. Further topics in skills and tools used in engineering. Multi-disciplinary engineering design, problem solving and team projects utilizing skills introduced in Freshman Engineering I.

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.

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.

ESCI 211 - Dynamics (3)
Particle kinematics and kinetics in rectangular, cylindrical and normal-tangent 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.

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.

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.

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.

ESCI 311 - Mechanics of Solids Lab (1)
Laboratory experiments to emphasize material covered in lectures of ESP310.

ESCI 320 - Thermodynamics (3)
Properties, characteristics and fundamental equations of gases, application of first and second laws of thermodynamics in analysis of basic heat engines, gas flows.

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.

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.

ESCI 420 - Heat Transfer (3)
Heat Transfer by conduction, convection and radiation and combinations of these modes.

ESCI 430 - Analysis & Ctrl 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.

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. Decision-making among independent, dependent, capital-constrained and unequal lived projects. Replacement, break-even, and minimum cost analyses. Depreciation and depletion methods and their effect on corporate income taxes, leading to after-tax cash flow analysis. Engineering project planning, implementation, and management.

Engineering Technology (ET)

ET 351 - Quality Engineering I (3)
This course provides the fundamental concepts of quality engineering. On successful completion of this course the participants will have a working knowledge of probability and statistics commonly used in engineering and will have an understanding of quality philosophies, principles, systems, methods, tools, organizational and team dynamics, customer expectations and satisfaction, leadership, improvement systems, and professional ethics.

ET 352 - Quality Engineering II (3)
This course will continue the study of quality engineering subjects. The course will cover documentation and quality audits, planning, controlling, and assuring product and process quality, including acceptance sampling and measurement systems. The participant will be introduced to reliability, statistical process control, and design of experiments.

Flight Science (FSCI)

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 335 - Advance Flight Systems (3)
This course will provide the technical knowledge necessary to understand advanced aircraft systems on board typical turboprop/turbojet aircraft. Prerequisites: PP253, PP260, PHYS124

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. Prerequisites: FSCI335, PP260.

FSCI 425 - Flight Deck Automation (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. Prerequisite: FSCI335

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: ECON190, AMGT360 (for AMGT majors). Pre or Corequisite AMGT405.

Mechanical Engineering (MENG)
### 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.

### 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.

### MENG 297 - Co-Op in Mechanical Engineerin (0)
An optional supervised work experience with an agency, firm, or organization which employs engineers.

### 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 335 - 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 351 - Material Science (3)
A study of the material properties, atomic structure and bonding, mechanical failure theory, dislocation, phase diagrams, polymer structure, and ceramics.

### MENG 355 - Heat Transfer (3)
Heat Transfer by conduction, convection and radiation and combinations of these modes.

### 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.

### MENG 425 - Manufacturing Processes (0-3)
A study of manufacturing methods for metals, powder metallurgy, machine tools, automation, composite manufacturing. An emphasis is given to workshop experience in various machine tools and composite lay-up for laminates.

### 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.
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.

Mechanical Engineering Tech (MENT)
MENT 290 - Manufacturing Technology (2)
This course will demonstrate the fundamentals of manufacturing processes, tools and systems. The participants will be introduced to advanced manufacturing technologies encompassing a wide variety of machinery, equipment and tooling with various levels of automation, including computers, robots, and material-handling equipment.

MENT 359 - Mechanical Stress Analysis (3)
This course is designed to help participants to acquire knowledge-based understanding of basic stress analysis of deformable solids. The goal is to provide participants with the basic treatment of structural failure analysis due to stresses induced under axial, bending, torsional loads. The course will utilize Unigraphics finite element package to support the course materials and address technologically challenging problems. Emphasis is on application of analysis procedures, industry standards, and cost-effective design. On successful completion of the course the participants should be able to apply their working knowledge to analyze actual engineering structures and machine components in a technologically sound and logical manner, and to apply to their solutions a few fundamental and well-understood principles.

MENT 360 - Mechanical Stress Analysis Lab (1)
This course includes laboratory projects to reinforce the lecture material in MENT 359. The participants explore both the virtual laboratory using Unigraphics and the in-situ laboratory testing. Laboratory works include the user of tensile, bending and torsion testing equipments. The participants prepare lab reports illustrating the test setup, procedure, results, and describe reasons for any differences in the test results from the theoretical predictions.

MENT 409 - Advanced Mechanical Design (3)
This course provides the participants with fundamental concepts of Mechanical Engineering Design. The participants design a component, system or process that will perform a specified task subject to certain problem-solving and solution constraints. Utilizing the latest industrial drafting procedures and practices, the participants will apply the principles of engineering graphics to problems dealing with the drawing and design of machines and components. Upon completion of this course the participants will have a creative outlook to design a technologically demanding product that must be functional, safe, reliable, competitive, usable, manufacturable and marketable.

MENT 410 - Advanced Mechanical Design Lab (1)
This course includes virtual laboratory projects (using Unigraphics design package) to reinforce and supplement the lecture material of MENT 409. The participants are asked to design a complete mechanical tool for a given set of design parameters and constraints.

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 11.5 hours dual flight instruction, 2 hours simulator instruction, 0.5 hours solo flight, and 6 hours pre-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 216 - Aeronautical Science II (3)
Federal Aviation Regulations and flight procedures as outlined in the Airmen'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 Airmen'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 multi-engine certificates. Students will be introduced to high performance and multi-engine airplanes through the study of advanced knowledge areas.

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.

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. Prerequisites: PP210 and all associated pre/corequisites; PP260.

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 multiengine certificates. Students will be introduced to high performance and multiengine airplanes through the study of advanced knowledge areas. Prerequisites: PP220. Corequisites: PP253.

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.

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.

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 instructor with flight instructor aboard the airplane and 7 hours practice ground instruction.

PP 308 - Flight VIII (2)
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.

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.

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: PP253, PP260 or the Commercial Certificate w/Multi engine rating. 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.

PP 320 - Aeronautical Science VI (3)
Fundamentals of teaching and learning; flight instructor responsibilities; aero-medical information; review of attitude instrument flying; terminal instrument procedures; enroute charts; flight training maneuvers and procedures. The student is prepared to take the instrument flight instructor knowledge test upon successful completion of this course.

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 - Flight V (1)
This course is the fifth and final in the flight training sequence. Instruction is provided to complete the single engine Commercial Pilot certificate.

PP 360 - Prin. of Flight Instruction II (3)
This course will provide the appropriate knowledge to understand the elements of teaching instrument and multi-engine flight. The student will prepare lesson plans and practice various methodologies appropriate for advanced flight instruction. Prerequisites: Possession of the Certified Flight Instructor Airplane Certificate.
### 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 501 - Foundations of Clinical Ethics (1)
A study of the principal ethical and legal norms that inform clinical ethics discussions. A range of theories and approaches will be studied, such as the role of virtues, principles, religion, and the law. An understanding of these areas is essential for understanding the disagreements that arise in clinical ethics cases and for analyzing such cases.

HCE 502 - Clinical Consult & Case Analysis (1)
This course has two main purposes: first, to examine the main models for conducting clinical ethics consultations; second, to present a framework for analyzing cases which is suitable for writing up case studies. Each of these goals will be met by analyzing actual cases in clinical health care ethics.

HCE 503 - Found of Cath Health Care Ethic (1)
This course examines the Ethical and Religious Directives for Catholic Health Care Services to offer a critical appraisal of the foundations of Catholic health care ethics.

HCE 510 - Info Consent and Surrogate Dec (1)
A study of informed consent and decision making on behalf of incompetent patients, including topics such as: the legal and ethical basis for informed consent, standards health professionals must meet in disclosing information, standards used by surrogate decision makers, and the role of advance directives.

HCE 511 - Death and Dying (1)
This course surveys ethical issues and norms that pertain in health care for patients who are near the end of life, such as advance directives, palliative care, proxy decision making, and criteria of death germane to this domain of study. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 512 - Ethical Pol Social Pain Managm (1)
A study of empirical data concerning pain management and palliative care to identify major areas of concern relevant for ethicists in the clinical setting: the ethical framework for physicians and institutions in providing pain management and palliative care; legal norms regarding pain management, including statutes, cases, professional guidelines, and private accreditation. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 513 - Patient Safety & Medical Error (1)
This course examines the related ethical issues of medical error and patient safety, especially from the perspective of quality improvement in health care today. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 514 - Organ Donation Ethical Issues (1)
A study of ethical and legal issues that arise in the care of children and adolescents, such as genetic testing and counseling, parental refusal of and demands for treatment, care of critically ill newborns, adolescent decision making, intra-familial organ and tissue transplants, end of life decisions, and confidentiality. The legal and ethical standards for making health care decisions on behalf of children will be examined. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 515 - Perinatal & Pediatric Ethics (1)
A study of ethical and legal issues that arise in the care of children and adolescents, such as genetic testing and counseling, parental refusal of and demands for treatment, care of critically ill newborns, adolescent decision making, intra-familial organ and tissue transplants, end of life decisions, and confidentiality. The legal and ethical standards for making health care decisions on behalf of children will be examined. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 516 - Law and Bioethics (1)
This course examines the relationship between law and ethics, generally and in the context of health care decision making. It includes a brief introduction to the legal system and legal method. It then applies this learning to one particular question in health care law and ethics.

HCE 521 - Theories in Philosophical Eth (3)
This course offers an introduction to philosophical ethical theories. A critical examination of Aquinas, Aristotle, Kant, and Mill will be undertaken with special attention to the implications of these theories for the study of health care ethics.

HCE 559 - Capstone Ethical Case Analysis (1)
A mentored, one-credit project for students completing the Certificate in Health Care Ethics. Students will develop and analyze an ethics case based on their clinical experience and areas of interest. Students will be responsible for integrating relevant health care ethics literature and a discussion of relevant legal, cultural, and/or religious issues into their analyses. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

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 Ethic (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 603 - Methods in Holth Care Ethics (3)
A study of secular and religious methods in Health Care Ethics, including: the influence of anthropology, views of person/body, and social justice; the ontology of medicine; the role of experience; development of narrative ethics, natural law theory, principles and virtue theory, casuistry, and libertarian approaches.

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 (3)
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 612 - Health Care Law (3)
A study of the impact of law upon delivery systems, providers, and patients in health care, including: legal analysis in case law and statutes; legal process in health care; fundamental legal principles in health care law; critical judicial decisions and regulatory issues that impact American health care settings.

HCE 613 - Canon Law and Hlth Care Ethics (3)
Health care ethics in the Catholic tradition respects the ecclesiastical jurisprudence of Canon Law. Course studies Canon law to provide a legal context for ethics discourse in Catholic health care including norms, physical and juridical persons, authority, responsibility, and obligations, temporal goods, and the apostolate.

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, sometics 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 641 - Pract I: Clin Pt Care Settings (1)
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 642 - Pract II: Comm/Pub Hlth Setting (1)
This practicum engages students in community and public health settings with these goals: to experience public and community dimensions of medical care; to identify the ethical perspectives of community and public health issues; to reflect critically on the ethical challenges and principles involved in these community and public health settings.

HCE 643 - Practicum III: Admin/Corp (1)
This practicum engages students in corporate and administrative settings with these goals: to experience these health care settings; to observe the planning and organization of health care in light of ethical principles; to reflect critically on the ethical challenges and principles involved in these administrative and corporate settings.

HCE 644 - Practicum (1-3)
The Practicum engages students in a variety of health care settings to experience the clinical environment, the public health and community dimensions of health care, and the administrative aspects of health care. These experiences will help students better understand the health care context. Students will reflect critically on ethical challenges in health care.

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.
Allied Health (AHP)
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.

Anatomy (ANAT)
ANAT 100 - Basic Human Anatomy (0-3)
Gross and microscopic structure of human body; emphasis on anatomical concepts, terminology, and correlation of structure and function.

ANAT 300 - Anatomy for AHP (6)
This course is a regional oriented study of the structure and function of the human body with emphasis on anatomical concepts and relationships relevant to physician assistants. Cadaver prossection and dissection, and clinical case studies are included.

Biochemistry (BCHM)
BCHM 623 - Macromolecules: Strct & Fnctn (4)
Students participate in self-directed problem-solving exercises designed to provide familiarity with concepts and methodology in the analysis of enzyme catalysis, protein-nucleic acid interactions, and protein function and regulation. Emphasis is on independent investigation of information resources, development of a research plan, design of experimental approaches, and evaluation of data. Offered every fall semester.

BCHM 624 - Adv. Tpcs in Biochem & Mol Bio (3)
Two topics of current interest in the general areas of macromolecular structure and function, molecular biology, signal transduction, and regulation of metabolism are presented each semester. Emphasis is on application of the scientific method and evaluation and interpretation of experimental data. Offered every fall semester.

BCHM 625 - Prep & Evl of Sci Rsrch Propsl (3)
Lectures dealing with organization and evaluation of research proposals. Presentations of published papers selected by students in an areas outside their dissertation topic. Weekly progress reports lead up to submission of a research proposal. Proposals are critiqued by faculty and students and are reviewed in light of written critiques. Offered every spring semester.

BCHM 628 - Intro to Genomics & Bioinforms (2)
Lectures dealing with organization and evaluation of research proposals. Presentations of published papers selected by students in an areas outside their dissertation topic. Weekly progress reports lead up to submission of a research proposal. Proposals are critiqued by faculty and students and are reviewed in light of written critiques. Offered every spring semester.

BCHM 691 - Biochem & Mol Bio Journal Club (1)
Once per semester, each student selects a scientific research paper in the area of enzymology, macromolecular interaction, cellular regulation, molecular biology, or genetics. An informal oral presentation of the scientific background, critical evaluation of the data, and conclusions is presented to the Biochemistry and Molecular Biology Journal Club. Offered every spring semester.

BCHM 692 - Biochem & Mol Bio Colloquium (1)
Once per semester, each student selects a scientific research paper outside the area of the dissertation topic, and makes a critical evaluation of the data and conclusions for oral presentation to faculty and students. Offered every fall semester.

Clinical Laboratory Science (CLS)

CLS 100 - Introduction to Clinical Laboratory Science Lab
The purpose of this course is to describe the profession of Clinical Laboratory Science and illustrate career options available to Clinical Laboratory Science (CLS), Investigative and Medical Sciences (IMS) graduates, and Cytotechnology (CT) graduates. The course incorporates a combination of lectures, career panels, laboratory tours, and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

CLS 301 - Hematology and Body Fluids (4)
Content emphasizes the physiology of the body forming organs and, the maturation and function of their cellular products. Discussions will include the pathophysiology, evaluation and diagnosis of blood dyscrasias using laboratory test results. The formation, function, analysis and evaluation of various body fluids will also be discussed. Prerequisites: BIOL 104 and CHEM 164 & 166, or equivalent.

CLS 302 - Hematology and Body Fluids Laboratory (1)
Performance, interpretation and troubleshooting of basic hematology procedures using clinical specimens. Cell counts, differentials and other procedures will be performed on blood and body fluids. An emphasis will be placed on the principles and reactions involved in the testing procedure. Students will also receive an introduction to phlebotomy. Prerequisite or Corequisite: CLS-301

CLS 303 - Immunohematology (3)
An introduction to the basic immunologic and genetic principles governing blood groups and blood transfusion practice. Prerequisites: BIOL-104 and CLS-350, or equivalent.

CLS 304 - 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. Prerequisite or Corequisite: CLS-303

CLS 305 - Urinalysis (2)
A lecture/laboratory course studying the basic physiology of the kidney and a discussion of the mechanism of urine formation. Content will focus on the principles and clinical significance of the various procedures used in testing urine and their role in disease diagnosis. Prequisites: BIOL-104 and CHEM 164 & 166, or equivalent.

CLS 306 - Hemostasis and Thrombosis (2)
Principles and laboratory analysis of normal hemostasis and fibrinolysis will be presented. Discussions will include the diagnosis of bleeding and thrombotic disorders using laboratory results. The physiology and laboratory monitoring of anticoagulant therapy will be discussed. Prerequisites: BIOL-104 and CHEM 164 & 166, or equivalent.

CLS 330 - Clinical Biochemistry (4)
Lecture four hours per week. Biochemical principles 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. Prerequisites: BIOL-302 and CHEM-343 & 344, or equivalent.

CLS 331 - Analytical Instrumentation (0-3)
Lecture/laboratory 5 hours per week. Provides an introduction to chemical reactions and analytical instrumentation as used in laboratory diagnosis. Topics include: basic concepts of instrument selection and evaluation, quality control, photometry, electrochemistry, chromatography, molecular techniques and automation principles. Analysis of human body fluid specimens demonstrates selected principles. Prerequisites: CHEM-320 or CHEM 343 & 345, or equivalent; Majors only or permission of department chairperson.

CLS 350 - Medical Immunology (4)
A lecture/laboratory course studying the theories of innate immunity, humoral and cellular immunity, development and functions of T-cells and B-cells, the antibody response, the genetics of antibody diversity, hypersensitivility, immune deficiencies, transplantation and tumor immunity. Course also involves case study discussions and performance of basic serological and other immunological laboratory testing. Prerequisites: BIOL-104 or equivalent.
CLS 352 - Medical Microbiology (4)
Lecture presentation of the molecular biology of prokaryotic microorganisms. Includes structure, genetics, metabolism, regulatory mechanisms and growth/replication. Pathogenicity, epidemiology, diagnosis and laboratory identification of important groups of human pathogenic bacteria emphasized. Modes of action of selected antibiotics and chemotherapeutic agents also discussed. Prerequisite: BIOL-104 or equivalent.

CLS 353 - Medical Microbiology 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. Prerequisite or Co-requisite: CLS-352 or equivalent.

CLS 360 - Introduction to Clinical Laboratory Medicine (4)
This lecture/lab case study course surveys clinical laboratory medicine to introduce basic theory, selection, and interpretation of common diagnostic laboratory data. Topic areas include blood banking, chemistry, coagulation, hematology, immunology, microbiology, and urine analysis.

CLS 420 - Medical Parasitology (0-2)
A lecture/laboratory course studying 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. Prerequisite: BIOL-104 or equivalent.

CLS 421 - Medical Mycology (0-2)
A lecture/laboratory course studying mycotic diseases of man. Terminology, taxonomy, pathogenesis, specimen processing and techniques of laboratory identification are covered. Prerequisites: BIOL-104 and CLS-353, or equivalent.

CLS 422 - Clinical Urinanalysis & Hemost (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.

CLS 423 - Clinical Microbiology (5)
Clinical laboratory practicum applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in a clinical setting. Prerequisites: CLS-352 and CLS-353, or equivalent.

CLS 425 - Clinical Immunohematology (2)
Clinical laboratory course applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in the clinical setting. Prerequisites: CLS-330 and CLS-331, or equivalent.

CLS 426 - Research (3)
Experience in the basic principles of research design, data collection, data analysis and hypothesis testing through completion of a modest research project. Students have the option of selecting a quantitative or qualitative research topic to investigate. The course culminates in a research paper to develop skills and appreciation of techniques in scientific investigation and writing. Prerequisite: CLS-440.

CLS 429 - Principles of Laboratory Management and Education
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.

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. 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: Departmental approval is required. Prerequisite determined individually.

CLS 440 - Research Design, Critique Presentation
This course focuses on the investigative process and presentation methods. Topics include an overview of human research and the Institutional Review Board (IRB) process. 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 an approved IRB proposal, research proposal, and an oral presentation of that research proposal. Prerequisite: REMT-410

CLS 441 - Senior Synthesis (3)
This is a contracted course that may incorporate a variety of educational modalities. All options will serve to allow senior level investigative and medical sciences students an opportunity to integrate courses taken in relation to their degree and area of concentration with post graduation goals. Students may participate in a modest research project or a co-op experience. The course culminates with a written paper, career portfolio, and oral presentation of the synthesis experience.

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.

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 quantitatively evaluate blood cells for disease. Laboratory procedures will be performed on blood, bone marrow and body fluids. For certificate students only. Prerequisites: CLS-352 and CLS-353, 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 470 - Phlebotomy (0)
Experience gained in the principles and procedures of blood collection. Professional interpersonal communication with patients along with accurate selection and handling of equipment/collector containers are emphasized. Following OSHA and standard clinical safety guidelines in the collection and handling of blood is required.
CT 420 - Female Genital Tract III (3)
This lecture/laboratory course introduces the anatomy and histology of the vulva and vagina. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite: CT-331.

CT 430 - The Processing Laboratory (2)
This lecture/laboratory course covers routine procedures for receiving, processing, staining, cover slipping, and filing specimens. Students perform associated laboratory experiences under the supervision of a certified Cytotechnologist. Prerequisite: CT-400.

CT 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. Prerequisite: CT-420.

CT 441 - Female Genital Tract II (1)
This lecture/laboratory course in a continuation of CT-410. Prerequisite: CT-410.

CT 450 - 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. Prerequisite: CT-440.

CT 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. Prerequisite: CT-440.

CT 470 - Gastrointestinal and Genitourinary Cytology (3)
This lecture/laboratory course reviews the anatomy of each body site. Normal, benign, and malignant cellular changes of each system are studied. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite: CT-460.

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. Offered every fall semester.

DIET 102 - Career Exploration in Dietetic (0)
Students are introduced to the profession of dietetics and explore opportunities for practice. The historical foundation and the professional organization's credentialing and code of ethics are discussed. Guest speakers from the local community share their experiences and demonstrate skills. Offered every spring semester.

DIET 202 - Hospitality Law (3)
This course is taken through an agreement with St. Louis Community College at Forest Park. A course structured to meet the student's needs concerning hospitality law, current state and federal employment and wage status, and tax provision of all levels of government; credit philosophy and procedures; a survey of insurance needs and selection of most advantageous coverage; fundamentals of union organization, including contracts and bargaining; as well as general principles of business organization and organizational structure.

DIET 208 - Foundations in Nutrition (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. Offered every fall semester.

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. Offered every spring semester. Prerequisites: PPY 254 & BIOL 104 or 110 & DIET 208 or 221 or 380.

DIET 212 - Bar and Beverage Management (3)
This course is taken through an agreement with St. Louis Community College at Forest Park. This is an introductory course in how to set up, operate, and manage a bar. Students will learn about wines, spirits, and beers. Additional material covers layout and design, equipment, marketing, and staffing.
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. Offered every spring semester.

DIET 308 - Nutritional Aspects of Biochem (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. Offered every fall semester.

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 350 - Ethnic Meal Mgmt & Food Prep (0-4)
An introduction to food preparation and meal management principles that emphasizes the diverse cultural aspects of food and society. Basic food preparation methods and chemistry characteristics are explored. Ethnic foods will be researched and ethnic meals will be prepared. This course includes a lab. Offered every spring semester.

DIET 360 - Food Science (0-3)
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. This course includes a lab. Offered every spring semester.

DIET 370 - Quantity Food Procurement/Prep (0-4)
This course will consist of a lab and lecture designed to develop managerial food preparation skills. Upon completion of this course, the student will be able to demonstrate basic techniques of food preparation and recipe development and standardization, develop menus for optimal nutrition utilizing nutrient analysis software, and establish and maintain inventory selection, records, and controls.

DIET 375 - Food Specialties (2)
Advanced techniques of nutritionally sound food preparation and menu development as they apply to research and relate to current dietary recommendations will be presented. Students will explore the unique flavor systems of the world as they impact ethnic cuisine with emphasis on redesigning recipes for health that maintain the integrity of the unique cultural flavors. Recipe and menu development for spa cuisine models will be presented. Students will prepare nutritionally-balanced vegetarian diets while exploring why people choose vegetarian diets, including cultural and global perspectives as well as, economics and health issues. Students will participate in food competitions, as appropriate. Offered every Spring semester.

DIET 380 - Concepts in Nutrition (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. Offered every fall semester.

DIET 385 - Advanced Nutrition (0-3)
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. This course includes a lab. Offered every spring and summer semester.

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. Offered every fall semester.

DIET 401 - Catering II (1)
Limited to culinary emphasis students. A continuation of DT H301-01 Catering I. A hands-on working experience with an emphasis on the planning, preparation, and execution of a variety of food catering events. The variety to include events within the University, Clayton Farmers Market (Off site omelet bar), Barbecue for James Beard Scholarship Fundraiser to feed 500 people with 30 of the areas top chefs, and to assist the St. Louis Chefs De Cuisine Culinary Competition, Class times will vary due to the catering appointments. An average of 5 hours per week will be devoted to this course.

DIET 402 - Catering II (1)
This course is designed to enhance the student's understanding of the requirements needed to run a successful, profitable business. Working directly with the client to determine needs, theme and budget, students will plan, organize and execute various catering events with the supervision of an executive chef. Prerequisite: DIET 401. Offered spring semester.

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. Offered every fall semester.

DIET 411 - Clinical Practicum Lab (2)
Lab that coordinates clinical and problem-based learning experiences with DT H-410 Medical Nutrition Therapy I, the nutritional management of different disease states. Offered every fall semester.

DIET 414 - Adv Meat Analysis/Knife Skills (0-2)
Purchasing, receiving, evaluating and proper storage procedures will be discussed. Emphasis is placed on primal and sub-primal cuts, federal inspections, grading, yields, and the classification of meats, poultry and game. Laboratory activities include hands-on fabrication of pork, beef, poultry, and lamb. Basic knife skills will be presented. Offered every fall semester.

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. Offered every spring semester.

DIET 416 - Clinical Practicum Lab (2)
A semester-long course that coordinates clinical and problem-based learning experiences with DT H-415: Medical Nutrition Therapy II, the nutritional management of specific disease states. Offered every spring semester.

DIET 419 - Garde Manger (1-3)
Introduction to garde manger work including sandwiches, vegetable carving, canapés, hors d’œuvres, aspic, chaud froid, ice carving and buffet presentation. Food science and health issues associated with laboratory experiences will be explored. Offered every Fall semester.

DIET 425 - Baking (1-2)
Introduction to fundamental baking-including breads, cookies, and Danish. Principles and procedures of theory and practice of high quality crafted bakery items. Food science and health issues associated with laboratory experiences will be explored. Offered every Fall semester.

DIET 426 - Pastry (0-3)
Introduction to pastry with fundamentals in icings, creams, cakes, sugars and decorating. Course will offer theory and practice of step-by-step procedures or makeup, assembly and production of quality bakery products. Food science and health issues associated with laboratory experiences will be explored. Offered every Spring semester.

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 will visit local community health programs. Offered every spring semester.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>DIET 435</td>
<td>Food Systems Management I (3)</td>
<td>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.</td>
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<tr>
<td>DIET 436</td>
<td>Food Systems Management II (0-3)</td>
<td>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. Offered every spring semester.</td>
</tr>
<tr>
<td>DIET 440</td>
<td>Nutrition Education (3)</td>
<td>Study of principles and practices of nutrition education of groups, including aspects of public speaking and lesson planning. Office every spring semester.</td>
</tr>
<tr>
<td>DIET 450</td>
<td>Nutrition Counseling (0-3)</td>
<td>This course incorporates the application of communication skills, interviewing, assessment, and counseling theories to the nutrition counseling of individuals for the reduction of disease risks and/or improvement of current health status. Offered every fall semester.</td>
</tr>
<tr>
<td>DIET 487</td>
<td>Crit Read of Res Material I (1)</td>
<td>Assessment and critical review of current research papers in various areas of nutrition and dietetics. Emphasis is on understanding and interpreting statistical results in a clinical setting. Offered every fall semester.</td>
</tr>
<tr>
<td>DIET 488</td>
<td>Crit Read of Res Material II (1)</td>
<td>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. Offered every spring semester.</td>
</tr>
<tr>
<td>DIET 489</td>
<td>Independent Study (0-3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 491</td>
<td>Culinary Practicum (3)</td>
<td>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 use. The second section will focus on medicinal herbs with an evaluation of the indications for use, side effects, and drug/herb interactions. The final section will focus on the culinary properties of herbs. Offered every Spring semester.</td>
</tr>
<tr>
<td>DIET 497</td>
<td>Culinary and Medicinal Herbs (3)</td>
<td>Emphasis will be placed on practical field experience under the supervision of St. Louis' most experienced chefs. 150 hours of hands-on supervised work experience within the culinary disciplines of Baking, Pastry, and Garde Manger. A weekly seminar will also be required to review detailed logbook and to relate classroom knowledge vs contemporary issues within the culinary industry.</td>
</tr>
<tr>
<td>DIET 501</td>
<td>Survey of Nutrition for AHP (3)</td>
<td>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, the use 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.</td>
</tr>
<tr>
<td>DIET 507</td>
<td>Culinary &amp; Medicinal Herbs (3)</td>
<td>This course will be divided into three sections. The first section will include techniques for the identification of the most common classifications of herbs as well as a history of their uses. The second section will focus on medicinal herbs with an evaluation of the indications for use, side effects, and drug/herb interactions. The final section will focus on the culinary properties of herbs. Offered every Spring semester.</td>
</tr>
<tr>
<td>DIET 510</td>
<td>Human Nutr: Physio &amp; Metab. (3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 511</td>
<td>Nutritional Assessment (3)</td>
<td>Systematic study of assessment methodologies and their applications in institutional and community settings; current research innovations as well as pragmatic approaches are detailed. Offered every Fall semester.</td>
</tr>
<tr>
<td>DIET 513</td>
<td>Human Nutr: Physio &amp; Meta II (3)</td>
<td>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. Continuation of DT-H 510. Offered every Spring semester.</td>
</tr>
<tr>
<td>DIET 521</td>
<td>Pediatric Nutrition (3)</td>
<td>In-depth examination of the normal nutritional requirements for fetal development through adolescence in regard to normal physiological and psychological growth. Pathophysiology specific to abnormal growth patterns will be reviewed in relation to nutritional support. Review of recent research. Offered every Fall semester.</td>
</tr>
<tr>
<td>DIET 522</td>
<td>Gerontological Nutrition (3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 530</td>
<td>Community Nutrition (3)</td>
<td>An overview of the delivery of public health and community nutrition programs at local, state, national levels. Current issues relating to the promotion of good nutrition and prevention health care are examined. Students will evaluate nutrition components of various community health agencies. Offered every Spring semester.</td>
</tr>
<tr>
<td>DIET 535</td>
<td>Clinical Systems Management (3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 540</td>
<td>Nutrition Education (3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 545</td>
<td>Patient/Client Nutr. Mgmt Prac (0-3)</td>
<td>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.</td>
</tr>
<tr>
<td>DIET 550</td>
<td>Nutr. &amp; Physical Performance (3)</td>
<td>Examination of metabolism and nutritional requirements associated with aerobic and anaerobic exercise. Emphasis on maximizing physical performance through nutrition. Principles of health promotion and worksite wellness activities are addressed. Includes sports-nutrition assessment project, sports-nutrition book review, and a research paper. Offered every Spring semester.</td>
</tr>
<tr>
<td>DIET 560</td>
<td>Current Research in Vitamins (3)</td>
<td>Update on the latest research on vitamins; requirements, deficiencies, and toxicities in humans. Focus on current literature. Offered every Fall.</td>
</tr>
<tr>
<td>DIET 565</td>
<td>Current Research in Minerals (3)</td>
<td>Update on the latest research on minerals; requirements, deficiencies, and toxicities in humans. Focus on current literature. Offered every Spring.</td>
</tr>
</tbody>
</table>
An introduction to fitness assessments of individuals prior to beginning a physical conditioning program. ACSM guidelines for exercise testing. Principles of exercise prescription for healthy populations with special needs of pediatric, pregnant, and aging populations addressed. Includes a practice lab to be scheduled as needed. Offered every Spring semester.

**DPT 578 - Applied Educ in Dietetics I (0-1)**
Interns write and publish a newsletter for health care professionals; prepare and conduct adult education, including cooking demos, and nutrition education for K-5th grade elementary school children. Offered every Fall semester.

**DPT 579 - Applied Educ in Dietetics II (0-1)**
Interns write and publish a newsletter for health care professionals; prepare and conduct adult education, including cooking demos, and nutrition education for K-5th grade elementary school children. Offered every Spring semester. Continuation of DT H578.

**DPT 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 implications of disease and structural abnormalities to these parameters, and the relationship of resting cardiovascular function to exercise adaptation. Offered every Summer semester.

**DPT 581 - Asp of Cardio Fitness & Rehab (2-3)**
A total of 320 hours of applied experiences in a variety of settings for the purpose of developing the knowledge, skills, and abilities of a certified health fitness instructor. Practical application includes development and modification of exercise prescriptions for apparently healthy individuals upon completion of fitness testings (20 hours per week). Application of experimental research, and fitness assessment techniques pertinent to laboratory and/or non-laboratory environment. Techniques in laboratory experimental research: methods of use and operation of available experimental research equipment. Offered every semester.

**DPT 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.

**DPT 589 - Special Problems in Dietetics (0-3)**
Conduct an in-depth research. Develop a tool for data collection and statistical analysis. Interpretation and discussion of results presented in written format and submitted for publication in a refereed journal. Offered every semester.

**DPT 594 - Dietetic Internship (0)**
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 available to first year students only.

**DPT 110 - Student Development II (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 (0-1)**
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 further develops 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. Section 39 Instructor's Permission Required

**Health Information Mgmt (HIM)**

**HIM 300 - Intro to Health Information (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 305 - Introduction to Access (1)**
Learn to use the Microsoft Access database system to manage information files, and many other database applications. Master the skills necessary to plan and design a table as well as add, change, and delete information. Learn how to query a table to find and display data. Learn how to generate simple forms and reports to access or print out the information that you need. Additional topics include global changes, special functions, sorting, date arithmetic, modifying the table structure, and database management.

**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; data abstracting and display techniques. Case mix classification and analysis; techniques of sampling and weighted averages.

**HIM 330 - Classification Systems I (0-3)**
Principles and purposes of medical nomenclature and classification systems which include the coding and classifying of diagnosis and procedures for purposes of standardization, retrieval and statistical analysis.

**HIM 350 - Management for the Health Care Professional (3)**
Corporate and administrative structures of health providers; structure and function of departments; functional approaches to management of people, material resources and time; strategic and operational planning; organizational communication.

**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. There is a brief introduction to transcription and automatic data collection.
Inter-Professional Education (IPE)

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.

HIM 430 - Classifications Systems II (0-3)
Coding health records in the laboratory and/or health care setting; developing coding policies and procedures; performing coding quality assessment and establishing data management principles.

HIM 450 - Management of Human Resources (3)
Focus on job descriptions, staffing, and scheduling; performance appraisals, counseling, training needs, wage and salary administration; interviewing techniques, laws related to human resources, and labor organizations in health care.

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; productivity standard development; third party billing and reimbursement; legislation related to reimbursements; interpretation of financial data.

HIM 452 - Professional Practice I (3)
A 160-hour experience in approved health care facilities and/or related sites consisting of two modules: I - Technical experiences processing information to support patient-related information system function and departmental operations and services; II - Coding and quality management.

HIM 453 - Professional Practice II (3-4)
A 160-hour 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 460 - e-Health Concepts (2-3)
An introduction to the concepts of telemedicine, electronic health record, legal issues; e-health concepts include definitions, technology, users, legal issues, and ethical issues. 2 Credit Hours

HIM 461 - Health Information Systems (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.

HIM 470 - Fundamentals of Clin. Medicine (3)
The nature, cause, treatment, and management of clinical disease processes.

HIM 498 - Senior Seminar (3)
This course is designed to synthesize the information students have obtained in previous coursework through the use of case studies and project work.

HIM 499 - Special Studies (1-4)
A concentrated area of study in the field of health information management as agreed upon by the student and advisor.

Occupational Therapy (MOT)

MOT 500 - Found. Cncepts in Occup Sci (2)
Foundational concepts underlying occupational sciences for post-baccalaureate master students. Theoretical perspectives that address the various themes and tenets of human occupation will be covered.

MOT 501 - 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 necessary preparatory prerequisites for participation in Level II Fieldwork including progressive policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Field Coordinator.

MOT 502 - Professional Development Sem. (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.

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 & Management (0-3)
An introduction to the principles of management and organizational leadership, professional and personal development, and entrepreneurialism in traditional and non-traditional settings.

MOT 530 - Fund of Occup Centered Pract (0-3)
An in-depth examination of core principles and methods involved in comprehensive occupational analysis, assessment of occupational performance, and therapeutic occupation across practice areas.

MOT 535 - Person-Environ-Occupation I (0-4)
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 adult meaningful occupations.

MOT 540 - Human-Environ-Adaptation I (0-3)
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 545 - Person-Environ-Occupation II (0-3)
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.
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 109 - 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 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 405 - Human Growth & Devt: Lifespan (0-4)
A qualitative and quantitative study of normal development through the lifespan. The course includes an introduction to the theories of development and aging, and focuses on a systems approach model, with emphasis on physical development.

MPT 407 - Basic Exam I (0-2)
This course is designed as a skilled application course to provide an initial experience of gathering objective data. The course supplies a basic working knowledge of common physical therapy measurement procedures in a practical framework. Students will be expected to perform the basic physical therapy examination skills of palpation, range of motion measurement, muscle length testing and manual muscle testing.

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 411 - Clinical Kinesiology (0-3)
This course provides a theoretical knowledge base for movement analysis that can be used as a framework for clinical intervention. Students will be expected to understand and discuss the basic interaction of the neuromusculoskeletal system and the role of joint structure and function in regard to movement. The body will be viewed as an interrelated system and the student will be expected to comprehend the concepts of normal movement.

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 415 - Applied Exercise Physiology (0-3)
This course examines muscle physiology; specific types of exercise; endocrine, cardiovascular and respiratory response to exercise and training; training regimens; nutrition and diabetic management.

MPT 419 - Basic Examination II (0-2)
This course introduces and applies an analysis framework for interpretation of data gathered from the subjective patient history and initial objective examination. The student will be expected to critically analyze clinical data.

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 sites 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 507 - Applied Neuroscience (0-2)
This course presents motor control theory and applications as related to healthy individuals and the treatment of patients. Motor learning will be reviewed.

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 513 - Thermal Agents (0-2)
This course covers the physical, biological, physiological and psychological rationale for treatment utilizing the thermal physical agents. Students will acquire theoretical and practical knowledge of selection and application of these treatment interventions.

MPT 514 - Electrical & Mechanical Agents (0-3)
This course is concerned with the physical, biological, and physiological rationale for treatment interventions utilizing electrical and mechanical agents. The course covers the theoretical and practical knowledge of specific modalities and the integration of these interventions into the plan of care.

MPT 519 - Biomechanical Interventions (0-3)
The course covers the examination, interventions, and goals for individuals who have undergone amputations or who have disabilities which require orthotic management. The student will study theoretical frameworks upon which prosthetic/orthotic principles are applied and the practical applications for clinical use.

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 affect the musculoskeletal system. The student will be introduced to the pathology, etiology, and incidence of specific disorders.

MPT 524 - Orthopedic Conditions I (0-4)
This course covers the pathokinetitcs, relevant physical therapy examination, differential diagnosis, and treatment interventions of disorders of the lower quadrant, lumbar spine to feet. Topics covered will include connective- and soft-tissue changes, systems differentiation, and interventions for the joints.

MPT 525 - Orthopedic Conditions II (0-4)
This course explores the pathokinetitcs 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 527 - Neurological Conditions I (0-2)
This course provides the student with a comprehensive approach to pediatric patients with neurological conditions. Emphasis will be placed on examination and evaluation skills and alternative approaches to treatment interventions.

MPT 528 - Neurological Conditions II (0-4)
This course provides the student with a comprehensive approach to patients with neurological conditions. Emphasis is placed on examination and evaluation skills and alternative approaches to intervention.

MPT 529 - Pulmonary & Cardiovasc Cond. (0-3)
This course examines the pathogenesis and pathophysiology of cardiovascular and pulmonary disorders. Examination, evaluation, goals, and intervention methodology will be discussed.

MPT 534 - Medical & Surgical Conditions (0-2)
This course presents the student with a comprehensive approach to patients with medical and/or surgical conditions. Emphasis will be placed on examination, evaluation, interventions, and the information that impacts the selection and implementation of these procedures.

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, pharmacodymanics 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 570 - Patient Management I (0-2)
This course provides the opportunity to integrate the various dimensions of patient care into an organized problem-solving process which covers all aspects of patient management. The primary focus will be clinical decision-making for patients with orthopedic impairments. The identification and impact of critical issues related to medical status and patient safety through all aspects of patient care will be emphasized.

MPT 571 - Patient Management II (0-2)
This course builds on the clinical problem-solving process introduced in Patient Management I and further prepares the student for patient management for those with a variety of diagnoses. Emphasis is placed on the addition of neurologic impairments to the problem solving process and the creation of comprehensive intervention plans.

MPT 572 - Comm. Process in Patient Care (0-2)
This course covers teaching skills, interviewing skills, and other communication skills needed in the clinical environment. This course also provides an opportunity to apply learning theory, personality theory, and developmental theory to communication.

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 580 - Clinical Seminar I (0-2)
This course covers some basic examination, evaluation, and treatment interventions in both theoretical and practical application framework. Examinations and interventions presented include vital signs, selected emergency procedures, patient positioning, patient transport and transfer techniques, and infection control. In addition, patients rights and responsibilities are discussed.

MPT 581 - Clinical Seminar II (0-1)
This course covers basic techniques such as gait with assistive devices and home exercise programs. Also included are issues of professional responsibility, the code of ethics, medical records, the Guide to Physical Therapist Practice, and documentation of patient examination and interventions.

MPT 583 - Clinical Education (12)
The student is assigned to eighteen weeks of clinical affiliations. The student performs the full range of patient management skills and professional responsibilities under the supervision of a physical therapist.

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.

Nuclear Medicine Technology (NMT)

NMT 331 - Nuclear Physic/Instrumentation (4)
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.

NMT 332 - Radiochemistry/Radiopharmacy (3)
A study of basic radiopharmaceutical principles, generators, chemistry of radionuclides and their associated compounds, dosage forms, quality control and regulations.

NMT 333 - Radiation Protection/Radiobio (2)
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 334 - 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.

NMT 335 - Advanced Instrumentation (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 341 - Imaging Clinical Practicum (7)
The supervised use of radionuclides for in vivo diagnostic and therapeutic purposes.

NMT 342 - Radiopharmacy Clin. Practicum (3)
Supervised preparation of radiopharmaceuticals, performance of associated quality control, drug dispensing and record keeping.

NMT 343 - Adv Imaging Clinical Practicum (2)
The supervised use of radionuclides for positron emission computed tomography (PET) and other modalities.

Occupational Science (OCS)

OCS 100 - Seminar in OT Practice (2)
This course will provide students with applied and reflective learning experiences that relate to occupational therapy practice. The seminar will include guided observations and discussions of various occupational therapy practice settings.
OCS 101 - Intro to Occup. Sci & Therapy (2)
This course introduces the student to the academic discipline at occupational science and continues the socialization process to the occupational therapy profession. It includes professional development, specialization, and career paths in occupational therapy.

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 300 - 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 provide students with the necessary preparatory prerequisites for participation in applied experiences. This seminar will address evaluation of student performance during the applied experience, student evaluation of the applied experience, and lay the foundation for professional behavior expectations.

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 the 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 the musculoskeletal system.

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 studied.

OCS 322 - Contexts of Occupation (3)
This course is an overview of the temporal, spatial, and sociocultural 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 sociocultural 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 - Devt of Occup. Across Lifespan (3)
This course builds on knowledge acquired in NRN-243, Human Development, and covers typical developmental progressions in occupations that are essential to everyday life from infancy through aging. Focus will be on broad activity patterns in work, play, communication, and the developmental emergence of self. Special developmental challenges associated with specific ages are presented and family systems theory is introduced.

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 - Occupations in Diverse Comm (3)
This course builds on the previous course, Occupations in Communities to extend an understanding of community, dynamics, and how communities are impacted by the challenges of poverty, homelessness, chronic illness, disability, or other social issues. Students will be assigned to a St. Louis area community site for a relevant service learning experience in diverse community settings.

OCS 382 - Occupational Science Inquiry (2)
This course studies the evolution of occupational science and the development of research in occupational science that support occupation based practice within the profession of occupational therapy. This course prepares students to transition to the Master's in Occupational Therapy Program.

OCS 400 - 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 provide students with the necessary preparatory prerequisites for participation in level I fieldwork. This course will address evaluation of student performance during their level I fieldwork and student evaluation of level I fieldwork. Students will be introduced to the beginning process of level II fieldwork.

OCS 401 - 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 necessary preparatory prerequisites for participation in Level II Fieldwork including progressive policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Field Coordinator.

OCS 425 - Prof. Development & Leadership (4)
An introduction the principles of management and organizational leadership, professional, and personal development, and entrepreneurialism in traditional and non-traditional settings.

OCS 441 - Human Environ Aptdation II (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.

OCS 446 - Person Environ Occupation III (0-3)
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 older adult meaningful occupations. Lab required.

OCS 462 - 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.

OCS 472 - Fundmts of Occp Centerd Prac (0-3)
A in-depth examination of core principles and methods involved in comprehensive occupational analysis, assessment of occupational performance, and therapeutic occupation across practice areas.

OCS 482 - Person-Environment Occupation (0-4)
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 adult meaningful occupations.
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 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 and health care ethics.

PAED 501 - Hist & Legl Issue of PA Practc (3)
This course explores through lecture and discussion the factors affecting the development of the profession and role socialization with the emphasis on standards of quality assurance, credentialing of continued competence, ethical and legal issues governing clinical responsibilities and practice on a health care team.

PAED 501 - Hist & Legl Issue of PA Practc (2)
This course explores through lecture and discussion the factors affecting the development of the profession and role socialization with the emphasis on standards of quality assurance, credentialing of continued competence, 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 applications of this knowledge to patient management. It 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 506 - Physical Diagnosis (0-4)
The tools, techniques, procedures and skills of the diagnostic physical examination are presented in a systems approach as they relate to the systematic performance and documentation of complete and problem focused physical examinations. Medical terminology is integrated with each system.

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 backrounds, ages and personalities.

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 oriented 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)
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 the 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PAED 513</td>
<td>Prin &amp; Pract. Otorh &amp; Opthmly (4)</td>
<td>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.</td>
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<tr>
<td>PAED 515</td>
<td>Clinical Pharmacology (2)</td>
<td>Principles of pharmacology ad 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.</td>
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<tr>
<td>PAED 517</td>
<td>Surgical Skills Patient Care (2)</td>
<td>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.</td>
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<tr>
<td>PAED 520</td>
<td>Clinical Therapeutics (2)</td>
<td>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.</td>
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<tr>
<td>PAED 521</td>
<td>Prin &amp; Pract of Pulmonology (5)</td>
<td>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.</td>
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<tr>
<td>PAED 522</td>
<td>Prin &amp; Pract of Cardiovascular (6)</td>
<td>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.</td>
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<tr>
<td>PAED 523</td>
<td>Prin/Pract of Gastroenterology (3)</td>
<td>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.</td>
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<tr>
<td>PAED 524</td>
<td>Prin/Pract of Nephro &amp; Genitou (3)</td>
<td>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 patient.</td>
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<tr>
<td>PAED 525</td>
<td>Prin &amp; Pract of Endocrinology (2)</td>
<td>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.</td>
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<tr>
<td>PAED 530</td>
<td>Evidence Based Medicine (2)</td>
<td>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.</td>
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<tr>
<td>PAED 535</td>
<td>Specialty Lecture Series (3)</td>
<td>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.</td>
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<tr>
<td>PAED 540</td>
<td>Internal Medicine I (4)</td>
<td>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 appropriate assessment, oral and written case presentations, understanding the complexities and interrelationships of disease processes and diagnostic/therapeutic collaboration.</td>
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<tr>
<td>PAED 542</td>
<td>Family Medicine (4)</td>
<td>Four 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.</td>
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<tr>
<td>PAED 545</td>
<td>Internal Medicine II (3)</td>
<td>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.</td>
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<tr>
<td>PAED 551</td>
<td>General Surgery (4)</td>
<td>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.</td>
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<tr>
<td>PAED 556</td>
<td>Pediatrics (4)</td>
<td>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.</td>
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<tr>
<td>PAED 570</td>
<td>Psychiatry &amp; Behavioral Med (3)</td>
<td>This rotation provides experience in working with patients who have psychiatric, behavioral or substance abuse problems. Emphasis is placed on the recognition and management of these problems in both inpatient and outpatient settings.</td>
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<tr>
<td>PAED 575</td>
<td>Women's Health (4)</td>
<td>Four 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.</td>
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<tr>
<td>PAED 580</td>
<td>Emergency Medicine (4)</td>
<td>Four weeks. 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.</td>
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<tr>
<td>PAED 585</td>
<td>Orthopedic Surgery (4)</td>
<td>Four weeks. Clinically based experience provides opportunities in orthopedic surgery and outpatient sites at the VA Medical Center or in private settings.</td>
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<tr>
<td>PAED 586</td>
<td>Master's Seminar (4)</td>
<td>This course involves both lecture and independent study and is designed to help the clinically prepared PA student develop competency in related professional roles. Lecture topics focus on the PA as administrator, manager, teacher and researcher. Students work independently to complete a research project begun earlier in their Research Methods course and prepare a paper to submit for publication.</td>
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<tr>
<td>PAED 590</td>
<td>Preceptorship (6)</td>
<td>This clinical experience integrates previous studies. Preceptorship sites are chosen by the student in most cases.</td>
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<tr>
<td>PAED 593</td>
<td>Special Topics Elective (4)</td>
<td>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.</td>
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An introductory course in the fundamental mechanisms of human physiology. Emphasis is given to basic cell functions and biological control systems, as well as to coordinate body functions.

The focus of this course is the development of professional behaviors expected to be possessed by graduate physical therapists. 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 second semester junior year through second semester senior year).

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 will also be covered.

This course introduces the student to basic concepts, principles, and skills needed by all physical therapists. During this course, students independently study medical terminology. They are introduced to the history of the profession of PT, the American Physical Therapy Association and the Code of Ethics, the physical therapist assistant. Knowledge regarding the healthcare team is expanded. Clinical education processes at SLU are introduced. CPR, First Aid, emergency procedures, vital signs, the Model of Disablement, and the Guide to Physical Therapist Practice are also included in this course.

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.

The focus of this course is the development of professional behaviors expected to be possessed by graduate physical therapists. 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).

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.

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 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.

The focus of this course is basic science knowledge needed in physical therapy. Topics covered include histology, embryology and genetic influences.

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 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.

This course involves both written and verbal communication in physical therapy. The medical record and two types of note writing are addressed. Basic concepts regarding verbal communication are explored. A unit on ethics is included along with a unit on group work and team formation. Issues of cultural competence are further explored.

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, i.e., IV’s, catheters, Oxygen administration, and their significance to physical therapy treatment are presented. Also included will be the 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 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.

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.

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 sessions 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.

Motor control theory and applications, and motor learning principles are presented as they relate to healthy individuals and patient interventions. Principles of neuroanatomy and neuropsychotherapy are reviewed and applied to patient case studies.
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 512 - Professional Development IV (1)
The focus of this on-line course is the development of professional behaviors expected to be possessed by graduate physical therapists. 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.

PT 513 - Physical Agents I (0-2)
Thermal Agents is the first in a sequence of courses concerned with the physical, physiological, and psychological rationale for treatment utilizing physical agents. Upon completion of this course, it is expected that the student will have acquired not only a theoretical and practical knowledge of a variety of physical agents, but that she/he also will be able to integrate this component of treatment into overall patient care treatment plan that provides for optimal goal achievement. In addition to subject matter synthesis and performance demonstration, this course emphasizes the following: therapist-patient verbal, non-verbal, and written communication; optimum patient positioning and draping; therapist and patient safety during application of physical agents; and thorough knowledge of proper equipment usage and maintenance. Laboratory sessions will be conducted in a simulated patient problem-solving format.

PT 514 - Physical Agents II (0-2)
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 care program for optimum goal achievement.

PT 519 - Biomechanical Interventions (0-3)
Biomechanical Interventions is focused on physical therapy management for patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathology. The student will have acquired a broad understanding of the biomechanical principles applicable to the musculoskeletal system. Each regional unit includes examination (history, systems review, and tests and measures), evaluation of 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.

PT 520 - Musculoskeletal Conditions I (0-2)
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.

PT 521 - Musculoskeletal Conditions II (0-3)
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.

PT 522 - Musculoskeletal Conditions III (0-4)
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 case situations using clinical reasoning strategies.

PT 523 - Musculoskeletal Conditions IV (0-2)
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.

PT 525 - Clinical Gait (0-2)
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.

PT 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.

PT 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 an integral course component.

PT 528 - Neurological Conditions II (0-2)
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.

PT 529 - Cardiopulmonary Conditions (0-3)
This course examines the pathogenesis and pathophysiology of cardiovascular and pulmonary disorders. Cardiopulmonary examination, goal setting and intervention methodologies are included.
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 re-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, childhood disabling musculoskeletal dysfunction, and incontinence.

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

This one hour lecture course will provide 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, and adverse reactions will be discussed. Dosage determinations, based on age and weight, will be introduced.

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 delivery system and the implications for physical therapy services. The students will address legal issues that are relevant in management of physical therapy practice.

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.

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.

This course introduces the students to several models of health beliefs as well as discussion of the impact of the health care environment on 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.

This course covers 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 orthopaedic impairments throughout 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 outcomes 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 an interprofessional team case seminar.

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 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 and focuses on 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.

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.

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.

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.
Radiation Therapy (XRT)

XRT 330 - Intro Radiation Therapy Pract (0-1)
Focus is on the affective domain of patient care in radiation oncology. Introduces basic psychomotor skills in localization, treatment and dosimetry. Professional responsibilities of a radiation therapist will be demonstrated and evaluated. Quality assurance and departmental operations are considered. An overview of daily departmental operations will be demonstrated. Class labs and demonstrations are incorporated to complement specific content areas. 1 credit hour (1 didactic/0 practicum) Prerequisites: ANAT 200 Human Anatomy, PPY-254 Human Physiology

XRT 331 - Radiation Physics (4)
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 332 - Radiation Therapy Practice I (2)
This course provides the student with and 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 333 - Treatment Technique (3)
Introduces concepts and terminology of radiation therapy treatment set-ups. Examines 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. 3 credit hours (2 didactic/1 lab) Prerequisites: Introduction to Radiation Therapy Practicum, ANAT 200 Human Anatomy, PPY 254 Human Physiology Co-requisites: Principles of Radiation Therapy Practice I, Clinical Practicum I

XRT 334 - 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 335 - Clinical Practicum I (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. 2 credit hours (0 didactic/2 practicum) Prerequisites: Introduction to Radiation Therapy Practicum Co-requisite: Principles of Radiation Therapy Practice I

XRT 336 - Clinical Dosimetry (4)
Provides an opportunity for simulation and-dosimetry and treatment planning for radiation oncology special procedures. 4 credit hours (4 didactic/0 practicum) Prerequisites: Principles of Radiation Therapy Practice I, Treatment Planning Co-requisite: Principles of Radiation Therapy Practice II
XRT 345 - Clinical Practicum II (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 350 - Rad Onc Pat. Care & Qual Manag (0-3)
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 respectively 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 351 - RadioBiology (1)
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 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 498 - Capstone in Radiation Therapy (1)
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
Computer Science (CSCI)
CSCI 226 - Adv Object-Orntd Design & Syst (3)
Classes and methods, messages, instance, initialization, inheritance, static and dynamic binding, and polymorphism.
Nursing (NURS)

NURS 110 - Nursing as a Profession (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 application of the sciences and humanities to nursing education.

NURS 120 - Introduction to Health Care (1)
This course introduces the student to the concepts of health and wellness with emphasis on the recipients of health care including individuals, families, groups, and communities.

NURS 130 - Intro to Interpr Health Care (1)
This course is designed to provide students in health care professional programs with introductory knowledge of interprofessional teamwork within an evolving health care system. The purpose of the course is to introduce concepts in interprofessional education to health profession students for collaborative patient, family, and community health care. The philosophical and theoretical foundations of interprofessional health care are explored in relation to promotion of health and wellness as well as management of illness. Interactive learning experiences provide the opportunity to develop knowledge and understanding of each professions contribution to health care. This is a foundation course for future interprofessional study of health promotion, issues of health care delivery, evidence-based practice, and clinical application of these concepts.

NURS 210 - Communication in Health Care (0-2)
This course focuses on the development of skills in communication that the health care provider uses in working with clients across the lifespan. Consideration is given to factors affecting the provider-client relationship with the primary focus on understanding human relationships. The seminar component provides the student with the opportunity to practice communication skills.

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 244 - Dim of Nurs Prac I (3-4)
This course serves as an introduction to nursing and its place within the health care delivery system. Emphasis is placed on understanding the basic needs of individuals. Consideration is given to factors affecting the nurse-client relationship in health care, including self-awareness and cultural awareness. An overview of the communication process and the nurse-client relationship in health care, with the primary focus on understanding human relationships, is presented. The continuum of health care and the factors affecting health care are also presented.

NURS 330 - Pharmacology in Nursing (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), PPHY 254 and NURS 243, as well as the following NURS courses, which may be taken concurrently: 250, 252, 360 and 370.

NURS 335 - Pharmacology in Nurs Prac I (1)
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 nurses 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 336 - Pharmacology Nurs Prac II (2)
Lecture 2 hours per week. This course expands the students knowledge of the nurses role and responsibilities in drug therapy. The student will focus on application of the nursing process to the care of clients receiving drugs that affect reproduction, oxygenation, tissue perfusion, metabolism, nutrient absorption and digestion, infection, cell proliferation, sensation, perception, and consciousness.

NURS 344 - Dimensions of Nurs Prac II (4-5)
Building on concepts learned in the Dimensions of Nursing Practice course, this course provides students with the knowledge foundational to the care of clients across the lifespan, from diverse backgrounds, and in a variety of settings. The roles of the nurse, as a member of the interdisciplinary health team, are discussed. Factors that promote the delivery of quality care are presented. Stress and crisis are explored in relation to acute and chronic alterations in health and the need for nursing assistance to achieve positive adaptation. Research is introduced as a method of inquiry and as a foundation for the development of the scientific base for nursing practice. The student develops a continuing relationship with a family in a community setting.

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 364 - Pathophysiology (3-4)
The modification and adaptation of physiological function in response to pathological conditions is the emphasis for this course. Major considerations are given to selected pathological alterations and their effects on physiological and psychological functions.

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 375 - Health Assessment (3)
This course focuses on the assessment component of the nursing process in the health care of individuals and families across the life span. The course integrates assessments of physical health, functional capacity, growth and development and psychological, sociocultural and spiritual health of individuals within their families and communities. The university laboratory experience provides for learning a systematic method of performing health assessments and development of assessment skills.

NURS 380 - Conceptual Framwk for Pract (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 385 - Health Asmt and Diag Rng (3)
This course builds on the Registered Nurse students previous educational and work experiences to focus 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, growth and development and psychological, socio-cultural and spiritual health of individuals within their families and communities. The course provides experiences conducive to students acquisition of a systematic method of performing comprehensive health assessments and the use of diagnostic reasoning in the assessment process.

NURS 403 - Dimension of Nurs Prac III (2)
This course introduces the student to research as a method of inquiry and as a foundation for the development of the scientific base for nursing practice. Emphasis is placed on the critical evaluation of research and the utilization of research findings.

NURS 421 - Care Client Life Span I (4)
Building on concepts learned in previous courses, this course uses a family-centered approach in the study of health needs of childbearing women. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote adaptation of the childbearing family. The student applies theoretical knowledge in the care of childbearing families in acute care and community settings.

NURS 423 - Care Client Thru Life Span II (4)
Building on concepts learned in previous courses, this course uses a lifespan approach in the study of clients experiencing alterations in nutrition, elimination, metabolism or skin integrity. 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 424 - Care Client thru Life Span III (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 oxygenation. 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 427 - Psych/Mental Hlth Nursing (4)
The concepts 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 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, 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.

NURS 429 - Public Health Nursing (4)
This is a continuation of NR-N428 and will expand the students understanding of public health and public health nursing. Special emphasis will be on population-based approaches to promote and maintain health of community and at-risk populations. Research-based knowledge of public health science and leadership roles in community health planning are integrated. Evaluation of care and fostering of accountability are integrated throughout the course. Ethical policy issues in public health continue to be examined.

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 - 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 at 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.

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.

NURS 434 - Maternal-Child Hlth Nurs Clini (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.

NURS 436 - Nrs Mgmt: Older Adult Theory (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 - Nrs Mgmt: Oder Adult Clinicals (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 441 - Care of Client Thru Life 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 444 - Care of Client Thru Life 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 455 - Leadership and Management (3)
See NURS456 for Course Description.

NURS 456 - Leadership and Management (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.
The focus of the course is on health promotion during the school year. Emphasis is on teachers role in fostering student health. Establishing collaborative relationships with individuals in the community a variety of agencies is explored as a way to enhance the services and scope of comprehensive school health programs. Health is viewed comprehensively with physical, psychological, sociocultural, and spiritual dimensions.

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.

See Course Description for NURS480.

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 identify a pertinent issue and provide a service to an agency or population group. Seminars will provide opportunities for students to discuss and reflect on how service activities express the professional obligation to work as change agent for a more just society.

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.

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.

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.

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.

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.

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.

Selected advanced physiologic concepts are correlated with behaviors which form the basis of mental health. These include molecular, cellular, and multicellular components of psychoimmunology, biochemical transmissions of neurons, neurosensory influences, specialized areas of the brain, and biochemical hormonal stability.

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.

Selected models and tools are used to understand behavior and to identify risks to health across the lifespan; these include lifestyle, cultural and environmental factors. Clinical applications of health promotion, protection, and disease prevention strategies with individuals, families, communities, and vulnerable populations are analyzed.

This course integrates the advanced assessments of individuals within the dimensions of the Saint Louis University Adaptation Framework. The practicum provides for learning a systematic method of performing comprehensive health assessments and developing advanced assessment skills. The third credit hour is specific to the student's nursing specialty.

Relevant theories are applied in the nursing management of clients with primary health care needs and/or acute or chronic illness. By using nursing research and practice standards students implement strategies in the physiological, psychological, sociocultural, and spiritual dimensions in caring for clients and their families.

Content in this course focuses on the acutely ill client with complex illness. Identification of client conditions requiring the application of technology in order to provide comprehensive assessment data or to stabilize the physiological condition are described. The evaluation of these resources and clinical outcomes are also considered.

Specific concepts in the management of clients with complex acute and unstable conditions are studies. Advanced theories and research findings from nursing, medicine and the psychosocial sciences are used to identify and meet client needs in physiological, psychological, sociocultural and spiritual dimensions of care.

A foundation theory course in psychiatric/mental health nursing, with focus on content basic to the nurse's role in facilitation/adaptation of the underserved, severely and persistently mentally ill client. The ecological model and psychoanalytic, interpersonal, and crisis theories are analyzed in relation to the Saint Louis University Adaptation Framework.

Emphasis is placed on knowledge application for client mental health promotion and maintenance and nursing care during acute or chronic illness. Research findings and practice standards guide holistic care and therapy with the individual, family, or group. Client's sociocultural background and development level and treatment setting are considered in management.
NURS 545 - Adv Clin St: Adol/Adult/Older (4)
Relevant theories are applied in the nursing management of adolescent, adult, and older adult with primary health care needs and/or acute or chronic illness. By using nursing research and practice standards students implement strategies in the physiological, psychological, sociocultural, spiritual dimensions in caring for clients and their families.

NURS 547 - Advanced Clinical Studies: Primary Health Care
This course focuses on the theoretical and scientific bases for management of healthy childbearing and childbearing families. Care of children with minor acute and selected stable chronic health problems. Trends in health care, ethical issues, and the socioeconomic and political environment will be analyzed to optimize the management of care.

NURS 552 - Adv Clin St: Perinatal Nurse (4)
Emphasis is placed on application of relevant theory for health promotion and management of care. Students use nursing research and practice standards to implement strategies in the physiological, psychological, sociocultural, and spiritual dimensions in caring for both low- and high-risk pregnant women and infants and their families.

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 Nurs Education (2)
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 Nurs 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 562 - Adv Clin St: Nurs of Children (4)
Relevant theories are applied in the nursing management of children with primary health care needs and/or acute or chronic illness. By using nursing research and practice standards, students implement strategies in the physiological, psychological, sociocultural, and spiritual dimensions in caring for children and their families.

NURS 565 - Adol Sex/Childbearing/Childrear (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 568 - Rsch Util/Evdce Bsd Prac Nrs (2-3)
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 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 572 - Adv Clin St: Gerontological Nsg (4)
Relevant theories are applied in the nursing management of elderly clients with primary health care needs and/or acute or chronic illness. By using nursing research and practice standards students implement strategies in the physiological, psychological, sociocultural, and spiritual dimensions in caring for elderly clients and their families.

NURS 575 - Care/Elderly Interdisc Apprch (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 577 - Adv Practice Nrs with Families (2-3)
The course provides theoretical foundations for the nursing care of families within the context of community. Nurses will apply concepts and develop partnerships with families to promote their health and well-being. Contemporary family forms and policies that impact family well-being are examined.

NURS 578 - Adv Clin St: Public Health Nrs (4)
Emphasis is placed on the advanced application of nursing and public health theory and research for improving community or population health. Skills developed include implementation and evaluation of programs for primary, secondary and tertiary health promotion in communities from the perspective of private or official organizations. Attention is given to family case management, community organization, management of the public health nursing team and grant writing as means to improve population health.

NURS 579 - Community Assmt/Dgnstc/Plnng (2-3)
Case studies focus on the development of advanced knowledge and skill in needs assessment and health care planning for urban and rural populations or communities. Students apply information obtained from health and population databases, study strengths and weaknesses of various planning models, and identify strategies for change across health professional and citizen groups.

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 583 - Nursing Informatics Practicum (3)
The practicum gives students the opportunity to increase their competence in the use of computer-based information systems in healthcare organizations. Students apply nursing, administrative, and informatics concepts to reinforce and enhance analytic skills needed in the design, selection, implementation, administration, and evaluation of clinical management information systems.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Description</th>
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<tbody>
<tr>
<td>NURS 587</td>
<td>Administration Care Systems I (3)</td>
<td>This course focuses on strategic management of quality and cost, and evaluation of performance as a framework for decision making in the administration of nursing care systems. Principles and methodologies of quality management, cost management, and program evaluation are explored within care systems. Students apply quality/cost concepts in the practicum.</td>
</tr>
<tr>
<td>NURS 588</td>
<td>Administration Care Systems II (3)</td>
<td>This course focuses on mastering applied quantitative and qualitative methods to analyze and evaluate quality and costs in the administration of nursing care systems. Advanced methodologies are studied for the strategic management of fiscal resources and costs of human resources. Students apply advanced quality and cost technologies in the practicum.</td>
</tr>
<tr>
<td>NURS 589</td>
<td>Adv Prac Nrs: Sem/Practicum (0-5)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 600</td>
<td>Theory Development in Nursing (3)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 601</td>
<td>Research Issues in Health Promotion, Disease</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 602</td>
<td>Measurement of Nursing Var (3)</td>
<td>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, quantitate methods and designs, and instrument construction and evaluation.</td>
</tr>
<tr>
<td>NURS 603</td>
<td>Nursing Issues and Leadership (2)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 604</td>
<td>Care Acute/Chronically Ill Pop (3)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 609</td>
<td>Quantitative Mthds Nrs Rsch (3)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Qualitative Mthds Nrsing Rsch (3)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 612</td>
<td>Iss Sci Integrity in Nrs/Hlth (1)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 613</td>
<td>Knowledge Dev in Nursing (3)</td>
<td>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.</td>
</tr>
<tr>
<td>NURS 614</td>
<td>Interpretive Phenomenology: Research Metho</td>
<td>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.</td>
</tr>
</tbody>
</table>
Health Care Ethics (HCE)
HCE 501 - Foundations of Clinical Ethics (1)
A study of the principal ethical and legal norms that inform clinical ethics discussions. A range of theories and approaches will be studied, such as the role of virtues, principles, religion, and the law. An understanding of these areas is essential for understanding the disagreements that arise in clinical ethics cases and for analyzing such cases.

HCE 503 - Foun of Cath Health Care Ethic (1)
This course examines the Ethical and Religious Directives for Catholic Health Care Services to offer a critical appraisal of the foundations of Catholic health care ethics.

HCE 510 - Info Consent and Surrogate Dec (1)
A study of informed consent and decision making on behalf of incompetent patients, including topics such as: the legal and ethical basis for informed consent, standards health professionals must meet in disclosing information, standards used by surrogate decision makers, and the role of advance directives.

HCE 511 - Death and Dying (1)
This course surveys ethical issues and norms that pertain in health care for patients who are near the end of life, such as advance directives, palliative care, proxy decision making, and criteria of death germane to this domain of study. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 512 - Ethical Pol Social Pain Managm (1)
A study of empirical data concerning pain management and palliative care to identify major areas of concern relevant for ethicists in the clinical setting; the ethical framework for physicians and institutions in providing pain management and palliative care; legal norms regarding pain management, including statutes, cases, professional guidelines, and private accreditation. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 513 - Patient Safety & Medical Error (1)
This course examines the related ethical issues of medical error and patient safety, especially from the perspective of quality improvement in health care today. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 514 - Organ Donation Ethical Issues (1)
A study of ethical and legal issues that arise in the care of children and adolescents, such as genetic testing and counseling, parental refusals of and demands for treatment, care of critically ill newborns, adolescent decision making, intra-familial organ and tissue transplants, end of life decisions, and confidentiality. The legal and ethical standards for making health care decisions on behalf of children will be examined. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 515 - Perinatal & Pediatric Ethics (1)
A study of ethical and legal issues that arise in the care of children and adolescents, such as genetic testing and counseling, parental refusals of and demands for treatment, care of critically ill newborns, adolescent decision making, intra-familial organ and tissue transplants, end of life decisions, and confidentiality. The legal and ethical standards for making health care decisions on behalf of children will be examined. Maximum number of students: 15. Enrollment requires permission of the Program Coordinator.

HCE 516 - Law and Bioethics (1)
This course examines the relationship between law and ethics, generally and in the context of health care decision making. It includes a brief introduction to the legal system and legal method. It then applies this learning to one particular question in health care law and ethics.

HCE 521 - Theories in Philosophical Eth (3)
This course offers an introduction to philosophical ethical theories. A critical examination of Aquinas, Aristotle, Kant, and Mill will be undertaken with special attention to the implications of these theories for the study of health care ethics.
### 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 641 - Pract I: Clin Pt Care Settings (1)
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 642 - Pract II: Comm/Pub Hlth Setting (1)
This practicum engages students in community and public health settings with these goals: to experience public and community dimensions of medical care; to identify the ethical perspectives of community and public health issues; to reflect critically on the ethical challenges and principles involved in these community and public health settings.

### HCE 643 - Practicum III: Admin/Corp (1)
This practicum engages students in corporate and administrative settings with these goals: to experience these health care settings; to observe the planning and organization of health care in light of ethical principles; to reflect critically on the ethical challenges and principles involved in these administrative and corporate settings.

### HCE 644 - Practicum (1-3)
The Practicum engages students in a variety of health care settings to experience the clinical environment, the public health and community dimensions of health care, and the administrative aspects of health care. These experiences will help students better understand the health care context. Students will reflect critically on ethical challenges in health care.

### 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.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 110</td>
<td>Liturgy &amp; Sacraments I</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
<tr>
<td>THEO 111</td>
<td>Liturgy &amp; Sacraments II</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
<tr>
<td>THEO 120</td>
<td>Catholic Doctrine</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
<tr>
<td>THEO 121</td>
<td>Catholic Morality</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
<tr>
<td>THEO 130</td>
<td>Catholic Doctrine I</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
<tr>
<td>THEO 131</td>
<td>Catholic Doctrine II</td>
<td>2</td>
<td>Offered for Philosophy and Letters students only.</td>
</tr>
</tbody>
</table>
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 461 - Contemp Adult Spirituality Conf (1)
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 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 make 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.

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 301 - Const. Issues & Crim. Process (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 (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 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 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 465 - Admin & Mgmt of CJ Organizations (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 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 include 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 work 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 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 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 profession 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 370 - Advertising Princ & 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.

CST 130 - Information System & Technology (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 135 - Introduction to Informatics (3)
An introduction to the fundamental principles and concepts of technology used for the study of Informatics. Topics covered include the basics of computer architecture; computing algorithms; data structures and database concepts; standards of information presentation; concepts of information processing, including searching and data organization; Internet-based information access tools; information analysis, information representation, economics of information sharing, ethics and computing and the transformation of data into information.

CST 140 - Programming Logic and Design (3)
This course will prepare students for analysis and application of logic techniques used in structured computer programming. The course covers a range of topics including data representation, data validation, array processing, comparing and branching conditions, structures, file processing, and interactive logic. Pseudocode and hierarchy charts will be used to help students understand and express structured logic.

CST 160 - Introduction to Programming (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 260 - COBOL Programming (3)
This course will provide students with the foundation knowledge necessary for programming in a business-oriented language. Student instruction concentrates on developing the programming logic and syntax needed to solve basic business problems. Design tools, such as flowcharts and pseudocode, are introduced and used as a basis for developing programs. The student will be exposed to file handling, table and array processing, report generation, arithmetic statements, sorting procedures, data types, and conditional statements.

CST 270 - Discrete Methods and Models (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 280 - Discrete Structures I (3)
This course is the first course in a two-term sequence which will introduce the mathematical tools necessary for understanding computer science applications. Topics include: sets, relations, functions, basic counting techniques, permutations, combinations, graphs, recurrence relations, simple analysis of algorithms, O-notations, Boolean algebra, and number systems.

CST 293 - CST Special Topics (1-4)
Prior approval of sponsoring professor and program director required.

CST 295 - Principles of Data Analysis (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 296 - CST Independent Study (1-4)
Prior approval of sponsoring professor and Program Director required.

CST 300 - Principles of Software Enginring (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 305 - Adv Programming Concepts (3)
This course covers advanced concepts in programming using the C language within the UNIX environment. The course begins by exploring the fundamental framework of the UNIX operating system which covers file management, shell and editing, and basic UNIX commands. The emphasis of the course will be on developing programming solutions that are effective, reliable, and user-oriented in the C programming language.
CST 310 - Princ. of Object Oriented Prog (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 320 - Princ. of Event Driven Progrm (3)
This course introduces the necessary skills and methodologies needed to program in an event driven programming language. Students learn about properties, methods, and events as they relate to an object and its interface. Students will design, develop, and code GUI based applications that solve computer information technology based business problems.

CST 330 - Cncpts Database Analysis & Des (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 350 - Fund. of Operating Systems (3)
This course provides students with a sound foundation in the key mechanisms of operating systems. Windows NT and UNIX will be referenced as running illustrative examples of operating systems. Topics include an overview of the components of an operating system, mutual exclusion and synchronization, implementation of processes, scheduling algorithms, memory management, and file systems.

CST 360 - Networking & Telecomm I (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 (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 (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 (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 401 - Data Structures & Algorithms (3)
This course provides advanced study of techniques and algorithms for representing and manipulating data structures. The course will expose students to methods used by the business and scientific community in building efficient and optimized computer technology solutions. Topics include advanced language features, data abstraction, object-oriented programming, classes, dynamic storage allocation, garbage collection, compaction, sorting, searching, merging, hashing, recursion, stacks, queues, linked lists, trees and graphs.

CST 405 - CST Project Management (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 (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 420 - Client Server & Software Software (3)
Prerequisites: Grade of C or better in CST 160, CST 310, or CST 320, and ENGL 190. This course covers the various levels of application and system software such as file systems, memory, threads, process, and device management, scheduling algorithms, and concurrency. Students will configure, customize, and manage major operating system services and understand how decisions affect users. Students will manage and implement user and computer accounts, group policies, access to resources, monitor system performance, and administer server resources.

CST 420 - Client Server Automation (3)
Prerequisites: Grade of C or better in CST 160, CST 310, or CST 320, and ENGL 190. This course covers the various levels of application and system software such as file systems, memory, threads, process, and device management, scheduling algorithms, and concurrency. Students will configure, customize, and manage major operating system services and understand how decisions affect users. Students will manage and implement user and computer accounts, group policies, access to resources, monitor system performance, and administer server resources.

CST 460 - Networking & Telecomm II (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 (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 (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.
and proper authority to enter a contract. The fundamentals of contract law. Formation and administration of a contract will be studied.

**CTM 300 - Basic Principles of Contract Management (3)**
This course will focus on managing subcontractor and vendor contract performance. Topics will include: the legal relationships created by subcontracting; the importance of adequately defining the subcontracted work; strategic teaming agreements between companies; and subcontract planning and scheduling. Students will also gain an understanding of the need for a subcontracting plan that allows for the monitoring of both cost reimbursable and firm-fixed price type subcontractors.

**CTM 400 - Intellectual Property Protection (3)**
In this course, students will learn how to protect the company's ideas, technology, know-how, brand names, logos, and marketing tools while learning how to establish a niche in the market.

**CTM 415 - Proposal Preparation, Acquisition, and Negotiation (3)**
This course will study the most advanced solicitation and negotiation strategies and understand how to develop a sound and competitive proposal. Emphasis will be placed on procuring and developing contracts including: effective market analysis; competitive techniques for preparing winning proposals; advanced negotiation strategies and tactics; and strategic planning.

**CTM 425 - Contracting in the Global Marketplace (3)**
Contracting in the global marketplace presents a unique set of challenges for an organization. In this course, students will learn how to procure and develop international contracts through the application of sound contract management principles. Special arrangements and available international sources of law will also be addressed.

**Education (ED)**

**ED 120 - Human Growth & Development (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: Educnl 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 (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 Inclnsn & 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 368 - 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 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 420 - Asmnt 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 426 - Classrooms 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 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 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 433 - Tchng Mthds in the Fine Arts (2)
This course will focus on the art and music education curriculum. The candidate with a thorough background in speech and language development related to children with special needs. Prerequisite: admission to the teacher preparation program.
Hospitality Management (HMGT)

HMGT 300 - Intro to Mgmt in Hosp Industry (3)
Overview of management theory, functions, and tools of management relating to the specialized operations within the hospitality industry, in general and in Food and Beverage operations, in particular. Focus on contemporary approaches to the managerial functions of planning, organizing, staffing, and controlling in a multicultural, dynamic organization.

HMGT 311 - Food & Beverage Management (3)
Study of the principles of food and beverage management in full-service restaurants and related venues. The course will consider fine dining, fine cuisine, and control systems within independent units or as units within another food service. Students will complete a Menu Analysis and prepare a Menu for a new or existing restaurant.

HMGT 320 - Catering and Events Management (3)
This course examines the roles and responsibilities of professional planning and executing of meeting, conventions, and special events. Topics include sales, marketing, facilities evaluation, menu planning and pricing, staffing requirements and customer relations. Students will be responsible for planning and execution of a simulated event.

HMGT 340 - Service Management (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.

HMGT 360 - Technology in the Hosp Industry (3)
This course introduces the student to specific applications of technology in the hospitality industry. Topics will include point of sale systems, back office systems, property management systems, time and attendance and payroll systems, human resource and labor management systems, and others. The role of the internet for the hospitality industry and basic hardware will also be discussed.

HMGT 420 - Loss Prevention (3)
This course introduces students to the major areas of loss prevention/ risk management in the hospitality industry including internal controls, safety, security, quality control and insurance. Topics will include employee theft, cash control, fraud, safety programs, government regulations (OSHA, EPA, et), shopping services, and all forms of insurance. Students will conduct a Loss Exposure Audit for a local hospitality operation.

HMGT 497 - Hospitality Industry Practicum (3)
Seniors are required to expand their understanding of Food & Beverage services through a management practicum arranged and approved by the program director.

Humanities (HUM)

HUM 300 - Encntrg Humanities: Anc - Rena (3)
These courses constitute a survey of the humanities. They cover Western Culture from ancient Mesopotamia to the Twentieth Century. The courses try for a broad coverage of topics. From the framework of a historical survey they will examine the major forces that have both shaped and expressed Western culture. Students will learn about literature from the Epic of Gilgamesh to Moby Dick, architecture from pyramids to skyscrapers, music from Gregorian Chant to George Gershwin, and philosophy from Socrates to Sartre.

HUM 301 - Encntrg Humanities 2:Ref - Inf (3)
These courses constitute a survey of the humanities. They cover Western Culture from ancient Mesopotamia to the Twentieth Century. The courses try for a broad coverage of topics. From the framework of a historical survey they will examine the major forces that have both shaped and expressed Western culture. Students will learn about literature from the Epic of Gilgamesh to Moby Dick, architecture from pyramids to skyscrapers, music from Gregorian Chant to George Gershwin, and philosophy from Socrates to Sartre.
Prior approval of sponsoring professor and Program Director required.

**HUM 480 - Humanities Synth: Phil & Human (3)**
This course will address such questions as: what is art; what is beauty; what are the fundamental human experiences that have been expressed in art throughout cultures around the world and across the ages? The course will begin with a short section on the philosophy of aesthetics, looking at the idea of beauty through the eyes of Plato, the medievals, Kant, Nietzsche, Santayana, Murdoch and Sister Wendy. The course will examine myths, fables and fairy tales from around the world, including myths of explanation, of love, death and rebirth, archetypal myths of the hero/ine, and the mother. Myths will provide students with the themes common to human experience. Examples of these experiences in works of art, including film, music, dance, the visual arts, philosophy and literature will also be studied.

**HUM 485 - Humanities Portfolio Pro Semnr (1)**
Taken the last semester of senior year in the Humanities 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 Humanities 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.

**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.

**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 (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 (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 398 - Advanced Independent Study (1-4)**
Prior approval of sponsoring professor and Program Director required.

**OSTD 410 - Conscpts & Theories of Leadersh (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.

**Professional Studies (PS) (PST)**
**PST 100 - Learning Strateg., Processes, (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 310 - Accounting Concepts for Profes (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 (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 reasearch 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; e-Commerce 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 490 - Social Science Research Method (3)
Examine the process of constructing and implementing social science research with a focus on methodology, different research methods and statistical analysis. This course will include an emphasis on the value of strong writing skills as an integral part of social science research and the development of ethical positions and how a particular position will influence the type of research selected.

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, Intraspsychic, 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, tranquillizers, 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 sexualities, 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 workplace 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.

Real Estate & Community Dev (RECD)
RECD 300 - Real Est. Roles and the Public (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 315 - Real Estate Appr, Market, Res (3)
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 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 also be covered.

RECD 400 - Real Estate Law (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 (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 transactions, the nature of public versus the private role in real estate transactions, the various methods for financing in real estate transactions, and the decision analysis involved in identifying prospective sites 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 (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 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 487 - Real Estate Capstone (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.
Behavioral Sc/Health Educ (BSH)

BSH 500 - Behavioral Sci & 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 PRECEDE-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 Health Education (3)
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 532 - Understanding Segmentation (3)
The course will prepare students to conduct audience segmentation and analysis for public health communication programs. Students will learn: 1) the rationale, principles and goals of audience segmentation; 2) specific methods for gathering audience data; and 3) how to translate audience data and segmentation strategies into a communication plan.

BSH 533 - Persuasion, Message Design and Customization (3)
The course aims to introduce students to persuasion theories, and to prepare students to develop health communication programs customized to specific population subgroups or individuals. On completion of the course each student will be able to design messages for public health programs, accounting for relevant theories and evidence.

BSH 534 - Dissemination and Evaluation Strategies (3)
The course aims to introduce students to theories and practices related to dissemination and evaluation for health communication programs. On completion of the course each student will be able to plan, develop, and assess dissemination and evaluation strategies in public health programs, accounting for the evidence base.

BSH 535 - Media Strategies for Public Health Professions (3)
The course aims to introduce students to a range of theories and practices related to media and dissemination that inform health programs and behavior. On completion of the course each student will be able to plan, develop, and assess media and dissemination strategies in public health programs, accounting for the evidence base for relevant social and behavioral conditions.

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 594 - Intern: Beh Sci & Health Educ. (0)
This course provides supervised experience in application of community health techniques through work in a public health agency or other health care organization.

BSH 597 - Research Topics in Behavioral Science and Health Education (3)
This course provides a 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 601 - Research Methods in Behavioral Science (3)
This course provides an overview of selected methods used in conducting behavioral science research. The course will address all methodological aspects of behavioral science research, with an emphasis on data collection methods and survey research. (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 603 - Applying Theory in Research & Practice (3)
Theory is a fundamental conceptual tool in the design and assessment of public health programs. Students will learn to critically assess relevant theories and evidence in relation to specific public health problems, and will be trained in the application of theory to inform and benefit program planning, development, implementation and evaluation.

BSH 610 - Community Analysis, Organizing, and Change (3)
This course surveys principles and models underpinning community-based health promotion initiatives. Qualitative and quantitative approaches to needs assessment and community analysis are introduced. Literature is reviewed on citizen participation, empowerment, self-help, coalitions, dissemination of validated program models, and related issues of community organization applied to health problems. The course features student analysis of prominent community-based research and demonstration projects. (Offered annually.)

BSH 611 - Health Behavior Assessment (3)
The purpose of this course is to review research and theory guiding the assessment of selected health behaviors; to integrate behavioral and physiological sciences in conducting health behavior assessments; and to emphasize assessment as a core component of the scientific approach to the development and implementation of public health interventions. The course will promote skills necessary to critically evaluate methods used to assess health behaviors from a variety of theoretical perspectives applied to health promotion and risk behavior prevention. (Offered annually.)

Biostatistics (BTS)

BTS 500 - Principles of Biostatistics (3)
This course is designed as an introduction to statistical analysis for students in public health, health administration and research. It is for persons interested in learning the fundamental concepts and techniques of descriptive and inferential statistics with particular emphasis on application in health care administration, business, marketing, and epidemiology. Basic statistics, including probability, descriptive statistics, inference for means and proportions and regression models are presented. (Offered every semester.)
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Description</th>
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<tbody>
<tr>
<td>BST 501 - Biostatistical Methods (3)</td>
<td>This course introduces the basic principles and methods of biostatistics, sampling, and study design. Emphasis is on fundamental concepts and techniques of descriptive and inferential statistics with applications in basic science and clinical research, public health, and epidemiology. The core content includes: sampling theory, research design, basic statistics, including probability, descriptive statistics inferences for means and proportions, and regression methods. Multivariable methods are introduced. The analytic methods and applications will be linked to topics developed in advanced coursework in epidemiology and biostatistics.</td>
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<tr>
<td>BST 502 - Theory of Biostatistics (3)</td>
<td>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.)</td>
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<tr>
<td>BST 503 - Stat Programming &amp; Study Plan (3)</td>
<td>The course teaches SPSS (12 hours) and SAS programming (20 hours) for statistical analysis and nQuery (4 hours) for sample size estimation and study planning. Programming topics 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.</td>
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<tr>
<td>BST 510 - App Lin Stat Models (ANOVA) (3)</td>
<td>This is the first of a two-course sequence on linear statistical models. This sequence represents a unified approach to the application of linear statistical models in regression, analysis of variance, and experimental design in biomedical and health services research. Both the theory and application of the general linear model (GLM) are presented. (Offered annually.)</td>
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<tr>
<td>BST 511 - App Lin Stat Models II (Regres) (3)</td>
<td>This is the second of a two-course sequence on linear statistical models. This sequence represents a unified approach to the application of linear statistical models in regression, analysis of variance, and experimental design in biomedical and health services research. Both the theory and application of the general linear model (GLM) are presented. Offered annually.</td>
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<tr>
<td>BST 520 - Survival Data Analysis (3)</td>
<td>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 on 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.)</td>
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<tr>
<td>BST 521 - Categorical Data Analysis (3)</td>
<td>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.)</td>
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<tr>
<td>BST 522 - Longitudinal Data Analysis (3)</td>
<td>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.</td>
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<tr>
<td>BST 530 - Exploratory Data Analysis (3)</td>
<td>This seminar provides an in-depth treatment of the statistical techniques known as exploratory data analysis (EDA). Topics include data reexpression, data smoothing, box and stem-and-leaf plots, resistant summary statistics and the visual display of quantitative information. Students will learn to use EDA tools to enrich their descriptive statistical analyses as well as to improve the quality of their inferential statistical analysis. Specialized EDA software (e.g., IMP) will be used throughout the course. (Offered every other year.)</td>
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<td>BST 531 - Network Analysis (3)</td>
<td>Advance seminar covering social network analysis methods, with an emphasis on using network analysis software to model social and health science network data. Topics include background and history of network analysis, network data collection and management; network graphics; network measures of centrality, cohesion, and structural equivalence; multiplex and longitudinal network analysis.</td>
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<td>BST 540 - Applied Data Management (2-3)</td>
<td>This course provides supervised experience in research and biostatistical consulting projects. The purpose of the class is to give students hands-on opportunities to understand both the technical and human side of statistical consulting.</td>
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<tr>
<td>BST 550 - Biostatistical Consulting (3)</td>
<td>Students enrolling in this course will work as partners with the Biostatistics faculty in the School of Public Health in various research and biostatistical consulting projects. The purpose of the class is to give students hands-on opportunities to understand both the technical and human side of statistical consulting.</td>
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<td>BST 560 - Statistical Software (2-3)</td>
<td>This course provides direct research experience in biostatistics. Content is developed jointly between the student(s) and a faculty mentor.</td>
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<td>BST 570 - Clinical Trials (3)</td>
<td>Clinical Trials is an overview of concepts and skills needed to successfully plan, design, and conduct trials in medical and health sciences. Underlying key issues and factors to consider will be discussed in detail. Monitoring and auditing trials, analyzing and interpreting data, and disseminating the findings will also be covered.</td>
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<tr>
<td>BST 580 - Biostatistical Review (1-3)</td>
<td>Students will learn advanced concepts and techniques of research data management with particular emphasis on applications in public health. Students will learn to use SAS statistical software. (Offered annually.)</td>
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<tr>
<td>BST 593 - Clinical Trials (0-3)</td>
<td>This course will focus on applications of various statistical methods for analyzing longitudinal, or repeated measures, data. The core contents will cover multilevel analysis, growth curve modeling, and structural equation modeling. Offered annually.</td>
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<td>BST 594 - Internship in Biostat Consult (0)</td>
<td>This course provides supervised experience in research and biostatistical consulting projects.</td>
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<td>BST 597 - Research Topics in Biostatistics (1-3)</td>
<td>This course provides direct research experience in biostatistics. Content is developed jointly between the student(s) and a faculty mentor.</td>
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<tr>
<td>BST 598 - Graduate Reading in Biostatistics (1-3)</td>
<td>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.</td>
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**Community Health (CMH)**

**CMH 500 - Health Care Organization (3)**
This course provides an overview of 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.)

**CMH 501 - Public Health Administration (3)**
This course provides a survey of local, state, and national administrative and organizational patterns of public and voluntary community health administration, with emphasis on their history and philosophy, legal bases, and behavior. Management and policy issues and trends in public health administration are reviewed and discussed. Public health administration issues are related to the overall U.S. health care system. (Offered twice each year.)
CMH 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.)

CMH 503 - Health Planning & Marketing (3)
This course provides students with theoretical and practical skills in planning and marketing. Technical concerns are presented in relation to social, political, and economic constraints. This course emphasizes "hand on" experience with planning and marketing techniques. (Offered annually.)

CMH 505 - AIDS Epidemic: End of 21st Cen (3)
Using an interdisciplinary approach, this course provides an overview of the AIDS epidemic during its first two decades. Major topics include: history of the epidemic; epidemiology of HIV/AIDS; natural history of the virus; HIV disease progression and medical care; HIV prevention; and social, policy and economic issues associated with HIV/AIDS. (Offered occasionally)

CMH 509 - Global Health Systems (3)
A comprehensive approach to program development and evaluation from a scientific perspective will be discussed. Highlighting the linkages between data systems and program/policy initiatives, participants will learn how to access and interpret existing data systems and methods of using data to impact specific policies or decision-makers. Learning will be problem-based, and course will include lectures, practice exercises, and case studies. Offered annually.

CMH 514 - Evidence-Based Public Health (2)
A comprehensive approach to program development and evaluation from a scientific perspective will be discussed. Highlighting the linkages between data systems and program/policy initiatives, participants will learn how to access and interpret existing data systems and methods of using data to impact specific policies or decision-makers. The course will take a "hands-on" approach and will emphasize information that is readily available at the fingertips of busy practitioners. It will rely on problem-based learning and will include lectures, practice exercises, and case studies.

CMH 519 - Adoles Sextly: Childbrng/Chldrn (3)
Using a social epidemiology perspective, this course examines current trends in adolescent sexuality, fertility and childrearing and the societal context within which these trends have developed. Factors associated with adolescent sexual behavior, pregnancy, and childrearing are explored within the framework of adolescent development. The course describes the public health and social consequences of adolescent childbearing and analyzes creative models for prevention of pregnancy and providing comprehensive services for pregnant and parenting adolescents and their families. Ethical issues surrounding such programs are examined. (Offered annually.)

CMH 520 - Bio Basis of Public Health (3)
This course focuses on some biologic elements relevant to populations and current public health issues. Topics include but are not limited to biologic plausibility in causal inference, aging, disease susceptibility, disease immunity, psychopathology, reproductive (sexual) behavior, the human genome, cancer, and xenobiotics, in a public health context. (Offered annually.)

CMH 521 - Intro to Clinical Medicine (3)
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.

CMH 541 - Community Hlth & Spirituality (3)
An introduction to the study of the impact of spirituality on community health and ministry, including: Catholic traditions, other faith traditions, the role of art and ritual, the use of prayer and other practices, and examination of key values in public health settings, and exploration of the meanings of faith, relatedness and personal belief systems. (Offered occasionally)
CMH 589 - Seminar in Health Disparities (0)
Prerequisite: CMH 543 or 544 (taken concurrent). This course will build on the didactic work presented in CMH543. (Understanding Health Disparities) and CMH 544(Eliminating Health Disparities) from an applied perspective. Exploration and discussions will revolve around the students' community-based research rotations, individual research projects, and the work of others in the field. This course is required for (and restricted to) trainees in the "Eliminating Health Disparities Traineeship." (Offered twice each year.)

CMH 592 - Comm Hlth Prof & Intern Prep (0)
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.

CMH 594 - Internship in Community Health (0-3)
This course provides supervised experience in application of community health techniques through work in a public health agency or other health care organization.

CMH 595 - Special Study for Examinations (0)
Registration is required for Master of Public Health students during the semester of their oral comprehensive examinations.

CMH 597 - Research Topics (1-3)
This course provides direct research experience in community health. Content is developed jointly between the student(s) and a faculty mentor.

CMH 598 - Graduate Reading Course (1-3)
This course provides specialized study in community health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

Environmental/Occupation Hlth (EOH)

EOH 500 - Environmental & Occup 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 521 - Control of Chem & Phys Hazards (3)
This course is an in-depth study of management and control methodologies used for abatement of gases, vapors, aerosols, noise and vibration. Other components of the course may include control methodology for radiation and solid and hazardous wastes as time permits. Following the course in evaluation of Environmental Hazards, this course assumes the student has some basic knowledge of the recognition of hazards and hazard assessment. Engineering and indu strial hygiene concepts will be applied to typical problems in workplaces and communities. Case studies of two small manufacturing plants will be used throughout the course to integrate theory of controls with practical application. The controls will be discussed as part of a decision making process used in risk management. (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 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 -Cntnr of Infect. & Bio Hazards (3)
This course addresses the nature of biological agents including the sources, pathways, routes of entry, and health effects of infectious and allergic diseases. Basic concepts from medical 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 541 - Environmental Risk Comm. (3)
This course introduces the student to risk messages and how different audiences perceive them. Basic concepts and applications of risk communication will be presented and discussed in class. Emphasis will be placed on learning to apply risk communication techniques to typical problems faced by environmental and occupational health practitioners. The class will learn the problems of communicating to diverse groups both in the U.S. and abroad through role playing exercises and development of a risk message. (Offered annually.)

EOH 550 - Environ & Occup 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.)
EOH 560 - Policy, Science and Decisions in Environmental Health
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 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)

EOH 571 - Terrorist Organizations and Their Motivations (3)
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)

EOH 572 - Communicable Diseases and Infection Control (3)
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)

EOH 573 - Disaster Planning (3-4)
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: EOH 572. (Offered annually)

EOH 574 - Epidemics and 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 19th 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)

EOH 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)

EOH 576 - Disaster Communications and Media Relations
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)

EOH 577 - Biosecurity & Risk Assessment (3)
Students will, through directed readings, guided discussions and participation in risk assessment exercises, gain the ability to participate in the risk assessment process to enhance the health, safety and environmental security of their community, its critical infrastructures and commercial and residential buildings. Using the rubric of risk analysis the course engages its participants to consider the risk that state sponsored, post modern jihadist or domestic terrorists may obtain and use biologically, chemically or radio-nuclear weapons against vulnerable civilian populations. Course participants will gain an understanding of the process of developing actionable intelligence that can be used by the public health, medical and public safety communities to reduce risk and enhance the biosecurity planning, response, mitigation and recovery process. (Offered annually)

EOH 578 - Behavioral & Cultural Aspects of Disaster Resp
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)

EOH 579 - Fundamentals of Management During an Emerg
This course will introduce the learner to a basic understanding of disaster management for disasters resulting either naturally or terrorist initiated. This course is designed to provide the learner with information on the background, components, and systems involved in the management of disasters and other emergencies. Current practices, strategies, and important players involved in disaster management will be presented. The response to disasters involves politics and public leaders. The course will examine how leaders deal with the strategic challenges they face, the political risks and opportunities they encounter, the errors they make, the pitfalls they need to avoid, and the paths away from crisis they may pursue. The course will also examine what crisis leadership is and why effective crisis leadership requires organizations that are effective and the organizations require effective leaders. (Offered annually)

EOH 580 - Cases in Environ & Occup Hlth (3)
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 581 - Biosecurity Practicum (3)
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)

EOH 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)

EOH 583 - Legal and Ethical Implications of Disasters (2)
Students will examine the legal and ethical implications of disaster management. Elements of public health law and the principles of ethics will be covered. Students will apply ethical principles and public health laws to disaster planning and response scenarios through case studies and disaster simulations. (Offered annually)

EOH 594 - Intern in Envrn & Occup Hlth (0)
This course provides supervised experience in application of environmental health techniques through work in a public health agency or health care organization, or other appropriate environment.
### Epidemiology (EPI)

**EPI 500 - Principles of Epidemiology (3)**
This course is a comprehensive overview of epidemiologic research of the distribution and determinants of disease risk factors in human populations. The application of epidemiological evaluations in public health practice is emphasized. Topics include analytic reasoning in public health and causal inference; disease surveillance; descriptive, analytic observation and experimental study designs; infectious disease outbreak analysis and health outcome evaluation. Basic statistical measures, including measures of disease frequency and measures of absolute and relative effects, are covered. (Offered every semester.)

**EPI 501 - Epidemiology Methods I (3)**
This course, with EPI-502, provides a comprehensive overview of epidemiologic research methods. Covers measures of disease frequency, association, disease surveillance, causal inferences, experimental and quasi-experimental study designs, and screening. For students desiring more intensive immersion than offered in EPI-500. (Offered annually)

**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 phenominal 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 521 - Mental Health Epidemiology (3)**
This course focuses on three aspects of mental health epidemiology: 1) epidemiology of specific disorders (affective disorders, schizophrenia, etc.); 2) methodological and measurement issues; and 3) community surveys and epidemiologic field methods. The course emphasizes a critical appreciation of the substantial body of knowledge in psychiatric epidemiology. (Offered occasionally.)

**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 524 - Disability Epidemiology (3)**
The emphasis in this course is on the interplay of epidemiology and disability in America. The course is divided into five primary modules: 1) concepts and classification; 2) injury; 3) maternal and child health issues; 4) aging, and 5) applying outcomes research. (Offered every other year.)

**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 570 - Epidemiology Methd for Occ Dise (3)**
This course provides students with an opportunity to examine some of the important steps involved in performing epidemiologic research among occupational groups by reviewing epidemiologic designs, industrial hygiene concepts, and workplace behaviors related to diseases associated with occupations. (Offered annually.)

**EPI 594 - Internship in Epidemiology (0)**
This course provides supervised experience in application of epidemiology techniques through work in a public health agency or other health care organization.

**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)**
Content is developed jointly between the student(s) and a faculty mentor.

**EPI 601 - Advanced Epidemiology Methods (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 603 - Clinical Epidemiology (3)**
The purpose of this course is to explore how epidemiologic models are applied to clinical research questions. Clinical epidemiology evaluates factors that are related to variation in the outcomes of illness. Topics that may be covered include the evaluation of diagnostic tests and screening studies, nosocomial infections, health outcomes issues, and the synthesis of existing study results including critical literature review and the use of meta-analysis. Some statistical measures related to clinical epidemiology will also be introduced and discussed.

**EPI 621 - Genetic Epidemiology (3)**
This is a graduate level course in genetic epidemiology. The course focuses on the role of human genetics in epidemiology and public health. The epidemiology of Mendelian disorders and the genetic environment contribution to common, complex familial conditions is emphasized. (Offered annually.)
Health Administration (HADM)

HADM 503 - Intro to Hlth 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.

HADM 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.

HADM 510 - Quality Impro in Hlth Cre Mngt (3)
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.)

HADM 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.)

HADM 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.)

HADM 514 - Info Systems in Public Health (2)
This course provides an introduction to information systems and their role in the functioning and management of health services organizations in the public and non-profit sector. Topics include basic concepts and terminology pertaining to computer hardware and software; issues in accessing and utilizing information from the World Wide Web; and the creation and management of information systems. (Offered annually.)

HADM 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.)

HADM 518 - Manageral Envrn & Occup Hlth (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.

HADM 520 - Health Care Economics (3)
An in-depth survey of major topics in health care economics, including the production of health, demand for medical care and health insurance, different regulatory approaches, cost containment, cost-benefit and cost-effectiveness analyses, theories of non-profit firm behavior, and alternative delivery systems. (Offered annually.)

HADM 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.)

HADM 529 - Multi-Inst Argmnt in Hlth Care (3)
Resource pressures are causing restructuring of healthcare organizations and change in job descriptions and career tracks. This course examines career opportunities in the healthcare industry arising from organizational consolidations and increased importance of certain industry segments. Consolidated organizations examined include for-profit hospital chains, physician practice management corporations, academic medicine networks, for-profit rural hospital chains, post-acute networks, ambulatory care chains and employer alliances. New industry segments examined include the medical devices industry, pharmaceutical industry, medical supplies industry, health information industry and e-commerce. The course prepares students for a variety of careers in the fast-changing healthcare industry. (Offered annually.)

HADM 530 - Mgnt of Hlth Care Organization (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.

HADM 531 - Ambulatory Hlth Care Mgmt (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.)

HADM 533 - Long-term Care Admin & Plan (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.)

HADM 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.

HADM 537 - Organizational Beh & Mgmt (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.)

HADM 538 - Management of Human Resources (3)
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.
HADM 539 - Leadership in Hlth Care Orgnzns (3)
This course focuses on leadership in organizations, exploring the relationships among different approaches to leadership and different organizational contexts. The course is intended for those who aspire to leadership; those who want to make a positive difference in an organization or institution. The course provides a series of opportunities to think more deeply and systematically about leadership and to increase each student’s personal capacities as a leader. (Offered annually.)

HADM 540 - Legal Asp of Hlth Srvs Mgmt (3)
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.)

HADM 542 - Hlth Care Ethcs in Plural. Soc (3)
This course introduces students to the ethical issues confronting health care managers in today's pluralistic society and increasingly complex health system. It develops the student's ability to analyze ethical problems arising in the field of health administration, to assess the values of our society, which might be used to solve these problems, and to employ the methodology of ethical decision-making proper to a pluralistic society. (Offered annually.)

HADM 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.)

HADM 571 - Financial Asp of Managed 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.)

HADM 572 - Govt 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.)

HADM 580 - Strat Mgmt in Hlthcare Orgnzns (3)
This course focuses on leadership in organizations, exploring the relationships among different approaches to leadership and different organizational contexts. The course is intended for those who aspire to leadership; those who want to make a positive difference in an organization or institution. The course provides a series of opportunities to think more deeply and systematically about leadership and to increase each student’s personal capacities as a leader. (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 Manageme
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 512 - Health Information Systems (3)
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HMP 516 - 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 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 518 - Managerial Envmm & Occup Hlth (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 520 - Health Care 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, costbenefit, 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 532 - Leadership in Health Care Orgzn (3)
This course focuses on leadership in organizations, exploring the relationships among different approaches to leadership and different organizational contexts. The course is intended for those who aspire to leadership; those who want to make a positive difference in an organization or institution. The course provides a series of opportunities to think more deeply and systematically about leadership and to increase each student’s personal capacities as a leader. (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 536 - Health Law (3)
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 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 Ca
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 - Leadership in Hlth Care Orgzn (3)
This course focuses on leadership in organizations, exploring the relationships among different approaches to leadership and different organizational contexts. The course is intended for those who aspire to leadership; those who want to make a positive difference in an organization or institution. The course provides a series of opportunities to think more deeply and systematically about leadership and to increase each student’s personal capacities as a leader. (Offered annually.)

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 542 - Hlth Care Ethics in Plural Soc (3)
This course introduces students to the ethical issues confronting health care managers in today's pluralistic society and increasingly complex health system. It develops the student's ability to analyze ethical problems arising in the field of health administration, to assess the values of our society, which might be used to solve these problems, and to employ the methodology of ethical decision-making proper to a pluralistic society. (Offered annually.)

HMP 550 - Disaster Preparedness (3)
This practicum on disaster preparedness focuses on recent US human and natural disaster experiences. The course is designed to introduce students to the evolution of disaster preparedness roles and organizations through didactic and field experiences.

HMP 551 - Health Care Financial Mgmt (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, capitalization 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 552 - 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 553 - Federal Health Policy Fellowship (3)
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 554 - 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 555 - Health Management Rounds (0)
Career development lecture series designed to expose students to the philosophical approaches, management styles, decision-making strategies and problem solving techniques of leading health care management executives.
HMP 592 - Health Policy Rounds (0)
Career development lecture series designed to expose student to the philosophical approaches, policy processes, and decision-making strategies that are used by leading health policy makers and analysts.

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.)

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 603 - Clinical Epidemiology (3)
The purpose of this course is to explore how epidemiologic methods are applied to clinical research questions. Clinical epidemiology evaluates factors that are related to variation in the outcomes of illness. Topics that may be covered include the evaluation of diagnostic tests and screening studies, research in therapeutic efficacy including clinical trials and non-randomized studies, nosocomial infections, health outcomes issues, and the synthesis of existing study results including critical literature review and the use of meta-analysis. Some statistical measures related to clinical epidemiology will also be introduced and discussed, such as the interpretation of Kaplan Meier curves and proportional hazard ratios. Offered annually.

PHS 604 - Secondary Data Analysis (3)
This course is designed to introduce students to the concepts, strategies, and methods associated with secondary analysis of data and how secondary analysis is related to health outcomes research. Particular attention will be paid to database acquisition, manipulation and maintenance, meta-analysis and critical reviews, clinical, and population based surveys. Illustrative studies will accompany course topics. Hands-on experience with research design and analytical techniques will be provided. Students are expected to be facile with intermediate statistical techniques, epidemiological research design and survey analysis. Students will conduct a secondary analysis and prepare a report of their study. 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 694 - Teaching Internship (0)
Introduces students to the methods of undergraduate and graduate level teaching, including syllabus preparation and presentation skills.
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 225 - Human Development Thru the Life Cycle (3)
Understanding of human growth and development from prenatal life through old age, according to a variety of theoretical perspectives.

SWRK 226 - Self in Society (3)
Analysis and synthesis of social, psychological, and cultural concepts providing insights into human behavior in a social environment. Evaluation of concepts in terms of their potential and actual application to social work practice.

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 340 - Theory and Methods Social Work Practice I (3)
Introduction to methods in practice of social work; foundations for beginning skills through knowledge of communication, assessment, professional relationships and methodology. Major theories and bodies of knowledge identified as a base for social work intervention. Foundation course for SWRK441 and SWRK442.

SWRK 351 - SW Practice I: Comm Skills (3)
This course is an introduction to social work practice and emphasizes basic communication skills necessary for effective practice. Students will learn oral and written communication skills such as interviewing, relationship building, documentation, scholarly writing skills and APA formatting. It provides a foundation in skills, theories, and methods of generalist social work practice that will be built upon in other practice courses.

SWRK 352 - SW Practice II: Indiv & Family (3)
This course introduces students to a generalist perspective utilizing a systems framework for social work practice with individual and families. Core knowledge, values and skills related to assessment, intervention, evaluation, and termination, are provided. Emphasis is placed on the establishment of professional relationships characterized by mutuality, collaboration, and respect.

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 407 - Child Welfare Issues (3)
Examination of the issues and problems which give rise to the need for child welfare services and study of the policies and practices which constitute this field of practice. Focus on development of skills for use in public child welfare agencies.

SWRK 421 - Social Work Interventions (1-3)
Elective course. This course packages three, separate, five-week segments across a semester with each segment focusing on a special social work area of practice or an issue of significance to the profession. The combination of segments is subject to change each year. Students may register for 1, 2, or 3 segments.

SWRK 441 - Theory and Methods of Social Work Practice I
Understand and utilization of various practice interventions at different levels of social work engagement.

SWRK 442 - Theory and Methods Social Work Practice III (3)
This course addresses social work practice evaluation, termination, and follow-up for each level of generalist practice.

SWRK 451 - Soc Work Prac III: Groups (3)
This course focuses on the core knowledge, values and skills for planning, implementing and evaluating groups used in generalist social work practice. This course uses a systems framework integrating a number of different group social work theories and perspectives.

SWRK 452 - Soc Wkr Prac IV: Communities (3)
This course focuses on the values, knowledge and skills within a systems framework for generalist practice in organizations and communities. Students learn skills related to maintaining and influencing organizations, influencing policy development, and organizing and developing communities.

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 490 - Social Work Professional Portfolio (1)
A summative compilation of a students experience in the BSSW Program. Students register for this course in their final semester but completing this assignment actually occurs throughout the student's period in the BSSW Program. Students assemble materials from courses, from practicum, and from other significant experiences throughout their academic career which demonstrates their development as beginning social work professionals. Work toward compiling the portfolio is guided by regular meetings between the student and his or her BSSW advisor throughout the student's program.

SWRK 498 - Independent Study (0-3)
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 700 - Values & Ethics in Social Work (3)
This is a seminar dealing with the value and ethical dimensions of social work.

SWRK 701 - Social Justice: Human Liberation and Comm
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)
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.

SWRK 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.
**SWRK 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.

**SWRK 711 - Seminar-Law And Soc Wk (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 - Social Work Practice with Low-Income Famili**
The Professional Foundation plus one Concentration Core course. Designed to bring together students across concentrations to examine the needs of families, neighborhoods, and communities struggling with high levels of poverty and its effects. Based on social work's historical mission of intervention in high-risk communities while advocating for social reform, this course is aimed at using the ecological model to develop an understanding of multilevel assessment and practice focused on empowering families, neighborhoods, and communities. This course recognizes the pattern of social and economic injustices based on racial, ethnic, social-cultural, and gender characteristics that result in inequitable distribution of poverty.

**SWRK 718 - Care of Edely: 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 - Comm Develop, Planning and Org (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 Behr/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 734 - Health and Human Behavior (3)**
Biopsychosocial framework for understanding how people think, feel, and act vis-a-vis their health.

**SWRK 737 - Control, Participation, Change (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.

**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)**
The contemporary American family as a major societal institution and as a social system. A range 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 compromising a comprehensive theoretical framework for understanding the types of stresses encountered by families overtime and the attempts by family members to cope with these stress.

**SWRK 742 - SOCIAL WORK PRACTICE IN MENTAL HEALT**
This course provides a human behavior and practice context for the delivery of social work services in the health systems continuum concerned primarily with mental health. Particular attention will be given to the interaction of the mental health institutions and cultural norms, definitions of deviance and illness, the medicalization of social interventions, social policy and the funding of mental health services, and the ability of social workers to deliver clinical services to the mentally ill.

**SWRK 744 - Substance Abuse Intervention (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 deals with the etiology, dynamics, treatment, and prevention of substance use disorders in contemporary American 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 multivariate. Prerequisites: SW S750 and SW S751 or their equivalents or permission of the instructor.

**SWRK 746 - Legislative and Regulatory Adv (3)**
Provides students with an understanding of the legislative and regulatory process that affects the quality of life in our state, nation and world. Equips students to use and empower others to use processes that promote social change. This is a practical course in social change focusing on legislative and regulatory activity at the state and federal levels. Prerequisites: SW S702 and SW S751.

**SWRK 750 - Social Work Practice Theory I (3)**
The concepts and beginning practice issues of professional social work. Values, ethics, knowledge and skill are integrated. A generalist model focuses on individuals and families and practice evaluation. Issues of diversity are explored.

**SWRK 751 - Social Work Practice Theory II (3)**
This is a foundation practice theory course which focuses on groups and communities.

**SWRK 753 - App to Group Therapy (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 755 - SOCIAL WORK PRACTICE IN THE HEALTH FI**
Framework for practice in the health care field; organizational environment of social work practice approaches; nature interdisciplinary practice.

**SWRK 757 - FOUNDATIONS OF FAMILY PRACTICE (3)**
Range of family treatment concepts and models; therapist style; treatment techniques.

**SWRK 758 - Child Abuse and Neglect (3)**
Roles and tasks in practice with families in protective services; multi-disciplinary approaches.

**SWRK 759 - COGNITIVE BEHAVIORAL FAMILY PRACTICE**
Behavioral Family practice focuses on educational and social learning approaches to address the needs of families and improve their ability of function with psychiatric disorders. Also covered are basic therapeutic skills and knowledge that are prerequisites to the Behavioral Family Practice Model.
SWRK 762 - CLINICAL DIAGNOSIS AND SOCIAL WORK P
Explores the ongoing relationship between clinical diagnosis and clinical practice. Examines the historical development of clinical diagnosis as a process. Emphasis on how social workers may employ their own perspectives by linking biopsychosocial stressors to personality dimensions.

SWRK 763 - THERAPEUTIC APPROACHES TO LOSS AND
Explores the process and stages of loss and change as well as the counseling implications for social workers. Investigates the impact of loss and changes resulting from material loss, relationship loss, intrapsychic loss, functional loss, role loss, and systematic loss.

SWRK 768 - SOCIAL POLICY IN THE HEALTHCARE SYST
Health care system of the United states from medical, sociological, political and economic perspectives; policy issues and alternatives.

SWRK 769 - Marital/couples Counseling (3)
An introductory skill development in dyadic/marital counseling. Focus on both premarital and long?term dyadic/marital developmental issues and the accompanying counseling/therapy content into experiential learning exercises. Prerequisite: SWRK 751

SWRK 770 - Motivational Interviewing, Cognitive Behavior
This course provides basic knowledge and skills of three contemporary interventions designed for people with co-occurring psychiatric, substance use and medical issues. The first intervention focuses on the principles and practices of Motivational Interviewing and its role in building motivation for change. The second intervention focuses on the concepts and skills of Brief Cognitive Behavioral Therapy and its role in assisting people who have co-occurring conditions in developing appropriate, stage-specific coping skills in order to achieve and maintain therapeutic goals. The third intervention focuses on the exploration, understanding and critical analysis of the theoretical background and beginning phases of Dialectical Behavioral Therapy as it relates to individuals, groups and treatment teams.

SWRK 771 - DOMESTIC VIOLENCE: EMPOWERING BATT
Seminar on reducing the incidence and impact of domestic violence through appropriate social work practice with battered women. Emphasis on the simultaneous need for quality direct services and for public policy changes to help end violence against women. An underlying assumption is that the integration of direct service and policy-level improvements will result in the empowerment of battered women.

SWRK 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.

SWRK 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. Prerequisites: The Professional Foundation including SWRK 821.

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 the 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 790 - Fem Appr: Not for Women Only (3)
This course is designed to clarify feminist issues and to illustrate how a feminist perspective social work practice can facilitate personal and social change. Characteristics, values, techniques and areas of feminist practice are explored and distinguished from other model. Prerequisites: SWRK 750 and SWRK751  Note: This course is offered on intensive week long schedule between the fall and spring semesters.

SWRK 798 - Introduction to Non-Profit Organization Mana
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.

SWRK 801 - Housing 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 802 - NARRATIVE APPROACHES TO FAMILY PRAC
This course enables students to develop knowledge and skills grounded in the theory and practice of narrative family therapy. The philosophical underpinnings as well as the basic practice principles of this post-modern stance will be covered in the course.

SWRK 808 - EDUCATION AND PSYCHOLOGY OF THE EXC
This course focuses on the field of disability. 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.

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 until the 1950’s. 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 System (GIS). (Generally offered in the fall semester.)

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, whistle-blowing, etc. (Generally offered in fall semester.)

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. (Generally offered in fall semester.)

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. (Generally offered in fall semester.)

SWRK 819 - FOUNDATION INTEGRATIVE PRACTICE SEMI
This seminar provides an opportunity for students in the Foundation Practicum 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 based through peer sharing; and provide a supportive opportunity for students to debrief on practice challenges.
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SWRK 820 - CONCENTRATION INTEGRATIVE PRACTICE
This seminar provides an opportunity for students in the Foundation Practicum 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 based through peer sharing; and provide a supportive opportunity for students to debrief on practice challenges.

SWRK 823 - Practicum III (3)
Continuation of the development of specialized skills in the chosen concentration.

SWRK 824 - Practicum IV (3)
Continuation of the development of specialized skills in the chosen concentration.

SWRK 825 - Practicum V (3)
This elective provides additional practicum experience in an area of special interest to the student.

SWRK 898 - Independent Study (3)
Individually directed study of a particular issue related to social work theory or practice. Prior approvals by student's advisors, director of MSW program, and faculty member directing the study are required.