Center/Advanced Dental (CAD)

CAD 501 - Pain: Anat, Phys, Psy, & Trmt (1)
Explores multiple topics of pain with special emphasis on head and neck pain and conditions and/or syndromes that mimic dental pain. Protocols for dealing with both dental and non-dental "pain patients" will be addressed. Offered every year.

CAD 503 - Advanced Oral Microbiology (0-2)
Examines the interface of human host and its microbial inhabitants converging to cause disease. Describes oral ecosystems resulting from interaction between human anatomy and physiology and microbial populations and their physiology with emphasis on the pulpal, periapical, and periodontal regions. Includes factors that maintain population balance and health or cause population imbalance and disease in these ecosystems. Includes management and prevention of oral microbial disease. Offered every year.

CAD 504 - Molecular Biology of the Cell (2)
Up-to-date cell and molecular biology of the tooth and supporting structures. Attention given to molecular structure and function of composite proteins of tooth and bone and to cellular and physiological mechanisms key to driving development and repair. Offered every other year.

CAD 505 - Intro to Statistical Inference (3)
Nature of measurement in graduate dentistry. Basic principles and techniques of research analysis, particularly in graduate dental research. Introduction to probability theory and sampling theory; criteria of reliability and validity. Fundamental concepts of descriptive and inferential statistics, introduction to levels of measurements and application of parametric and non-parametric tests. Offered every year.

CAD 506 - Ethics & Dentistry (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 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 516 - Advanced Oral Medicine (1)
Material on oral diagnosis and oral medicine is presented to develop the ability to make an accurate diagnosis of oral and general diseases. Special emphasis is placed on treatment of the medically compromised patient. Offered every year.

CAD 517 - Advanced Oral Pathology (1)
Oral diseases with similar clinical appearances are presented. A differential diagnosis will be developed. For each entry, the etiology, biologic history, clinical features, histologic characteristics, progress, and current treatment will be identified. Offered every other year.

CAD 518 - Business Law II (1)
A discussion of the legal, professional, and ethical aspects of dental practice with consideration of practice acquisition, location, promotion, personnel issues, contract and tort liabilities, practice format and administration, taxes, insurance and estate planning. A continuation of CAD-G515. Offered every year.

CAD 519 - Advanced Head & Neck Anatomy (2)
Discussion and laboratory demonstrations of the anatomy of specific areas of the head and neck that relate to dental practice. Emphasis will be placed upon the interrelationships, clinical significance, and variation of the structures studied. Offered every year.

CAD 522 - Clinical Immunology (1)
A comprehensive review of inflammation and immunity and how they harm or protect the host with special emphasis on clinical dentistry. Offered every year.

CAD 523 - Business Law (2)
A discussion of the legal, professional, and ethical aspects of dental practice with consideration of practice acquisition, location, promotion, personnel issues, contract and tort liabilities, practice format and administration, taxes, insurance, and estate planning. (Offered every year.)

CAD 524 - Implants/Temp Anchorge Device (1)
To introduce the orthodontic and periodontic resident to prosthetic implants and to miniscrews and mini-boneplates for orthodontic anchorage; toward evaluation of the patient holistically, the site, the local physiology, and biocompatibility in anticipation of implant-surgery; to become familiar with placement-surgery, loading the implant (or temporary anchorage-device), maintenance, implant-removal surgery, and bone regeneration; to review the biomechanics involving use of temporary anchorage devices in orthodontic therapy; and to discuss autotransplantation for various dental purposes.

Endodontics (ENDG)

ENDG 500 - Preclinical Endodontic Techniq (1)
A didactic and laboratory introduction to basic endodontic clinical principles and techniques. A format to experience alternate clinical treatment methods. Offered every year.

ENDG 520 - Literature Review I (1)
Provides a format for reviewing and presenting significant clinical and contemporary endodontic literature published in related journals. Offered every academic term.

ENDG 530 - Preclinical Teaching Practicum (0)
Supervised teaching participation in the instruction of undergraduate dental students in the preclinical endodontic technique course. Offered every year.
### Orthodontics (ORTH)

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>ORTH 501</td>
<td>Fundamentals of Orthodontics</td>
<td>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.</td>
</tr>
<tr>
<td>ORTH 503</td>
<td>Facial Development</td>
<td>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.</td>
</tr>
<tr>
<td>ORTH 525</td>
<td>Clinical Cephalometrics</td>
<td>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.</td>
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### Oral Biology (ORTH)

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ORTH 531</td>
<td>Oral Biology</td>
<td>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.</td>
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### Endodontics (ENDG)

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<tbody>
<tr>
<td>ENDG 531</td>
<td>Clinical Teaching Practicum</td>
<td>Supervised teaching participation in the clinical instruction of undergraduate dental students. Offered every year.</td>
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<tr>
<td>ENDG 541</td>
<td>Pulp Biology</td>
<td>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 regressive changes; healing and repair of periapical tissues; and histopathology of periapical lesions. Offered every year.</td>
</tr>
<tr>
<td>ENDG 547</td>
<td>Concepts in Biomedical Science</td>
<td>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.</td>
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<tr>
<td>ENDG 551</td>
<td>Principles of Endodontic Surgery</td>
<td>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.</td>
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<tr>
<td>ENDG 552</td>
<td>Amrcn Brd of Endodontics Rview</td>
<td>Preparation for certification by the American Board of Endodontics. 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.</td>
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<tr>
<td>ENDG 556</td>
<td>Clinical Endodonsics</td>
<td>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.</td>
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<tr>
<td>ENDG 559</td>
<td>Endodontic Journal Club</td>
<td>A consideration of recent developments and current literature in endodontics and related fields.</td>
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### Oral Surgery (ORTH)

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<tbody>
<tr>
<td>ORTH 551</td>
<td>Diagnosis &amp; Treatment Planning I</td>
<td>Evaluation and treatment planning of various types of malocclusion. Offered every year.</td>
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<tr>
<td>ORTH 552</td>
<td>Clinical Cephalometrics</td>
<td>Offered every year.</td>
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<tr>
<td>ORTH 555</td>
<td>Ortho Anlys &amp; Trtmt Modalities</td>
<td>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.</td>
</tr>
<tr>
<td>ORTH 556</td>
<td>Clinical Case Conferences</td>
<td>In a seminar format, each class-meeting features the presentation by one of the students of the work-up and diagnosis of an active orthodontic patient. The other students and faculty propose and critically evaluate possible treat-plans and modalities. The presenting student then reviews the actual treatment-plan being followed and the progress in therapy to date. Offered every year.</td>
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<td>Course Code</td>
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<tr>
<td>ORTH 558</td>
<td>Clinical Specialty Seminars (1)</td>
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<td>ORTH 560</td>
<td>Intro to Clinical Orthodontics (1)</td>
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<tr>
<td>ORTH 561</td>
<td>Intro to Clin. Orthodontics II (1)</td>
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<td>ORTH 562</td>
<td>Prin of Ortho Techniques I (2)</td>
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<tr>
<td>ORTH 563</td>
<td>Prin of Ortho Techniques II (2)</td>
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<td>ORTH 564</td>
<td>Tip Edge Brckt &amp; Str Arch Tech (1)</td>
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<tr>
<td>ORTH 570</td>
<td>Clinical Procedures (1)</td>
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<tr>
<td>ORTH 571</td>
<td>Clinical Orthodontics I (0-2)</td>
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<tr>
<td>ORTH 580</td>
<td>Sem: Child &amp; Adol Psychology (1)</td>
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<td>ORTH 584</td>
<td>Diag Sem: Mixed &amp; Adult Dentit (0-1)</td>
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<td>ORTH 589</td>
<td>Review for the ABO Examination (0)</td>
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<tr>
<td>ORTH 591</td>
<td>Literature Review (0-1)</td>
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**Periodontics (PERI)**

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<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>PERI 500</td>
<td>Principles of Periodontics (1)</td>
<td></td>
<td>An overview of critical didactic and clinical information in the field of periodontology to the incoming periodontal resident. Offered every year.</td>
</tr>
<tr>
<td>PERI 501</td>
<td>Periodontal Lit Review I (1)</td>
<td></td>
<td>A format for reviewing and presenting significant classical and contemporary periodontal literature published in related journals. Offered every semester.</td>
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<tr>
<td>PERI 510</td>
<td>Conscious Sedation I (1)</td>
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<td>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.</td>
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<tr>
<td>PERI 511</td>
<td>Conscious Sedation II (1)</td>
<td></td>
<td>Continuation of PER-G510. Offered every year.</td>
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<tr>
<td>PERI 520</td>
<td>Intro to Grad Implant Dent I (1)</td>
<td></td>
<td>A comprehensive course to prepare knowledge necessary for clinical dental implant treatment; all phases of surgical and prosthetic treatment are discussed. Offered every year.</td>
</tr>
<tr>
<td>PERI 521</td>
<td>Intro to Grad Implant Dent II (1)</td>
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<td>Continuation of PER-G520. Offered every year.</td>
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<tr>
<td>PERI 522</td>
<td>Advanced Implant Surgery I (1)</td>
<td></td>
<td>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.</td>
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<tr>
<td>PERI 523</td>
<td>Advanced Implant Surgery II (1)</td>
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<td>Continuation of PER-G522. Offered every year.</td>
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<tr>
<td>PERI 530</td>
<td>Clinical Teaching Practicum (0)</td>
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<td>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.</td>
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<tr>
<td>PERI 540</td>
<td>Perio Case Presentation Sem (0-1)</td>
<td></td>
<td>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.</td>
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<tr>
<td>PERI 550</td>
<td>Clinical Periodontics I (1)</td>
<td></td>
<td>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.</td>
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<tr>
<td>PERI 570</td>
<td>Perio Systematic Interrelation (0)</td>
<td></td>
<td>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.</td>
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<tr>
<td>PERI 580</td>
<td>Ortho-Perio Interrelationships (0)</td>
<td></td>
<td>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.</td>
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<tr>
<td>PERI 590</td>
<td>Current Lit in Periodontics (1)</td>
<td></td>
<td>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.</td>
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<tr>
<td>AAM 200</td>
<td>Introduction to African American Studies (3)</td>
<td>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. Offered every semester.</td>
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<tr>
<td>AAM 201</td>
<td>Contemporary Black America (3)</td>
<td>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.</td>
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<tr>
<td>AAM 220</td>
<td>Blacks &amp; the Mass Media (3)</td>
<td>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.</td>
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<tr>
<td>AAM 226</td>
<td>African American Religious Traditions (3)</td>
<td>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.</td>
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<tr>
<td>AAM 229</td>
<td>Intro to African Politics (3)</td>
<td>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.</td>
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<tr>
<td>AAM 230</td>
<td>African American Culture (3)</td>
<td>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.</td>
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<tr>
<td>AAM 233</td>
<td>History of Africa to 1884 (3)</td>
<td>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.</td>
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<tr>
<td>AAM 234</td>
<td>History of Africa since 1884 (3)</td>
<td>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.</td>
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<tr>
<td>AAM 311</td>
<td>Intercultural Communication (3)</td>
<td>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.</td>
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<tr>
<td>AAM 335</td>
<td>African American Religious Traditions (3)</td>
<td>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.</td>
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<tr>
<td>AAM 336</td>
<td>Race &amp; Ethnicity (3)</td>
<td>Examines the impact of racial, cultural, national, and religious differences on social processes. Emphasis on current data.</td>
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<td>AAM 350</td>
<td>Social Inequality (3)</td>
<td>The different forms of inequality will be examined from different theoretical perspectives. The course examines the causes and consequences of inequality in society as well as alternative approaches to dealing with the inequality.</td>
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<tr>
<td>AAM 358</td>
<td>American Slavery (3)</td>
<td>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.</td>
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<tr>
<td>AAM 373</td>
<td>African Diaspora Writing (3)</td>
<td>An introduction to the fiction and poetry of Black African and African American writers. Offered every semester.</td>
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<tr>
<td>AAM 375</td>
<td>U.S. Anti-Black Racism (3)</td>
<td>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.</td>
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<tr>
<td>AAM 383</td>
<td>Psychology of Oppression (3)</td>
<td>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.</td>
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</table>
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.

AAM 483 - Post 1900 African American Literature (3)
An exploration of African American writings from the beginning of the twentieth century to the present through a reading of a variety of literary, critical, and historical texts from the Harlem Renaissance to Afrocentrism.

AAM 490 - Black Women in Society (3)
This course is designed to provide an interdisciplinary approach for the study of Black women in a changing society and the impact of social, historical, cultural, political, and economic forces. Attention will be devoted to Black women's relationships as a result of societal conditions. Fall Semester.

AAM 496 - Capstone Course (3)
This synthesizing course provides an opportunity to integrate key concepts of African American Studies in a specific area of interest. Capstone projects are expected to demonstrate competence in critical thinking, inquiry skills, and the synthesis of knowledge through original research or field service project or artistic endeavor. Offered every semester.

AAM 498 - Advanced Independent Study: Research (3)
Independent study topics are assigned that deal with selected problems in the African, African American, or Caribbean experience. Research topics may be integrated with student's major. This course will serve as the capstone course for students pursuing the certificate in African American Studies.

Arabic (AR)

AR 110 - Communicating in Arabic I (0-3)
This course will cover all four language skills (speaking, listening, reading, and writing) of Modern Standard Arabic, at an elementary level. Emphasis placed on active use of the language. Students master the Arabic alphabet and basic pronunciation of all the Arabic sounds, learn to read elementary texts and converse in day to day situations.

AR 115 - Communicating in Arabic II (0-3)
A continuation of Arabic I. This course enables students to deepen their knowledge of the four basic language skills (speaking, listening, reading, and writing) and further fosters and understanding and appreciation of Arabic literature and Arabic cultures.

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 200 - Drawing I (0-3)
An introduction to the basic elements in drawing. Line and mass as a means to explore objective and spatial concepts in various media. A lab fee is required. Satisfies core requirement in Fine Arts.

ART 210 - Design (3)
An introduction of the basic formal concepts in the two-dimensional arts; line, shape, value, color, texture, and balance as interdependent units. A lab fee is required. Satisfies core requirements in Fine Arts.

ART 212 - Three Dimensional Design (3)
An introduction to the design elements in three-dimensional forms and space. A variety of construction methods will be used in developing visual acuity. A lab fee is required.

ART 215 - Color Theory (3)
An exploration of the theory and visual effects of color within the framework of fundamental design concepts that demonstrate the properties and interaction of color. A lab fee is required.

ART 220 - Painting I (3)
An introduction to the fundamentals of painting from observation: color, shape, spatial relationships, and materials related to the traditional practice of painting in oil. A lab fee is required.

ART 230 - Printmaking: 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 248 - Fibers and Textiles (3)
This course will introduce students to the basics of surface design (dyeing and patternmaking fabric) weaving cloth on a portable loom, book arts, and felt making. Emphasis is on developing safe and successful methods for working in a studio environment and developing student's technical and design concepts into artistic works. Guided individual studio projects will culminate into a small coherent body of work. In addition to technical development, research will be done of historical and cultural traditions and functions of cloth and fibers.

ART 249 - Jewelry and Metalsmithing (3)
This course is designed to introduce the student to the basic techniques of traditional and non-traditional metalsmithing. Includes reviews of current and historical jewelry concepts. Class time will be spent on demonstrations, critiques, project and concept development towards creating an individual direction in metals.

ART 250 - Computer Art I (3)
An introduction to the computer as an artistic medium. Students develop skill and fluency with graphic software as well as explore the distinct aesthetics of computers. Lectures and research will strengthen students aesthetic vocabulary and deepen their understanding of political and cultural implications of electronic art. A lab fee is required. Satisfies core requirement in Fine Arts.

ART 260 - Photography I (3)
An introduction to black and white photo technique: camera, film, and darkroom procedures including film processing and printing. Coursework will cover a range of technical and aesthetic topics including: exposure, contrast, and composition. Students must have a 35mm SLR camera with manual control of shutter speed and f-stop. A lab fee is required. Satisfies core requirement in Fine Arts.
ART 270 - Graphic Design I (3)
This course is an introduction to the basic principles and concepts of graphic design. Projects will develop idea generation, problem solving and technical skills. The use of type, image and visual style as components of communication will be introduced. Students will use industry standard software. A lab fee is required.

ART 280 - Studio Foundation Seminar (1)
Support for students beginning majors in Studio Art. Discussion topics cover strategies for making art, looking at art, and exhibiting art. Students will gain an overview of the studio art program, learn the role of creating independent work, and discuss issues dealing with inspiration, research, and community.

ART 294 - Foundations Portfolio Review (0)
Foundations Portfolio Review provides students the opportunity to focus on and evaluate artistic production. Students are strongly encouraged to work together with their faculty mentors, who will support students in the selection and presentation of these portfolios. At the end of the semester, each student will meet with the entire Studio Art faculty and present a portfolio for evaluation. The student will receive verbal assessment at this meeting.

ART 298 - Independent Study (1-6)
Permission of studio faculty required prior to registration.

ART 300 - Drawing II (3)
Building on foundation concepts and skills, this course examines the subjective modes of drawing by exploring the extended use of materials, formal concepts and organizing strategies, and expressive responses to observed subjects. A lab fee is required.

ART 301 - Drawing Studio II (3)
A continuation of ART300. A lab fee is required.

ART 320 - Painting II (3)
A continuation and elaboration of Painting I with a greater opportunity to employ individual choices while working within project guidelines that explore the relationship of image/idea with conceptual approaches to the medium. A lab fee is required.

ART 321 - Painting Studio II (3)
A continuation of ART320. A lab fee is required.

ART 330 - Printmaking II (3)
A continued exploration into printmaking processes with an emphasis on intaglio and relief. Students develop imagery that is more personal and exploits the properties of the print process. A lab fee is required.

ART 335 - Monoprints (3)
An exploration of various procedures and techniques associated with printing single images on paper. A lab fee is required.

ART 340 - Ceramic Sculpture II (3)
Larger, more complex forms will be created by hand and on the wheel. Mastery of technical skills, including firing techniques and clay/gaze formulations, will allow students to pursue their aesthetic and conceptual goals, increasing their level of personal investigation and expression. A lab fee is required.

ART 345 - Sculptural Materials (3)
Methods of constructing and/or 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 351 - Computer Art II (3)
A continuation of ART350.

ART 355 - Sculpture I (3)
ART 350 - Computer Art II (3)
This course addresses the anatomy, history, basic principles and creative possibilities of typography. Students investigate how type functions as a system of communication and as an abstract visual element. Projects emphasize legibility, readability and expression. Experimentation with form and communication will be stressed. Lab fee is required. Prerequisite: ART 270

ART 375 - Introduction to Web Design (3)
Introduction to basic principles of web site design. Emphasis on technical skills, content development, interactivity and navigation. There will be an emphasis on developing strong, appropriate visuals for each project. Students will be introduced to industry standard web design software. Lab fee is required. Prerequisite: ART 250 or ART 270.

ART 430 - Printmaking Studio (3)
A continuation of ART400.

ART 440 - Ceramic Sculpture Studio (3)
Artistic expression will be developed through the continued exploration of painting as a discipline. Concepts, skills, and methods of working will be utilized to foster the identification and advancement of individual goals. Prior to registration students must meet with the instructor to discuss objectives and goals.

ART 450 - Computer Art Studio (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 470 - Graphic Design Studio (3)
Further exploration into the relationship between type and image in printed communication. Multiple piece projects focus on developing a consistent concept and visual strategy from piece to piece. Special attention will be paid to research, problem definition and concept development. Lab fee required. Prerequisites: ART 370.
ART 480 - Studio Senior Seminar (2)
Support for students about to graduate with a B.A. in Studio Art. Discussion topics cover optimizing their senior year and preparing for careers and graduate study. Course will be divided between divisions and group critiques of student artwork created independently. Prerequisites: ART 294 and senior status.

ART 494 - Senior Portfolio Review (0)
Senior Portfolio Review is a culminating course for Studio Art majors and requires students to develop a comprehensive portfolio of their studio artwork prior to graduating. Portfolios are useful for applying to graduate programs and for careers in Studio Art. Prereq: Satisfactory grade in ART 294 and senior status.

ART 498 - Adv. Independent Study (1-6)
Permission of studio faculty prior to registration.

**Art History (ARTH)**

ARTH 100 - Approaching the Arts (3)
Presents an introduction to the world of the visual arts with the goal of developing an understanding of important themes, functions, media, principles of design, and visual characteristics found in art.

ARTH 101 - History of Art (3)
Presents a chronological survey of the major periods of art history (ancient, medieval, early modern, and modern) and introduces students to key concepts, terminology, analytical strategies, and critical questions relevant to understanding art.

ARTH 102 - History of Architecture (3)
This course introduces students to the history of architecture from the ancient world to the present, survey major movements and concepts, important monuments and influential design within a chronological framework. Students will gain competence in analyzing architecture as well as familiarity with basic issues and concerns.

ARTH 104 - App the Arts: Art & Film (3)
This course will focus on the relationship between film and modern art. Motion picture making is a distinctly modern art form and shares characteristics found in modern art. Through art and film, we will examine impressionism, symbolism, expressionism, cubism, futurism, dadaism, abstract art, pop art and performance art.

ARTH 111 - History of Western Art I (3)
This course will present the development of western art and architecture from pre-historic times to the Middle Ages. Students will study artworks within the framework of art history methods such as formalism and social history.

ARTH 112 - History of Western Art II (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 sculptor, painter, 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 182 - 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 205 - Controversy in Art (3)
Introduces students to the primary controversial issues affecting the visual arts in recent years. The course will deal largely with contemporary issues, with key historical precedents providing some contextual perspective. Through readings, class discussions, and research, students will become fluent in the predominant divisive issues in the arts today.

ARTH 206 - Feminism in Art (3)
This course will present of overview of issues concerning feminism as it pertains to the visual arts. In addition to identifying the obstacles faced by feminist artists and the strategies they have used to overcome them, the course will also look at contributions of feminist critics and historians.

ARTH 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 209 - Topics in Art History (3)
This course allows students to examine specific themes and topics in the history of art, such as “Exhibiting Cultures: St. Louis Museums” or “Art and Pilgrimage,” from a variety of discipline-based perspectives, including formal, iconographic, reception, and/or social history.

ARTH 213 - Pre-Columbian Art (3)
The course will examine developments in architecture, sculpture, painting, ceramics and textiles of the many cultures in North, Central, and South America from the earliest settled societies to sixteenth century. The course emphasizes multidisciplinary approaches within Art History such as religious beliefs, social customs, and theoretical frameworks.

ARTH 215 - Saints in Art (3)
Through paintings, sculptures, and civic dedications of buildings, chapels, and cities, students will learn about the role of saints in the Catholic Church. Saints in art will be presented in a chronological plan, beginning with Early Christian virgins and martyrs, then following the waves of sainthood in the middle ages and early modern periods, to saints being canonized by Pope John Paul II. Saints and their art will be placed within art historical methods, especially social history and iconography, in order to understand saints’ diverse roles within the society.

ARTH 218 - History of Spanish Art (0-3)
This course presents a survey of Spanish Art from Altamira cave paintings to the work of Spanish masters, including El Greco, Velazquez, Goya, Gaudi and Picasso. Works will be studied using aesthetic theories and approaches relevant to them. Museum visits to the Reina Sofia and The Prado will be included.

ARTH 225 - The Art of Paris (3)
Following artistic developments from Roman Lutetia to modern day Paris, this course introduces students to the visual art and architecture of one of the world’s great cities. Students will analyze how art serves as an important element of cultural identity through a chronological analysis of this single city.

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 Art Survey (3)
Students will be introduced to the art and architecture of the Renaissance, 1300-1600. The artworks will be presented as products of the combined efforts of wealthy patrons, such as the Medici family and Pope Julius II, and talented artists, such as Botticelli and Michelangelo. Works of art will also be examined from formal, theoretical, and historical perspectives.
ARTH 260 - Baroque & Rococo Art Survey (3)
Introduces students to the arts of Europe and the Americas between 1560 and 1740. Celebrated artists presented include Bernini, Caravaggio, the Gentileti, Rembrandt, Rubens, and Velazquez, with attention paid to the religious functions of art, art's role in the Protestant and Catholic Reformation, the arts 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 1870 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 282 - Contemporary Art Since 1980 (3)
This course offers an in depth look at visual art from the last quarter of the 20th Century to today. Students will explore artists' diverse approaches to materials and techniques within the structure of a thematic focus. Theoretical concepts including postmodernism, feminism, and multiculturalism are also raised.

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

ARTH 314 - Islamic Art & Society (3)
A survey of the major architectural monuments and traditions, schools of painting, and principle media and techniques employed in the decorative arts of the Islamic World from about 700 to 1700. This course includes visits to the Islamic Collections of the Saint Louis Art Museum.

ARTH 330 - Classical Art: Greece & Rome (3)
The first half of the course analyzes the Greek experience from the Pre-Greek society of Minoans through the Classical moment of the Parthenon to the rise and decline of Alexander the Great and Hellenistic culture. The second half will present the art and architecture of the Roman Empire as political and cultural statements.

ARTH 340 - 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 - Elty Renaissance Art & Culture (3)
Presents the major artists and patrons of the 13th through 15th centuries by examining the art and architecture produced in the great cities of Florence, Padua, Mantua, Siena, and others. The artworks by such noted artists as Giotto, Duccio, Masaccio, Donatello, Brunelleschi, and many others, will be placed within formal, social, and theoretical frameworks.

ARTH 351 - High/Late Renaissance Art & Citre (3)
Presents the major artists and patrons of the 16th century by examining the art and architecture produced in the cultural capitals of Florence and Rome. The artworks by Leonardo da Vinci, Michelangelo, Raphael, 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 360 - Italian Baroque Art (3)
Students will study the artworks of the 17th century Italian masters such as Caravaggio, the Carracci brothers, and Bernini. Patrons, artists, and artworks will be placed within the cultural framework of Counter-Reformation Rome and other important cities.

ARTH 365 - Northern Baroque Art (3)
The course analyzes 17th century art in the northern centers of Holland, The Netherlands and Germany with such great artists as Rembrandt, Rubens and Vermeer. Emphasis will be placed on understanding the artworks within formal, theoretical, and historical viewpoints.

ARTH 370 - American Art: Colonial to WWII (3)
Examines American art from the colonial era through the nineteenth- and early twentieth centuries.

ARTH 371 - American Art: WWII to Present (3)
A study of the painting and sculpture since World War II. The origins and influences on our cultural environment reflected in the development of modern art movements and trends.

ARTH 372 - Rococo To Romanticism (3)
Familiarizes students with the art and culture of Europe and America between approximately 1715 and 1848, beginning in <i>ancien regime</i> 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, Caillebotte, 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)
Examines monuments and concepts related to the history of European and American architecture from 1750 to the present, including the relationship between architecture and history, architecture as communication, urbanism, architecture and social progress, class and architecture, functionalism, the role of technology, and the rise of modernity.

ARTH 401 - Christian Iconography (3)
An evaluation of the sign, symbols and content of religious art from the early Christian period to Modern times. Additional emphasis will be on the traditions and how they emerged.

ARTH 430 - Greek Art (3)
The art of Greece will be presented from the time of the pre-Greeks, the Minoans, through the Hellenistic world. Students will learn about the creation of such noted artworks as the Spearbearer, the Discus Thrower, and the Parthenon, by examining the society that produced them. Artworks will be presented within the major perspectives of the field of Art History.

ARTH 440 - Illuminated Manuscripts (3)
The relationship between text and image in a moderately literate society is the focus of this course. From the great Irish/Celtic bibles to romances and behavioral manuals owned by late medieval noblewomen, the course addresses questions of practicality, accessibility, and literacy in relation to medieval manuscript illumination.
**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 evolved in successive historical periods, taking note also of the discipline's own history.

**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 guide 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 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, temperament, 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 410 - Senior Seminar (3)
This course brings the major to a coherent end, through which students gain a broad understanding of the field and their path within it. Readings will concentrate on the development of major American Studies questions. The seminar will serve as a workshop for the independent senior projects. Senior major only.

ASTD 420 - Ethnic Groups in the U.S. (3)
The purpose of this course is to explore the ethnic diversity that has from the beginning been the material of American society, and to examine the implications of this diversity.

ASTD 425 - American Mosaic: Literature of Diversity (3)
The goal of this course will be an expanded appreciation of the multi-cultural 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 examined and used wherever helpful.

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 Stdes (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 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: Rdngs 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, hoocaust 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 - Approcs to Crit Inq: Hist Mthd (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 - Cres-Ctrnl 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 adviser's discretion.

ASTD 615 - Visual Culture Theory (3)
Introduction to the theoretical models and questions that inform the wide-ranging critical practices of visual culture studies. Course examines foundational texts in visual theory as well as many different cultural forms available to visual cultural analysis such as vision itself, material culture, museums, photographs, films, and television. Offered every other year.

ASTD 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 dignificance 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 649 - Expatriate Muse (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 650 - 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 655 - Sem in American Theology (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 656 - 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.

ASTD 695 - Special Study for Exams (0)
Students enroll in this course in the semester when they expect to take their PhD oral exams. May be taken no more than twice. Grade is Pass/Fail. The student can pass (or fail) even if she doesn't take the orals in the semester of her first enrollment. Students must make appointments to meet their faculty advisors at least twice in the semester of Special Study enrollment.

ASTD 698 - Graduate Reading Course (1-3)
Graded as a seminar course.
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 106 - 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 110 - Introduction to Biology (0-4)
This course will examine an introduction to the biochemistry of life, cellular biology and energy metabolism, development, genetics, and evolution. These biological principles will be introduced with an emphasis on the inquiry nature of the scientific process and the relevance of biology to students lives.

BIOL 196 - Inquiry-Based Principles of Biology (5)
Lecture three hours, laboratory three hours per week. This SLU Inquiry course is designed for first year students who are interested in an inquiry-based approach to the study of biodiversity, form and function, and ecology.

BIOL 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 246 - Exercise and Health (3)
The course will explore exercise metabolism, how the body responds and adapts to exercise, and the health implications of physically active and sedentary lifestyles.

BIOL 250 - Economic Botany (3)
This SLU Inquiry course will give students an appreciation of the importance of plants in human society. It includes a brief overview of plant form and function, followed by investigations into the economic and social aspects of plants (i.e. how society uses plants) and the historic and cultural aspects of human plant use.

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 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/exploratory approach to examine how microbes have shaped world history, impacted our food chain, posed health threats (bioterrorism and AIDS), and how microbes may guide our future. Satisfies the Science core requirement.

BIOL 270 - Plants & Cural 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 - Molecular Cell Biology I: Cellular Biochemistry
This is a sophomore-level course on cellular/molecular biochemistry including the synthetic flow of genetic information from DNA to RNA to protein (replication, transcription and translation), RNA and protein structure and function, enzymology, and energy flow (metabolism). It is designed as a foundation course for subsequent upper division cellular/molecular biology courses, including Molecular Cell Biology II (BIOL 304) and Genetics (BIOL 303). Fall semester. Pre-requisites: BIOL 104 and BIOL 106 and CHEM 163 & 164.

BIOL 303 - Principles of Genetics (0-3)
This course covers the basic principles of genetics, including transmission genetics, molecular genetics, gene regulation, recombinant DNA technology and genomics. Throughout the course, there is an emphasis on the application of genetics to experimental and problem-solving situations. Prerequisites: BIOL 302 OR CHEM 464.

BIOL 304 - Molecular Cell Biology II: Cell Structure and Function
Building on the principles introduced in BIOL-302, this course explores how specific proteins, lipids, sugars and nucleic acids contribute to cellular processes and structure. The material covered here provides a good foundation for upper-level courses in Development, Physiology, Microbiology and Immunology. Pre-requisite: BIOL-302 or CHEM-462; Co-requisite: CHEM-343/345.

BIOL 306 - Cell Structure & Function Laboratory (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 322 - Biology of Invertebrates (4)
Lecture three hours, laboratory three hours per week. This course surveys the invertebrate phyla with emphases on evolution, comparative morphology, life cycles, physiology, and ecology.

BIOL 326 - Biology of Plants & Fungi (0-4)
Lecture three hours, laboratory four hours per week. An introduction to algae, fungi, and true plants comparing life cycles (alternation of generations) and functional anatomy/morphology. Half of the course emphasizes the four developmental stages in the life of seed plants: germination, establishment, maturation, and reproduction.

BIOL 328 - Ethnobotany (3)
A modern synthesis of plant biology and the principles of cultural anthropology to compare the use of domesticated and wild plants. A comparison of tropical and temperate zone 'cases' requires four field trips to the Missouri Botanical Garden. Satisfies the Arts and Sciences Cultural Diversity requirement.

BIOL 342 - Comparative Anatomy of the Vertebrates (0-5)
Lecture two hours, two three-hour laboratories per week. Evolution of chordate morphology. Laboratory consists of the study of the structures of each major group of chordates with emphases on the dogfish shark and cat.

BIOL 344 - Embryology (0-5)
Lecture three hours, and two two-hour laboratories per week. Development of the vertebrate embryo from a single cell into a multicellular organism. Topics include: fertilization, changes in shape and form, increase in complexity and diversity, organ formation, processes by which cells with the same genetic endowment become different from one another.

BIOL 347 - General Physiology Laboratory (2)
Laboratory three hours per week. This stand-alone laboratory course is designated to supplement and reinforce material presented in the BIOL-454, but also covers topics beyond the scope of that syllabus, largely through computer-based interactive physiology programs, and the acquisition and analysis of cardiovascular, neuromuscular, and respiratory systems data using the PowerLab human physiology teaching system. Problems involving inquiry-based learning are also assigned. Prerequisites or Co-requisite: BIOL-454.

BIOL 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 358 - Independent Research (0-3)
The course provides an opportunity for first and second year students to carry out independent study and research. Permission of the Instructor required. Course goals, content and meeting times to be determined by the instructor.

BIOL 401 - Sex, Evolution, and Behavior (3)
This course is an in-depth examination of evolutionary theories concerning the sexual reproduction, parthenogenesis, mate choice, sexual selection, life history strategies, and sex allocation. Specialized topics such as pheromone communication will also be covered.

BIOL 402 - Vertebrate Reproductive Physiology (3)
This course is an in-depth examination of reproduction in the vertebrates. Topics include the development of the sex organs, gametogenesis, hormone function, and regulation of gonadal function, pregnancy, and parturition.

BIOL 404 - Pollination Biology (3)
The function and evolution of the reproductive organs of seed plants based on their morphology, biochemistry, breeding system, genetics, and ecological relationships between flowers and such pollinators as insects, vertebrates, and air currents. Includes two field trips to the Missouri Botanical Garden.

BIOL 405 - Molecular Technique Lab (2)
Lecture 1 hour, laboratory 3 hours per week. This course will provide students with experience in the theory and practice of molecular biology techniques. Topics to be covered include DNA isolation, cloning, PRC, DNA sequencing, and bioinformatics. Prerequisites: BIOL 302 and BIOL 303.

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 (0-4)
Lecture three hours, laboratory three hours per week. Prominent morphological, behavioral, physiological and ecological features of fishes, amphibia, reptiles, birds, and mammals. Week-end field trips are required.

BIOL 411 - Natural History (1)
An extended field trip to study the ecology of vertebrates, and the ecological features of fishes, amphibians, reptiles, birds, and mammals. Week-end field trips are required. This course does not fulfill a B.Sc. area requirement.
BIOL 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 of the study of fishes: systematics, ecology, behavior, evolution, and the economic importance of freshwater and marine fishes. Laboratory acquaints students with 80 of the 400 fish families. Week-end field trips are required to study the Missouri fish fauna.

BIOL 429 - Biology of Fishes: Field Trip (1)
An exploration of the freshwater fishes of Florida. Offered as a 10-day Field trip during Spring Break. This course does not fulfill a B. Sc. area requirement.

BIOL 431 - Biology of Birds (4)
Lecture three hours, laboratory three hours per week. Introduction to the study of birds including discussion of ecology, structure and function, evolution, behavior, and systematics. Laboratory includes field trips to the St. Louis Zoo, Missouri Botanical Garden, and other birding areas. Also, taught occasionally at the Reis Field Station.

BIOL 432 - Cave Biology (4)
An introduction to the study of caves. Emphasis will be placed on the systematics of cave organisms and on the adaptations that cave organisms possess to exist in an energy poor environment. Field work will involve studying cave systems in the Ozarks of Missouri. This course is taught during the summer at the Reis Field Station.

BIOL 433 - Spring Flora of the Ozarks (4)
A field-based course designed to acquaint students with the spring flora of the Ozarks. Students will learn to recognize common Missouri plant families and to identify plant species using taxonomic keys. Includes discussion of the major phytogeographic areas of Missouri and the biotic and abiotic factors that define them. Course is offered in May and is based at the Reis Field Station, but also includes off-site trips to state parks and conservation areas.

BIOL 434 - Systematic Biology (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 438 - Biology of Mammals (0-4)
Lecture three hours, laboratory three hours per week. This course surveys the evolution, morphological characteristics, physiology, ecology and behavior of mammals.

BIOL 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 (3)
Lecture three hours, laboratory three hours per week. Discussion of 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 emphases 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)
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 451 - Behavioral Endocrinology (3)**
The effects of hormones and neurotransmitters on reproductive, parental, aggressive, and social behavior; as well as on homeostasis, biological rhythms, learning, and mood. Introductory Endocrinology and Animal Behavior recommended but not required.

**BIOL 454 - Human Cellular Physiology I (3)**
This course focuses on the cellular/molecular underpinnings and integration of human systems physiology, including the general principles of homeostasis, endocrinology, neurophysiology, muscle, cardiac, pulmonary and renal physiology including fluid and electrolyte balance. Prerequisite: BIOL 304

**BIOL 455 - Biology of Aging (3)**
A review and discussion of the theories associated with aging with a survey of the mechanisms of aging and a discussion of age-related changes in animals and humans.

**BIOL 460 - Developmental Biology (3)**
This course investigates cellular and molecular mechanisms responsible for building multicellular organisms. Topics include fertilization, cleavage, gastrulation, axis specification, and organogenesis, with particular attention devoted to the experimental basis for current models. The connections between developmental biology and medical and environmental issues will also be considered. Textbook reading assignments will be supplemented by selected articles from the scientific literature. Prerequisite: BIOL-302 or BIOL-304

**BIOL 461 - Developmental Biology Lab (2)**
Laboratory six hours lab per week. This laboratory course is designed to supplement and reinforce material presented in BIOL 460 through observation and experimental manipulation of developing organisms. Living invertebrate and vertebrate model organisms will be used. Approximately two hours for observations will be required outside of scheduled lab times to be arranged at the mutual convenience of each student and the instructor. Co-requisite or Pre-requisite: BIOL 460.

**BIOL 462 - Biochemistry I (3)**
An upper-level, one semester, undergraduate course focusing on biomolecules. Topics to be covered include biological buffers, thermodynamics, amino acids, proteins, carbohydrates, lipids, membranes, nucleic acids, recombinant DNA, enzymes, and molecular motors.

**BIOL 463 - Foundations of Immunobiology (3)**
The cellular and molecular basis of immune function. Topics include receptors on T, B, and antigen presenting cells, cytokine networking, complement, function of the major histocompatibility complex, hypervisibility 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-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 475 - General Ecology (0-4)**
Lecture three hours, laboratory three hours per week. An introduction to the science of ecology: study of general theories, models, and problems in population, community, and ecosystem levels.

**BIOL 476 - Plant Biochemistry (3)**
A comparative survey of higher plant anabolic and catabolic processes. Topics include: carbohydrates, lipids, proteins, polyketides, terpenoids, aromatics, tetrapyroles and alkaloids.

**BIOL 479 - Biometry (0-4)**
This course is intended for students pursuing a biology major or minor. College-level algebra and general biology are required. The course will cover biological distributions and probabilities; the application of hypothesis testing; the relationship between biological and statistical hypothesis; the nature of biological data and sampling regimes, and how these fit within the scientific method.

**BIOL 480 - Internship in Conservation (1-3)**
Students will work with professional conservation/environmental biologists to get practical experience. Students may work with conservation biologists associated with the EPA, Missouri Conservation Department, Corps of Engineers, or private environmental consulting firms. Environmental problems treated within the framework of fundamental ecological principles.

**BIOL 481 - Integrated Bioinformatics Int. (0-3)**
Students will work with laboratories conducting molecular biology/bioinformatic research to gain practical experience. Internships will include research and development laboratories of local biotechnology companies, and in the departments of Biology, Chemistry, or Mathematics & Computer Science. Prerequisite: Permission of instructor required.

**BIOL 484 - Senior Inquiry:Library Project and Thesis (0-3)**
Permission of instructor required.

**BIOL 485 - Senior Inquiry:Graduate Level Course (0-3)**
Permission of Instructor, Chair, Dean of the College of Arts and Sciences, and the Graduate Dean required for registration in the graduate course.

**BIOL 488 - Senior Inquiry: Research Project (1-3)**
Permission of instructor required.

**BIOL 489 - Senior Inquiry: Comprehensive Examanation (0)**
Permission of department chairperson required.

**BIOL 495 - Senior Residency (0)**
Required of all graduating seniors.

**BIOL 498 - Advanced Independent Study (0-4)**
Individual study and research. Permission of instructor required.

**BIOL 500 - Problems in Vertebrate Morphol (2-3)**
Studies of the gross and microscope anatomy of the organs and organ systems of vertebrates. Gross dissection and histological preparation of selected structures in typical vertebrates of different classes. Offered occasionally.

**BIOL 501 - Ecology of Vertebrate Reprodn (3)**
A study of life history traits that lead to the evolution of sexual selection, parthenogenesis, viviparity, sex ratios, and environmental and genetic sex determination. Offered every other Fall.

**BIOL 502 - Comparative Vertebrate Reprodu (3)**
Lecture two hours, laboratory two hours per week. Advanced study of reproductive anatomy and physiology of the vertebrates. Offered every other Fall.

**BIOL 504 - Prbm-Experimental Embryology (2-4)**
Laboratory work conducted on an individual basis in selected areas of experimental embryology. Offered occasionally.
BIOL 505 - Molecular Techniques Lab (2)
2 credits Prerequisite: An undergraduate course in molecular biology (equivalent to BIOl-302 and 304) or permission of the instructor. Students will learn principles of molecular biology and recombinant DNA technology, and will gain hands-on experience with nucleic acid isolation, cloning, sequencing, and analysis.

BIOL 506 - Adv. Topics in Molecular Biol (0-4)
This course encompasses the central roles of DNA and RNA in molecular biology and the technologies used to analyze and manipulate nucleic acids in biomedical research. Topics to be covered are the structure, topology, and arrangement of nucleic acids in genomes, recombinant DNA technology, bioinformatics, and current research in molecular biology. Offered every Fall semester.

BIOL 507 - Adv Biological Chemistry (3)
An in-depth analysis of selected topics in biological chemistry. Topics may include for example, protein structure and function, and nucleotides and nucleic acids. Offered every other year.

BIOL 508 - Advanced Cell Biology (3)
This course is designed to deepen students' understanding of cell biology principles, experimental strategies, and current research questions. Topics covered will include how different categories of molecules regulate cellular activity and literature, experimental design and interpretation of results. Format: 3 hours lecture/discussion per week. Prerequisites: no prerequisites for students in Biology graduate programs; undergraduates by permission of the instructor only.

BIOL 509 - Biometry (0-4)
This course is intended for graduate students in biology. The course will cover the description of biological distributions and probabilities; the application of hypothesis testing, including the relationship between biological and statistical hypothesis; the nature of biological data, samples and sampling regimes, and how these fit within the scientific method. Central to the course is the use of biological models and experiments.

BIOL 510 - Cellular and Molecular Genetic (3)
The cellular and molecular basis of genetically controlled biological phenomena from microorganisms to complex, multicellular organisms. Topics considered are transcriptional regulation in prokaryotes and eukaryotes, chromatin structure and function, sporulation, yeast mating types, pattern formation in Drosophila, sex determination, and genetic control of development in C. elegans. Experimental methods used to study these events will be stressed. Offered every year.

BIOL 512 - Signal Transduction (3)
Mechanisms by which cells receive and respond to external signals; properties of the cell membrane; receptor structure and function; G protein-regulated transmembrane signaling; intercellular communication; first and second messengers. Experimental methods used to study these phenomena will be emphasized. Offered every year.

BIOL 530 - Prblms/Vertebrate Physiology (2-4)
Laboratory research on current problems in organ system physiology. Offered every semester.

BIOL 532 - 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 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 - 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 547 - 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 relation to health.

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 567 - Advanced Population Biology (3)
This course covers the theoretical and empirical investigations of population ecology and genetics. Major topics will include population growth and dynamics, population regulation, evolution of life histories, ecological interactions between populations, and evolutionary ecology of populations. Offered every other year.

BIOL 570 - Advanced Molecular Biology (3)
Current problems in plant morphology and systematics. Library/laboratory phase stressed. (Offered occasionally.)

BIOL 576 - Problems in Botany (3)
Offered Occasionally

BIOL 577 - Coevolution (3)
This seminar course focuses on reading and discussion of primary literature related to coevolution. Students will gain improved understanding of interspecific interactions (e.g. predation, parasitism, competition, pollination, mimicry) that led to interdependent evolution of species. Study and discussion of these interactions will demonstrate the essential link between ecology and evolution.

BIOL 578 - Molecular Phylogenetic Analysis (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 586 - Scientific Comm in Biology (3)
A course designed to teach students to prepare scientific manuscripts for publication and for designing oral presentations at scientific meetings. Students will learn the skills of preparing graphics and visual aids employing computer programs. Offered every year.

BIOL 591 - Department Seminar (0-1)
Selected topics in Biology. Attendance and participation required for all M.S. and M.S.(R) students in Biology. Offered every semester.

BIOL 597 - Research Topics (1-5)
Prior permission of guiding professor and department/program chairperson required. Offered every semester.

BIOL 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor and department/program chairperson required. Offered every semester.

BIOL 604 - Current Top: Developmental Bio (3)
Review and discussion of recent literature dealing with selected areas in developmental biology, including pattern formation, cell communication, cell differentiation, and molecular basis of development. Offered occasionally.

BIOL 615 - Neural Basis of Behavior (3)
Topics to be discussed include molecular biology and genetic analysis of channels, electrophysiology of synapses and transmitter amines, second messenger systems, molecular genetics of color vision, color blindness, sensory transduction, and development of neural circuitry. Offered every other year.

BIOL 630 - Spec Std: Cmprtv Physiology (1-4)
Conferences and library or laboratory problems dealing with specific functions of animals from the comparative viewpoint. Offered every semester.

BIOL 631 - Comparative Immunobiology (3)
Discussion of defense reactions of invertebrates and non-mammalian vertebrates from textbooks and current literature. Offered every other Fall semester.

BIOL 632 - Comparative Endocrinology (3)

BIOL 633 - Spec Std: Insect Physiology (1-4)
Library of laboratory study on a specific question. Offered every semester.

BIOL 634 - 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.

Chemistry (CHEM)

CHEM 100 - Chemistry and the Environment (3)
This course presents an introduction to the basic principles of chemistry and how these impact important environmental issues. Topics include critical issues in energy use and sustainability, elemental cycles in the environment, atmospheric chemistry and pollution, the hydrosphere and water pollution, and the biosphere and persistent organic compounds.

CHEM 101 - Basic Chemistry (3)
Designed for students who intend to take CHEM-163 but do not have the background or mathematical skills required to enter directly into CHEM-163. Topics include nomenclature, the scientific method as applied in chemistry, basic atomic theory, gas laws, equilibrium and chemical calculations and important classes of chemical reactions. Fall semester.

CHEM 151 - Engineering Chemistry (3)
For Parks College students; others need special permission. Fundamental chemical concepts; atomic theory; nomenclature; stoichiometry; thermodynamics and thermochemistry; gases, liquids, solids, phase diagrams and solutions; chemical equilibrium; bonding in ionic, covalent, and organic compounds and in plastics, polymers, and composite materials; kinetics. Fall and Spring semesters.

CHEM 152 - Engineering Chemistry Laboratory (1)
For Parks College students, others need special permission. Laboratory experiments to illustrate and supplement material in CHEM-151. Fall and Spring semester.
CHEM 153 - Principles of Chemistry I (0-4)
Lecture three hours, laboratory three hours per week. Fundamental concepts and principles of inorganic chemistry. For students in the Schools of Nursing and Allied Health Professions and Education. Offered Fall semester.

CHEM 154 - Principles of Chemistry II (0-4)
Lecture 3 hours, laboratory 3 hours. This course covers fundamentals of organic chemistry with an introduction to biomolecules and biochemistry. Primarily directed to students in Allied Health, Nursing, and Education. Prerequisite: Chemistry 153.

CHEM 163 - Introduction to Chemistry I - Lecture Only (3)
Introduction to the theoretical and mathematical models of chemistry, including periodic table and the elements, naming compounds, basic atomic structure, principles of chemical bonding, gas laws, chemical reactions.

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 (3)
The laboratory course to complement CHEM-163 and CHEM-167. Recommended only for students who have completed or are completing an adequate lecture course equivalent to CHEM-163 or 167.

CHEM 166 - Introduction to Chemistry II-Laboratory Only (3)
The laboratory course to complement CHEM-164 and CHEM-168. Recommended only for students who have completed adequate lecture courses equivalent to CHEM-163 or CHEM-167 and a lab course equivalent to CHEM 164 and who have completed or are completing an adequate lecture course equivalent to CHEM-165 or CHEM 168.

CHEM 167 - General Chemistry I, Chem & Biochem Majors
Introduction to the theoretical and mathematical models of chemistry, including periodic table and the elements, naming compounds, basic atomic structure, principles of chemical bonding, gas laws, chemical reactions. For students majoring in Chemistry or Biochemistry.

CHEM 168 - Gen Chem II, Chem/Bchem Majors (3)
Continuation of Chemistry 167 covering redox reactions and electrochemistry, chemical kinetics and thermodynamics, nuclear chemistry, transition metal chemistry, and descriptive chemistry of the elements. For students majoring in Chemistry or Biochemistry.

CHEM 178 - General Chemistry for the Advanced Student (3)
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 Chemist
Laboratory three hours per week, lecture one hour per week. Introduction to modern instrumentation methods used in chemical research, including nuclear magnetic resonance (FT-NMR), ultraviolet-visible (UV-VIS), infrared (FT-IR), and mass spectroscopy (GC-MS). Synthesis and spectroscopic characterization of chemical compounds will be emphasized. Spring semester.

CHEM 220 - Chemistry and Crime (3)
This course, for non-specialist, will introduce the student to some principles of the field of Forensic Science with an emphasis on the role chemistry plays in this science. Among other topics, we will discuss a variety of chromatographic and spectroscopic techniques and their applicability to the investigation of crime.

CHEM 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 Chem Lab II (1)
Laboratory three hours per week. A continuation of CHEM-344 with an emphasis on the synthesis and reactions of organic compounds. For chemistry majors in the B.A. program and students in the biological sciences and preprofessional health studies. Spring and Summer semesters.

CHEM 346 - Organic Chemistry I (3)
Lecture three hours per week. Introduction to the organic chemistry of aliphatic and aromatic compounds, correlating structural theory and reactivity using a mechanistic approach. Offered for Chemistry majors in the B.S. and B.A. program. Fall semester.

CHEM 347 - Organic Chemistry II (3)
Lecture three hours per week. A continuation of CHEM-346. Offered for Chemistry majors in the B.S. and B.A. program. Spring semester.

CHEM 348 - Organic Laboratory Techniques (1)
This course introduces the basic operational techniques in the organic chemistry laboratory. Required for all chemistry and biochemistry majors. co-requisite: Chemistry 346

CHEM 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 350 - Organic Lab Techniques II (1)
Students carry out experiments on important organic functional groups encountered in organic chemistry. Students carry out reactions, learn more advanced lab and instrumental techniques, and study functional group properties. Required for all chemistry and biochemistry majors. co-requisite: Chemistry 347
### CHEM 360 - General Biochemistry (1-3)
This course provides a survey of biochemistry. Topics include (a) structure and properties of amino acids, carbohydrates, lipids, and nucleic acids (b) behavior of enzymes (c) metabolism: glycolysis, citric acid cycle, oxidative phosphorylation (d) information transfer: replication, transcription, translation.

### CHEM 391 - Introduction to Chemical Literature (1)
Introduction to chemical literature and related information 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 sued 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 464 - Biochemistry II (3)
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 465 - Biochemistry Lab II (1)
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 485 - Analytical Chemistry (3)
Techniques such as optical spectroscopy, electrochemical measurements, and separation methods. Spring semester.

### 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 homogeneous catalytic processes.

### CHEM 518 - Intro Inorganic Research (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 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 523 - Chemical Sensors (3)
This course is designed to introduce the fundamentals of sensors and to discuss sensor development and applications. Topics to be covered include: optodes, ion selective electrodes, amperometric sensors, optical sensors, biosensors, and miniaturized sensors.
CHEM 524 - Electroanalytical Chemistry (3)
This course is designed to introduce you to the fundamentals of electrochemistry and to discuss electroanalytical techniques. Topics to be covered include: chronoamperometry, cyclic voltammetry, scanning electrochemical microscopy, spectroelectrochemistry, electrochemiluminescence, and electrochemical sensors.

CHEM 525 - Bioanalytical Meth Analysis (3)
This course will focus on analytical techniques and methodologies that are used to monitor biologically important compounds in various matrices. Topics will include the use of enzymes in bioassays, immunoassays involving antibody-antigen interactions, mass spectrometry in proteomics, capillary electrophoresis for genomics, and microscale instrumentation for quantitative determinations. Offered every other Fall semester.

CHEM 526 - Analytical Separations (3)
This course focuses on chromatographic and electrophoretic separations. Topics include general plate theory, the principles and optimization of gas chromatography, liquid chromatography, supercritical fluid chromatography and capillary electrophoresis, and the principles of the detection systems utilized in these separation techniques. (Offered every Spring semester.)

CHEM 527 - Stat Meth of Phys Scientists (3)
This course presents many of the important statistical methods used in physical sciences with a focus on applications important to engineering, chemistry, and physics. Errors, uncertainties, and error analysis in physical measurements, probability theory, probability density functions, moments of distributions, statistical parameters, statistical tests, least squares, chemometrics, electronic noise and noise reduction, and control charts are all discussed.

CHEM 528 - Intro to Analytical Research (1-3)
Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in analytical chemistry. (Offered every semester.)

CHEM 529 - Special Topics (3)
Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 535 - Elements of Surface/Colloid Sc (3)
The chemical properties of interfaces will be the main focus of this course. Chemistry of gas-liquid, solid-gas, and solid-liquid interfaces will be discussed with emphasis on thermodynamic descriptions. Industrial applications of interfacial processes will also be discussed. (Offered every other Spring semester.) Prerequisites: Chem 333 and 334 or the equivalent.

CHEM 537 - Computational Chemistry (3)
A description of the theory and practice of computational methods used in modern chemical research. Students gain knowledge of computational methods through classroom instruction and semester-long projects focused on a molecular system of their choice. Molecular calculations are performed using Gaussian 03 on a supercomputer.

CHEM 538 - Intro to Physical Research (1-3)
Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in physical chemistry. (Offered every semester.)

CHEM 539 - Spec Top-Physical Chemistry (3)
Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 540 - Advanced Organic Chemistry (3)
Physical organic chemistry including molecular orbital theory, structure-activity relationships, stereochemistry, reactive intermediates, determination of organic reaction mechanisms. (Offered every Fall semester.)

CHEM 541 - Synthetic Organic Chemistry (3)
Emphasis on modern synthetic methods, mechanisms and application to the synthesis of complex structures. (Offered every Spring semester.)

CHEM 544 - Polymer Chemistry (3)
A survey of polymer chemistry including the mechanisms of polymerization and the characterization and structure-property relationships of polymers. (Offered every other year.)

CHEM 545 - Principles of Medicinal Chem (3)
This course examines the relationship between chemical structure and biological activity with an emphasis on drug design and modification. Specific drug classes which will be used as illustrative of this relationship include, cardiovascular drugs, anti-inflammatory agents, steroid hormones, and chemotherapeutic agents (antibiotics), among others. Fall semester.

CHEM 546 - Heterocyclic Chemistry (3)
A broad survey of the synthetic approaches to, and reactions of the fundamental heterocyclic systems. (Offered every semester.)

CHEM 548 - Intro to Organic Research (1-3)
Advanced laboratory individually planned to afford opportunities for special training, or as an introduction to research in organic chemistry. (Offered every semester.)

CHEM 549 - Special Top-Organic Chemistry (3)
Scheduling in a given semester depends on the availability of an instructor and anticipated enrollment. (Offered occasionally.)

CHEM 551 - Fundamentals & Design of Nana (3)
This course addresses the development and application of nanomaterials. Synthetic and preparative processes for making nanoscale structures and materials are addressed along with techniques for their characterization. Theoretical models for describing physical and chemical properties of nanostructures are presented. Nanotechnology and applications of nanostructures are covered.

CHEM 561 - Principles of Develop Biology (3)
This course investigates cellular and molecular mechanisms responsible for building multicellular organisms. Topics include fertilization, cleavage, gastrulation, axis specification, and organogenesis, with particular attention devoted to the experimental basis for current models. The connections between developmental biology and medical environmental issues will also be discussed.

CHEM 591 - Research Seminar (0-1)
Registration required of full-time graduate students during regular sessions when the course is offered. Applicants for the M.S. (Research) degree may accumulate a maximum of three semester hours toward that degree. (Offered every Fall and Spring semester.)

CHEM 597 - Research Topics (0-3)
Prior permission of guiding professor required.

CHEM 596 - Graduate Reading Course (1-3)
Prior permission of guiding professor and department chairperson

CHEM 618 - Methods in Inorganic Research (3)
This course will introduce students to the most current research methods in modern inorganic chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze and interpret data in order to solve a particular problem in inorganic chemistry.

CHEM 619 - Advanced Inorganic Research (3)
This course will require students to search and critically analyze the inorganic chemistry literature, formulate a problem in experimental and/or theoretical inorganic chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 627 - Stat Meth for Phys Scientists (3)
This course presents many of the important statistical methods used in physical sciences with a focus on applications important to engineering, chemistry, and physics. Errors, uncertainties, and error analysis in physical measurements, probability theory, probability density functions, moments of distributions, statistical parameters, statistical tests, least squares, chemometrics, electronic noise and noise reduction, and control charts are all discussed.
CHEM 628 - Methods in Analytical Research (3)
This course will introduce students to the most current research methods in modern analytical chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze, and interpret data in order to solve a particular problem in analytical chemistry.

CHEM 629 - Advanced Analytical Research (3)
This course will require students to search and critically analyze the analytical chemistry literature, formulate a problem in experimental and/or theoretical analytical chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 638 - Methods in Physical Research (3)
This course will introduce students to the most current research methods in modern physical chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze, and interpret data in order to solve a particular problem in physical chemistry.

CHEM 639 - Advanced Physical Research (3)
This course will require students to search and critically analyze the physical chemistry literature, formulate a problem in experimental and/or theoretical physical chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 648 - Methods in Organic Research (3)
This course will introduce students to the most current research methods in modern organic chemistry. Students will learn the theory behind the methods but will also get hands-on experience by using these methods to collect, analyze, and interpret data in order to solve a particular problem in organic chemistry.

CHEM 649 - Advanced Organic Research (3)
This course will require students to search and critically analyze the organic chemistry literature, formulate a problem in experimental and/or theoretical organic chemistry to be addressed, and apply a research methodology to address the problem.

CHEM 651 - Fundamentals & Design of Nano (3)
This course addresses the development and application of nanomaterials. Synthetic and preparative processes for making nanoscale structures and materials are addressed along with techniques for their characterization. Theoretical models for describing physical and chemical properties of nanostructures are presented. Nanotechnology and applications of nanostructures are covered.

CHEM 690 - Introduction to Proposal Writing and Oral Pre
This course will introduce students to the complex process of proposal writing and the art of preparing and presenting effective oral presentations.

CHEM 691 - Seminar (1)
Each semester, invited speakers from research programs in both academic and industry will give presentations on their work, and PhD students will be expected to attend and engage in discussions with the speakers.

CHEM 699 - Dissertation Research (0-6)
This course involves an experimental or theoretical research project chosen and completed under the guidance of a graduate faculty member. A thesis must be written and orally defended.

Chinese (CHIN)
CHIN 110 - Communicating In Chinese I (0-3)
Prerequisites: None
Introduction to basic pronunciation (pinyin), simple sentence structure. Simple oral comprehension and speaking Chinese. Vocabulary items and useful phrases for surviving simple daily life and travel in China.

CHIN 115 - Communicating In Chinese II (0-3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMM 383</td>
<td>Methods Rhetorical Analysis (3)</td>
<td>Discusses the rhetorical methods used in the critical analysis of public communication. Course offers practice in the application of a variety of rhetorical methods.</td>
</tr>
<tr>
<td>CMM 384</td>
<td>Analysis of Popular Culture (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 385</td>
<td>Qualitative Research Methods in Communication</td>
<td>Introduces students to the methods used by qualitative/naturalistic researchers. Topics covered include strengths and limitations of qualitative research; problems of studying interaction in public settings; procedures for collecting, analyzing, and writing up qualitative data; and techniques for managing relationships between subjects and researcher.</td>
</tr>
<tr>
<td>CMM 400</td>
<td>Theories of Persuasion (3)</td>
<td>Focuses on contemporary persuasion theory and research. Covers a variety of perspectives on the subject, such as motivation theory, social judgment, social movements, and advertising campaigns. The approach helps demonstrate how theories of persuasion can help guide the practice of human communication.</td>
</tr>
<tr>
<td>CMM 415</td>
<td>Nonfiction Writers Workshop (3)</td>
<td>Capstone writing course, designed to provide near-professional experience for advanced writers. Course conducted as a group workshop.</td>
</tr>
<tr>
<td>CMM 416</td>
<td>Editing (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 420</td>
<td>Problem Solving Small Groups (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 421</td>
<td>Organizational Culture (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 422</td>
<td>Conflict Mediation, Negotiation, and Bargaining</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 425</td>
<td>Report Writing for Comm Prof (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 430</td>
<td>Gender and Communication (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 432</td>
<td>Communicating Across Racial Divisions (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 435</td>
<td>Stereotyping and Bias in the Mass Media (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 440</td>
<td>Mass Communication and Society (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 442</td>
<td>Theory of Free Expression (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 443</td>
<td>Culture, Technology, and Communication (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 444</td>
<td>History of Journalism (3)</td>
<td>Traces the history of journalism in the United States as a literary, political, social, economic, and cultural institution.</td>
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<tr>
<td>CMM 447</td>
<td>Rhetoric of Political Campaign (3)</td>
<td>Introduces principles of communication in political campaigns. Course addresses both theoretical and practical dimensions of campaign communication, including advertising, image making and issue management.</td>
</tr>
<tr>
<td>CMM 453</td>
<td>Multimedia Scripting &amp; Design (3)</td>
<td>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.</td>
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<tr>
<td>CMM 455</td>
<td>Seminar: Politics, Rhetoric, and Culture (3)</td>
<td>This course examines the relationship between politics and rhetoric. Does communication reflect political reality or create it? What are the political effects of different rhetorical styles? We will examine classical writings on rhetoric as well as contemporary democratic and rhetorical theory. Prerequisite: junior-level standing or permission of instructor.</td>
</tr>
<tr>
<td>CMM 460</td>
<td>Integrated Communications Campaigns (3)</td>
<td>Explores techniques for researching, designing, presenting, and evaluating communication campaigns. Course emphasizes integration of public relations and advertising strategies in a comprehensive plan.</td>
</tr>
<tr>
<td>CMM 464</td>
<td>Public Relations Case Studies (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 465</td>
<td>International Public Relations (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 470</td>
<td>Advertising Research and Strategic Planning (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 472</td>
<td>NSAC Advertising Competition (0-3)</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 dialogue communication in sespecial 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 increade tolerance for differing points of view.

CMM 521 - Contmy 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 humanness, language, and ways of knowing. Individual research required.

CMM 566 - Case Problems in Communication (3)
An advanced study and analysis of classic cases in advertising, public relations, journalism, or communication studies.

CMM 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. Prerequisite: 3 years of high school math.

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. Prerequisite: MATH 120 or MATH 132-MATH 142.

CSCI 112 - Web Development (3)
Teaches students some fundamental Web development and computer programming skills. Covers basics of Web page design with HTML and JavaScript computer languages. Prerequisite MATH 120 or equivalent.

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. Prerequisites: MATH 120 or MATH 132, MATH 141, MATH 142

CSCI 140 - Intro To Computer Science (3)
A broad survey of the computer science discipline, focusing on the computer's role in representing, storing manipulating, organizing and communicating information. Topics include hardware, software, algorithms, operating systems, networks. Note: This class may be taken concurrently with CSCI-150. Prerequisite: 3 years of high school 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 (3)
An introduction to computer programming based upon early coverage of object-oriented principles such as classes, methods, inheritance and polymorphism, together with treatment of traditional flow of control structures. Good software development practices will also be established, including issues of design, documentation, and testing. Prerequisite: MATH 120 or 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. Prerequisites: CSCI 140 or MATH 135 and at least a "C-" in CSCI 145 and CSCI 146 or a "C-" in CSCI 150.

CSCI 214 - Adv Data Struc & Algorithms (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. Prerequisite: At least a "C-" in CSCI 180.

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. Prerequisite: CSCI 180 and either CSCI 224 or ECE 317.

CSCI 334 - Network Programming I (3)
Transmission media; packets, frames, and error-detection; LAN and WAN technologies; routing; Internet architecture and protocols; network performance; host computers; routers; protocol layers; Internet protocol addresses; datagrams; encapsulation; fragmentation; reassembly; Internet Control Message Protocol; network security and legal issues. Prerequisite: CSCI 324.

CSCI 344 - Programming Languages (3)
Overview of programming languages: procedural and functional languages. Exposure to functional languages. Analysis of solution strategies to variable binding and function calls. Problem solving paradigms and linguistic issues. Prerequisite: CSCI 290.

CSCI 357 - Computer Graphics I (3)
Introduction to the theory and techniques of computer graphics. Algorithms and mathematics for creating two and three dimensional figures. Animation and two and three dimensional transformations. Interaction, windowing, and perspective techniques. Coding using the graphics library OpenGL. Prerequisites: CSCI 180 and MATH 244 and MATH 311 or MATH 315.

CSCI 371 - Databases (3)
Fundamentals of Database systems: the relational model, file organization and indexes, relational algebra, structured query language, the entity relationship model, normalization, object databases. Prerequisite: CSCI 180.

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 425 - Advanced Operating Systems (3)
Parallel processes; processor problems; linear address space and tree structured spaces of objects; resource allocation, queuing and network control policies; system balancing and thrashing; job allocation and process scheduling; multiprogramming systems; protection mechanisms for accessing jobs; pipelining and parallelism; distributed systems. Prerequisite: CSCI 324.

CSCI 434 - Network Programming II (3)
Client Server interactions; socket interference; Domain Name Systems; e-mail registration and transfer; file transfer and remote file access; security and legal aspects of network management; web-servers and technologies; CGI and Java technologies. Prerequisites: 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. Prerequisite: CSCI 180.

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)

CSCI 490 - Senior Design Project (3)
Semester-long computer science design projects by teams selected to cover as many areas of computer science as possible; documents and formal presentation are required. Prerequisites: Senior status in computer science.

CSCI 491 - Capstone Project (3)
Some projects may have more specific prerequisites. Either a research project or a design project. Public presentation of the project required. Prerequisites: Senior Computer Science major. All required 200-level CS courses and six additional hours of computer science. Prerequisites: CSCI 290 and CSCI 224 (senior standing, all required 200 level CSCI courses plus six more hours).

CSCI 495 - Senior Residency (0)
Required for graduation seniors.

CSCI 498 - Advanced Independent Study (0-6)
Prior permission of sponsoring professor and chairperson required.

Comm Sci & Disorders (CSDI)

CSDI 100 - Intro to Comm Sci & Disorders (3)
A survey course designed to provide an introduction to the areas of study and the disciplines involved in communicative disorders, including an overview of communication processes and development as well as speech, language, and hearing disorders. Offered each Fall and Spring.

CSDI 254 - Linguistics (2)
An introduction to linguistic theories focusing on the rule systems of language, language development, language difference, dialects and language change across time. Offered each Spring.

CSDI 300 - Phonetics (2)
A study of English phonemes with practice transcribing connected speech including dialectal variations, as well as disordered speech, using the international Phonetic Alphabet. Offered each Fall.

CSDI 310 - Speech Development (3)
A survey course designed to study the development of phonology, articulation, voice, and fluency across the lifespan. An overview of development of swallowing will also be included. Offered each Fall.

CSDI 326 - Anat & Phys of Speech Mechanism (3)
A study of the anatomical and physiological aspects of the speech mechanism. Offered each Fall.

CSDI 328 - Speech Science (3)
A study of the physiological, acoustic, and perceptual aspects of speech. Offered each Spring.

CSDI 329 - Hearing Science (3)
A study of the scientific aspects of hearing and its measurement, including basic acoustics, anatomy and physiology of the ear, psychoacoustics, and instrumentation. Offered each Fall.

CSDI 330 - Survey of Speech Disorders (2)
A survey of speech disorders, including etiologies, characteristics, linguistic and cultural correlates of articulation, phonology, voice, and fluency disorders across the lifespan. Offered each Spring.

CSDI 335 - Clinical Methods (3)
An introduction to clinical service provision, including principles and procedures in diagnostics and intervention that are common across communication disorders. Offered each Fall.

CSDI 336 - Clinical Observation (0)
Students will learn an approach to meaningful observation and documentation of clinical practice in communication disorders in multiple settings. Offered each Fall.

CSDI 342 - Beginning Sign Language (1)
An introduction to the manual alphabet and basic signs used in communicating with individuals who are deaf. Open to non-majors. Offered each Fall.

CSDI 343 - Advanced Sign Language (1)
A continuation of the study of sign language from CSDI 342. Offered each Spring.

CSDI 401 - Clinical Practicum (1)
A supervised clinical experience involving the application of principles and procedures of clinical service provision. Offered Fall, Spring, and Summer.

CSDI 405 - Research Seminar (1)
Investigation of methods of inquiry learned in the COPS Level 2 course. Interested students may apply and be admitted through a selection process based on faculty recommendation. Offered each Fall.

CSDI 406 - Research Practicum (1)
Research experience based on the completion of CSDI 405. Offered each Spring.

CSDI 420 - Language Development (3)
An overview of the development of language and communication skills in typically developing individuals across the lifespan. Issues related to linguistic and cultural diversity will be explored. Offered each Fall.

CSDI 430 - Survey of Language Disorders (2)
A survey of language disorders including etiologies, characteristics, linguistic and cultural correlates of language disorders across the lifespan. Offered each Spring.

CSDI 440 - Audiology: Basic Audimetry (3)
An introduction to various causes of hearing loss and comprehensive audiological evaluation procedures across the life span. Offered each Spring.

CSDI 441 - Aural Rehabilitation (3)
A study of hearing aids and other amplification systems, cochlear implants, speechreading, and auditory training. Habilitative and rehabilitative strategies for individuals with hearing impairment will be discussed. Offered each Fall.

CSDI 470 - Chara. Multicult Popultn (3)
A study of diverse populations, including cultural and linguistic differences and disorders in speech, language, and hearing, as well as cross-cultural issues in assessment and intervention. Offered each Spring.

CSDI 475 - Neurl Bases of Communicatin (3)
A study of neurological development and function related to speech, language, and hearing. Offered each Spring and Summer.

CSDI 480 - Senior Seminar (1)
Designed to be a culminating experience for seniors, this course provides the opportunity to synthesize the knowledge and skills they have acquired from prior coursework and related experiences through a capstone project. This project is expected to tie together information across the five dimensions of the university experience.

CSDI 488 - Advanced Audiology (2)
A study of pediatric audiometry, electrophysiology measures, behavioral hearing assessment related to developmental level, immittance audiometry and testing for auditory processing disorders. Offered each Spring.
CSDI 496 - Counseling (2)
An overview of counseling principles and procedures related to speech language pathology and audiology. Offered each Spring.

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

CSDI 553 - Augmentative & Alternative Com (2)
An overview of augmentative and alternative communication modes, techniques and symbol systems, as well as assessment and intervention strategies. Offered every Summer.

CSDI 555 - Language I (3)
A focus on theoretically-based functional practices in the assessment and intervention of language disorders in children from birth to eight years. Offered every Fall semester.

CSDI 556 - Language II (3)
A focus on theoretically-based functional practices in the assessment and intervention of language-learning disorders in school-age children and youth. Offered every Spring semester.

CSDI 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 Dsrdr 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 Pthlogy (1)
Taken in the last semester of study. This course focuses on the business, legal and ethical issues that impinge on clinical practice in speech-language pathology. Emphasis is placed on the administrative aspects of service delivery pertaining to private practice, clinics and hospital-based programs. Offered every Fall and Spring semester.

CSDI 582 - Cognitive Comm Disorders (3)
A study of the etiology, diagnosis, and treatment of cognitive communication disorders due to traumatic brain injury and dementia. Offered every Fall semester.

CSDI 588 - Advanced Audiology (2)
A study of pediatric audiology, electrophysiology measures, behavioral hearing assessment related to development level, immittance audiometry and testing for auditory processing disorders. Offered every Spring semester.

CSDI 589 - Institute in Comm Disorders (1-3)
Various topics in the field. Offered every Summer.

CSDI 594 - Clinical Internship (0-3)
A required course taken in the last semester of the program involving full-time clinical placement in an off-campus site. Emphasis of this course is the integration of academic knowledge and clinical skills in a professional setting. Offered every semester.

CSDI 598 - Research Topics (1-3)
Permission of Instructor of department chair required.

CSDI 599 - Thesis Research (0-6)
Permission of department chair required.

Earth & Atmospheric Sciences (EAS)
EAS 101 - Earth Systems I-The Solid Earth (3)
This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 102 - Earth's Environment I Lab (1)
This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.
EAS 103 - Earth's Dynamic Environment II (3)
This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-101 focuses on the solid earth and surface environments; EAS-103 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 104 - Earth's Environment II Lab (1)
Two hour laboratory per week. Illustrates and supplements the material covered in lectures of EAS-103 Earth's Dynamic Environment II. Several short field trips are taken during the semester. Not required for students enrolled in EAS-103, though EAS-103 is a pre-requisite or co-requisite for the lab.

EAS 105 - Introduction to Oceanography (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)
Treatments 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.

EAS 118 - Physical Geography Lab (1)
Two hour laboratory per week. Provides experience in using planimetric maps, topographic maps and nautical charts and an introduction to the underlying principles of map making and map reading. Fulfills 1 hour of science requirement. Usually offered in the Fall semester.

EAS 130 - Seismology of Nuclear Explosio (3)
This inquiry-based course will emphasize the scientific questions involved in the detection of underground nuclear explosions using seismology. Many other related issues will also be raised and discussed, e.g. the interplay of science and public policy, how political decisions are made, the ratification of Test Ban Treaties, and the difference between explosions and earthquakes. Class limit 19. Two lectures and a 2-hour lab per week. Offered once per year.

EAS 131 - Water-Our Precious Resource (3)
This 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 - Meteorological Aspects of Emergenecy Respons
This course is an in-depth look into the physical processes which affect the climate of Missouri. Students working in teams will use actual observations to examine the possible relationships between climate phenomena (i.e. El Nino, La Nina, Pacifica Decadal Oscillation, teleconnections, and global warming) and the weather patterns over Missouri. Fulfills three hours of science requirement. Fall semester.

EAS 142 - Foundations of Atmospheric Science (3)
This course provides an overview of atmospheric science for students majoring in meteorology. Topics include: atmospheric composition and structure, temperature, heat, moisture, air masses, fronts, midlatitude cyclones, thunderstorms, and hurricanes. Education and career opportunities will also be discussed. Co-requisite: MATH-141 or better, meteorology major, or permission of the instructor.

EAS 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 natural and man-made environmental hazards, their causes and possible solutions. Fulfills three hours of science requirement. Fall semester.
EAS 211 - Meteorological Analysis (3)
The analysis procedures and tools of meteorology are studied. Types and
formats of meteorological data from both observations and models are
examined. The analysis and display of data by hand and with computers
are introduced. Prerequisites: MATH-142, EAS-253, or permission of the
instructor. Must be taken concurrently with EAS-244.

EAS 220 - Mineralogy (3)
Lecture three hours per week. Crystallography, physical, chemical, and
descriptive mineralogy.

EAS 221 - Mineralogy Lab (1)
Identification of rock-forming and ore minerals through physical and
optical properties. will include field trips. Meets 3 hours once a week.

EAS 240 - Field Techniques in Geology (2)
Instruction in the fundamental methods of field work. Students will learn to
use a compass, maps and other geological aids, orienteer, describe basic
geologic features, keep a field notebook and map simple geologic
structures. Most of the course will be conducted in the field. Fall semester.

EAS 242 - Computer Applications in Earth Science (1)
Restricted to students in Earth and Atmospheric Sciences. Laboratory two
hours per week. Students gain experience in the use of word processors,
spreadsheets and graphing packages for tabulating, analyzing and
reporting scientific data in the geosciences. Spring semester.

EAS 244 - Atmospheric Processes and Systems (3)
Introduction to theoretical aspects of dynamic and synoptic meteorology
and numerical weather prediction. The kinematic quantities of vorticity and
divergence, as well as the analysis of weather systems will be
emphasized. Prerequisite: MATH-142, Co-requisite: PHYS-161/162, or
permission of the instructor. Must be taken concurrently with EAS-211.

EAS 253 - Fundamentals of Climate Systems (3)
Introduction to the fundamental processes which effect climate and
influence climate change. Topics include: earth's radiation budget, oceanic and atmospheric general circulations, ocean, atmosphere and
land interactions, climate classifications, and the hydrologic cycle.
Prerequisite: EAS-142, co-requisite: MATH-142 or better math course, or
permission of the instructor.

EAS 260 - Environmental Science Seminar Series (1)
The seminar series is comprised of two components. Environmental
scientists and professionals will be invited to give four seminars on
important environmental issues. Three seminars will also be given to
prepare students for their future careers. Must be declared environmental
science / studies major or in the process of declaring to enroll in seminar.

EAS 305 - Geomorphology (3)
Introduction to landforms and surficial deposits, and to the erosional and
depositional processes responsible for landform genesis. Long-term
landscape development and aspects of larger scale geomorphology.
Lecture three hours per week, occasional field trips. Spring or Fall
semester.

EAS 310 - Environmental Issues (3)
An examination of current and historical environmental issues from
scientific, economic, social, and political perspectives, with an emphasis
on energy, public health, land use, and global change. Prerequisites: EAS
101/102 or 103/104; BIOL 104, 106, 220, or 236; CHEM 161, 162, or 163;
or consent of instructor.

EAS 315 - Broadcast Meteorology I (3)
The principles of broadcast meteorology will be introduced combining
lectures and hands-on experience. Students will develop the skills
necessary to communicate scientific information, with emphasis on
weather forecasts. The campus radio station will be used by the students
to present weather forecasts on a daily basis Prerequisites: EAS-244,
EAS-211, or permission of the instructor.

EAS 316 - Broadcast Meteorology II (3)
production will be explored, including the concepts behind the presentation
and practical applications. The goal is to achieve the knowledge and
experience necessary to obtain a position in broadcasting and the
understanding on how to advance one's career. Prerequisite: EAS-315, or
permission of the instructor.

EAS 325 - Global Change (3)
Fundamentals of climate physics, global and regional scale average solar
and terrestrial radiation regimes and respective radiation balances;
radiation instruments of roof station; hydrologic cycle and water balance;
energy balance for atmosphere, ground and total earth system; heat
transfer in ocean and ground; paleoclimatology; climatic change. Fulfills
three hours of science requirement. Spring semester.

EAS 331 - Paleontology (3)
Lecture three hours, laboratory two hours per week. Classification,
anatomical structure and geological history of invertebrate fossils.

EAS 335 - Surface Water Hydrology (3)
Fundamentals of precipitation, runoff, evaporation, and effects that various
geomorphological and geological features have on these processes.
Temporal and spatial variability of stream flow and flooding as influenced
by both natural and cultural factors. Normally offered in Spring semester.

EAS 340 - Soils & Formation, Properties, Identification, an
This course covers the physical-, chemical-, and biologically related
properties of soils and the environmental issues surrounding soils and
society. Lecture 3 hours per week plus several field trips and field
exercises. Prerequisite or co-requisite: Chemistry 161 or equivalent.

EAS 350 - 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 405 - Petrology (3)
Origin, occurrence, classification and characteristics of igneous and
metamorphic rocks. Lecture three hours per week. Spring or Fall semester.

EAS 406 - Petrology Lab (1)
Three hours laboratory per week. An introduction to the description,
classification and analysis of igneous and metamorphic rocks in hand
specimens and under the microscope. A brief introduction to optical
mineralogy is included. Spring or Fall semester.

EAS 410 - Surface Processes (3)
Overview of physical and chemical processes and landform development
in modern and ancient surface environments. Field trip required.
Prerequisites are EAS 101 and 102. Co-enrollment in EAS 411 is strongly
encouraged.

EAS 411 - Surface Processes Laboratory (1)
This laboratory illustrates and supplements the material covered in
lectures of EAS-410 Surface Processes. Several field trips are taken
during the semester. Prerequisites are EAS 101, 102, and 240. EAS-410 is a
pre-requisite or co-requisite.

EAS 415 - Instrumentation and Remote Sensing (3)
Meteorological instruments will be studied from the viewpoint of
performance characteristics, sensitivity, dynamical error, and response to
sinusoidal and step impulses. Statistical treatment of output data; digital
systems; computerized processing and retrieval as it applies to
meteorology. Prerequisites: MATH-142, PHYS-163/164, or permission of the
instructor. Must take EAS-334 concurrently.
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, identification of environmental problems and possible solutions, report writing, and presentation of results. Several case studies will be reviewed in detail as needed.

EAS 426 - Environmental Geophysics (3)
Lecture three hours per week. Geophysical techniques for exploration and characterization of shallow structure and media in the geosciences. Includes gravity, magnetic, seismic, electrical, borehole and ground-penetrating radar methods. Alternate Spring semesters.

EAS 428 - Environmental Geochemistry (3)
Lecture three hours per week. Application of geochemical principles towards the understanding of chemical processes occurring at or near the Earth's surface. Alternate Fall semesters.

EAS 430 - Structural Geology (3)
Lecture three hours per week. Description of structures in sedimentary, igneous and metamorphic rocks at scales ranging from atomic to continental. Introduction to stress, strain, deformation mechanisms, and techniques of kinematic and dynamic analyses. Alternate Spring semesters.

EAS 431 - Structural Geology Laboratory (1)
Laboratory focuses on map interpretation, collection of structural data, and geometrical techniques for solving structural problems. Half-day and weekend field trips are an integral part of the laboratory.

EAS 433 - 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 440 - Environmental Science Capstone Project (3)
This team project is the final integrative experience in the environmental science/studies programs. Each team focuses on one local, regional, or global environmental issue. The results of each team's investigation of the problem(s) and formulation of potential solutions will be presented and defended before faculty and students. Senior standing required.

EAS 444 - Principles of Dynamic Meteorology I (3)
Dynamic principles underlying large scale atmospheric motion: 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)
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 452 - Seismic Exploration Lab (1)
Electrical properties of earth materials, natural electrical fields, electrical fields in layered media, electrical methods of exploration. Spring or Fall semester.

EAS 453 - Principles of Electrical Exploration (3)
Principles of electrical methods and interpretation; elementary seismic data processing. Spring or Fall semester.

EAS 455 - Principles of Gravity and Magnetic Exploration (3)
Earth's gravity and magnetic fields, density and magnetic properties of rocks, gravity and magnetic methods of exploration. Spring or Fall semester.

EAS 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. Offer 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 in an in-depth, integrative examination into the geology and geophysics of divergent and convergent margins. Subject matter includes the physiography, petrology, geochemistry, sedimentology, seismic surveys, and seismology of margins. Laboratory exercises, take-home assignments, classroom presentations and paper are an integral part of the course. Offered every other year.

EAS 518 - Trans Margins & Plate Interior (3)
This course in an in-depth, integrative examination into the geology and geophysics of transform margins and plate interiors. Subject matter includes the physiography, petrology, geochemistry, sedimentology, seismic surveys, and seismology of margins and plate interiors. Laboratory exercises, take-home assignments, classroom presentations and paper are an integral part of the course. Offered every other year.

EAS 519 - Seminar in Geoscience (2)
In-depth study of recent research developments in geophysics. This seminar or EAS-539 is offered every semester.

EAS 520 - Numerical Method of Prediction (3)
Study of the concepts of dynamic meteorology underlying numerical weather prediction models, the development of the single and multi-level models and their applications. Climate modeling. Offered during the summer session.

EAS 522 - Geophysical Data Processing (3)
Modern digital data processing methods used in geophysics, based on Fourier and Z transforms. Topics include correlation, spectral analysis, and digital filters, with application to earthquake seismology, seismic, gravity, and magnetic exploration. Offered occasionally.

EAS 523 - Boundary Layer Meteorology (3)
Comprehensive treatment of the Navier Stokes equations - development and solutions. Discussions of the three-dimensional modeling of the planetary boundary layer, the accompanying turbulence theory, and marine boundary layers. Offered every other Fall semester.

EAS 524 - Tropical Meteorology (3)
Study of the fundamentals of circulation in the tropics, the importance of sea-air interaction, convection processes, monsoons, energy transfer and hurricanes. Offered every Spring semester.

EAS 526 - Synoptic & Dynamic of Jet Strm (3)
The dynamic concepts useful in jet stream meteorology; methods of measuring various parameters in the free atmosphere; discussion of laboratory and computing models as they relate to planetary jet streams. Offered occasionally.

EAS 527 - Meteorology of Severe Storms (3)
Comprehensive treatment of the synoptic and mesoscale meteorological aspects and the mechanics of thunderstorms, tornadoes and downbursts. Offered every other Fall semester.

EAS 528 - Diag & Pred of Severe Storms (3)
Emphasis is placed on the development of short term (1-6 hours) forecasting techniques for severe storms. Topics include: instability mechanisms, severe storm structure and types, sounding analysis, low level jet inversion wind maxima, jet streak coupling, boundary layer thermal gradients, satellite/radar signatures of severe convection, flash flood forecasting and statistical guidance. Case studies of severe weather are discussed in class. Offered every other spring semester.

EAS 529 - Mesometeorology (3)
Comprehensive synoptic and theoretical discussion of mesoscale meteorological events, thermally induced circulations and nonconvective circulations. Offered occasionally.

EAS 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 Mech 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, thermoelectricity, and several classical boundary value problems relevant to the geosciences will be presented. Offered every other 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 crustal rocks 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 & Appliction (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 Explorn 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 sponsoring professor and the Program Director.

EAS 591 - Geoscience Journal Club (0-1)
A critical evaluation of literature concerning a specific problem.

EAS 599 - Graduate Reading Course (1-3)
In-depth analysis of topics for Ph.D. students. Offered occasionally.

EAS 610 - Adv Top in Solid Earth Geophys (3)
Physics of the Earth's interior; emphasis on current research problems. Topics from seismology, geology, heat flow, geomagnetism, and tectonophysics. Offered occasionally.

EAS 619 - Adv Seminar in Geophysics (2)
A critical review of the literature concerning a specific problem.

EAS 620 - Advanced Geomagnetism (3)
Lecture course on spherical harmonic analysis of the main magnetic field of the earth and of transient magnetic variations. Processes in the ionosphere relating to geomagnetism; topics in paleomagnetism and magnetohydrodynamics included. Offered occasionally.

EAS 631 - Advanced Seismology I (3)
The solution of the three-dimensional elastic wave equation in a whole sphere and plane layered halfspace will be developed using concepts of Green's functions, moment tensors, dislocation theory. Cagniard-de Hoop and wave number integration techniques will be introduced as complementary methods of solving the wave equation. Offered every Fall semester.

EAS 632 - Advanced Seismology II (3)
Wave propagation in a spherical earth is the focus of this course. Wave equation solutions using free oscillations, WKBJ ray theory and surface waves are developed. Modern techniques for wave propagation in an earth with laterally varying media will be addressed. Theory for the inversion of seismic observations, e.g., free oscillation frequencies, surface wave dispersion or body wave travel times, for earth structure will be developed. Offered every Spring semester.

EAS 648 - Gen Circulation of Atmosphere (3)
The nature and theories of the atmospheric general circulation, the energy and momentum budget of the atmosphere and the numerical simulation of the atmospheric general circulation. Offered occasionally.
Introduces students to theoretical and methodological approaches to ENGL 230 - Introduction to the Novel (3) poetry, including major terms, methods, and concepts.

Introduces students to theoretical and methodological approaches to ENGL 220 - Introduction to Poetry (3) occasionally.

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

Introduces students to theoretical and methodological approaches to ENGL 202 - Introduction to Literary Study (3) ENGL-190, or equivalent. Co-requisite: Micah House section of PSY-101.

Breakdown of social order. Micah House program only. Prerequisite: ENGL 150 or equivalent. Offered regularly.

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

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.

Advanced instruction in expository and argumentative writing with issues relevant to engineers. [Equivalent to ENGL 190] Designed for probable majors in English or Humanities. Through study of a subject tied to the research interests of the professor, this course emphasizes critical reading, argumentative writing, rhetorical awareness, and research. Serves as the first in a recommended sequence that includes ENGL 294, 394, and 494. Prerequisite: ENGL 150 or equivalent. Offered regularly.

Studies complex structures of language including its logical and persuasive possibilities. Emphasizes analytical reading, critical thinking, and research methodology skills. Prerequisite: ENGL-150, or equivalent.

Studies complex structures of language including its logical and persuasive possibilities. Emphasizes analytical reading, critical thinking, and research methodology skills. Prerequisite: ENGL-150, or equivalent.

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.

Advanced instruction in expository and argumentative writing with issues relevant to engineers. [Equivalent to ENGL 190] Designed for probable majors in English or Humanities. Through study of a subject tied to the research interests of the professor, this course emphasizes critical reading, argumentative writing, rhetorical awareness, and research. Serves as the first in a recommended sequence that includes ENGL 294, 394, and 494. Prerequisite: ENGL 150 or equivalent. Offered regularly.

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.

Introduces students to theoretical and methodological approaches to literary texts, including major terms, methods, and concepts. Offered occasionally.

Introduces students to theoretical and methodological approaches to poetry, including major terms, methods, and concepts.

Introduces students to theoretical and methodological approaches to the novel, including major terms, methods, and concepts.

Introduces students to theoretical and methodological approaches to drama, including major terms, methods, and concepts.

Introduces students to theoretical and methodological approaches to the essay, including major terms, methods, and concepts. Offered occasionally.

Introduces students to theoretical and methodological approaches to short fiction, including major terms, methods, and concepts. Offered regularly.

Introduces students to theoretical and methodological approaches to film, including major terms, methods, and concepts. Prerequisite: English 190 or equivalent.

Designed for students who plan to major in English or Humanities. Emphasizes theoretical and methodological approaches to literary texts. Serves as the second in a recommended sequence including ENGL 194, 394, 494. Pre-requisite: ENGL 190 or 194 (or equivalent) and permission of the department.

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.

This course will enable students to write in a way that creates more meaning in their lives, to describe what reading and writing mean to them, and understand personal writing practices. Students will write about 4 essays/narratives (16-35 pages) and a process journal.

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.

An introduction through reading and writing to common poetic forms. Offered regularly.

An introduction through reading and writing to the fundamentals of short story writing, with some attention to the problems of longer narrative forms. Offered regularly.

An introduction through reading and writing to the fundamentals of drama writing. Offered regularly.

An introduction through reading and writing to different aspects and modes of prose nonfiction, e.g., journal writing, the personal essay, and the development of individual style.

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.

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.

Studies novels to show the unity and diversity of the form from the beginning to the present. Offered regularly.
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 - Poetry (3)
Studies poetry to show the unity and diversity of the form from the
beginning to the present. Offered occasionally.

ENGL 315 - 20th Century British Poetry (3)
Examines 20th century British poetry in terms of modernist theories of
poetry, major historical and cultural events, and advances in
science/knowledge. Offered occasionally.

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

ENGL 319 - Non-Fiction (3)
Studies non-fiction, and the relations between reading and writing. Offered
occasionally.

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 - British Literary Tradition : Special Topics (3)
Special Topics in British Literary Traditions: content varies.

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 - American Literary Traditions I: Beginnings to
Examines representative works in American literature from the beginnings to
1865 in light of major historical and cultural developments. Strongly
recommended for majors. Fall semester.

ENGL 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 331 - African American Literary Traditions II: After 1
Examines African American literature of the 20th and 21st centuries
including works of literature, essays, poems and short stories. Offered
regularly.

ENGL 332 - African American Literary Tradition: Special T
Special topics in African American literary traditions: content varies.

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

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 336 - Literature of the Natural World (3)
Studies modern and contemporary literary texts as social, aesthetic, and
humanistic foundations for environmental and ecological perspectives.
Offered occasionally.

ENGL 337 - 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 338 - American Literary Traditions: Special Topics (3)
Special topics in American literary traditions: content varies.

ENGL 339 - Eastern European Literature (3)
Studies literary reactions to and treatments of some of the most sweeping
changes in Europe. Offered frequently.

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 344 - The Oxford Christians: Tolkien, Lewis and Will
Introduces students to the works of Tolkien, Lewis, and Williams,
examining their popularity, and their place in history. Offered occasionally.

ENGL 345 - Writing Sex in the Middle Ages (3)
Examines medieval texts in various genres that represent sexuality and
gender. Offered frequently.

ENGL 347 - World Literary Traditions IV (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 - Contemporary Irish Writing (3)
Examines the genres and themes in contemporary Irish literature and
culture, including modernist literary texts, and aspects of Irish culture.
Offered occasionally.

ENGL 353 - The Utopian Tradition in Literature (3)
Examines satric literature from Aristophanes to the contemporary
American novel. Offered occasionally.

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

ENGL 355 - Literature of the Natural World (3)
Studies modern and contemporary literary texts as social, aesthetic, and
humanistic foundations for environmental and ecological perspectives.
Offered occasionally.

ENGL 356 - Literature of Ridicule and Satire (3)
Examines detective and international spy literature. Offered occasionally.

ENGL 357 - Science Fiction (3)
A survey of futuristic fantasies that emphasize science and technology.
ENGL 370 - 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 371 - The Classics and Literature (3)
Examines classical epics, tragedies, comedies, lyrics and myths and their adaptations in English literature from the sixteenth to the nineteenth centuries. Offered occasionally.

ENGL 372 - Fantasy and Literature (3)
Examines literature about imaginary beings and worlds, including chivalric romance, fairy tales, and ghost stories. Offered occasionally.

ENGL 373 - African Diaspora Writing (3)

ENGL 373 - Introduction to Medical Humanities, Literature
Examines narratives of illness experience to understand illness and health as historically and culturally constructed; students interpret representations of suffering, confusion, despair, hopelessness, and hope that people experience when confronted with illness. Pre-requisite: a 200-level English course or English Departmental permission.

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

ENGL 377 - Film and Literature (0-3)
Examines works of literature and film. Offered regularly.

ENGL 377 - Film and Literature (3)
Examines works of literature and film. Offered regularly.

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 - 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 380 - History and Literature (3)
Examines works of literature and history. Offered occasionally.

ENGL 381 - Journalism and Literature (3)
Examines works of literature and journalism. 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 385 - Disaster Narratives (3)
This course reflects on the nature and implications of selected disasters by considering their real-life effects, both on innocent victims caught by forces beyond their control and on perpetrators. Prerequisites: PHIL 105 or 205 or equivalent; and ENGL 190.

ENGL 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). The works will be studied with particular emphasis on the importance of place, to tie in with the travel portion of the course.

ENGL 391 - Introduction to Linguistics (3)
Examines 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 Spring break). Prerequisites: CSE 101, or permission of instructor. Offered regularly.

ENGL 400 - Business and Professional Writing (3)
Examines business and professional writing from a rhetorical perspective. Involves case studies based on research in actual professional settings, with special attention to strategic planning and rigorous revision and editing. Offered every semester.

ENGL 401 - Advanced Expository Writing (3)
Examines the rhetorical strategies and writing techniques particularly useful in technical and report writing. Offered regularly.

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 work is 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 History (0-3)
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
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 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 429 - Special Topics in 16th and 17th Century Literature (3)
Courses that focus on selected topics and areas in the period.

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 (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 440 - Special Topics in Restoration & 18th Century Literature (3)
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 styles of the late century.

ENGL 441 - 18th Century Literature (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 442 - Jane Austen and Her Predecessors (3)
Examines women writers and literary traditions in the 18th and 19th centuries including Eliza Haywood, Fanny Burney, Jane Austen, Charlotte Brontë and Christina Rossetti. Offered regularly.

ENGL 443 - 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 445 - 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 446 - 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 447 - 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 occasionally.

ENGL 448 - British Postmodernism (3)
Studies contemporary British fiction, drama, and poetry through appropriate readings in postmodern theory. Offered regularly.

ENGL 449 - 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ENGL 465</td>
<td>Contemporary Irish Literature (3)</td>
<td>Analyzes the nexus of aesthetics and politics in contemporary Irish culture, including texts written by playwrights, poets, fiction writers, directors, cultural critics and historians. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 466</td>
<td>Early 20th Century Postcolonial Literature and</td>
<td>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.</td>
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<td>CUL</td>
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<tr>
<td>ENGL 467</td>
<td>Contemporary Postcolonial Literature and CUL</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 468</td>
<td>Major Post-Colonial Writers (3)</td>
<td>Examines major postcolonial writers like Achebe, Rushdie, Desai, Gordimer, Soyinka, and Walcott, including their attitudes to race, politics, language, gender and history. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 469</td>
<td>Special Topics in 20th/21st Century British, Iri</td>
<td>Topics in 20th and 21st Century British, Irish and Postcolonial Literature and culture, content varies.</td>
</tr>
<tr>
<td>ENGL 470</td>
<td>American Literary Tradition to 1865 (3)</td>
<td>Identifies and explores emerging themes and methods in American literature in the Puritan, Enlightenment, and Romantic periods. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 471</td>
<td>Contemporary American Literature (3)</td>
<td>Studies significant figures and trends that have shaped contemporary American literature. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 472</td>
<td>Ethnic American Literature (3)</td>
<td>Explores and analyzes ethnic American literature, including an understanding of the world views and ideologies of different groups. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 473</td>
<td>19th Century American Literature (3)</td>
<td>Studies major American literature of the 19th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 474</td>
<td>20th Century American Literature (3)</td>
<td>Studies the major American literature of the 20th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 475</td>
<td>20th Century American Poetry (3)</td>
<td>Surveys major trends and developments from the Imagists and the 20th century traditionalists to the major modernists (e.g. Pound, Williams), to the beats and confessionals of the later century. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 476</td>
<td>Recent American Poetry (3)</td>
<td>Explores American poetry in its varied forms. Surveys the current state of poetry and maps some possible directions for the future. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 477</td>
<td>American Drama (3)</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 478</td>
<td>American Short Story (3)</td>
<td>Surveys representative examples and major practitioners of the short story form from the 19th and 20th centuries. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 479</td>
<td>Major American Authors (3)</td>
<td>Examines some of the major American writers of the modern period focusing on their influences and their historical and literary contexts. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 480</td>
<td>Post-1900 African American Literature (3)</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 481</td>
<td>Native American Literature (3)</td>
<td>Explores how Native American authors read and write a “different” history, including how storytelling helps create community and a sense of home. Offered regularly.</td>
</tr>
<tr>
<td>ENGL 482</td>
<td>The Adolescent in American Literature (3)</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 483</td>
<td>Tha Machine Age in American Literature (3)</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 484</td>
<td>Special Topics: American Literary and Cultural</td>
<td>Topics in American literary and cultural studies, content varies.</td>
</tr>
<tr>
<td>ENGL 485</td>
<td>Interdisciplinary Studies (3)</td>
<td>Studies pertinent writings from an interdisciplinary focus relating literature to other media and other literature. Offered occasionally.</td>
</tr>
<tr>
<td>ENGL 486</td>
<td>Adv Independent Study (1-3)</td>
<td>May vary from 1 to 3 hours. Prerequisite: Permission of Department Chair.</td>
</tr>
<tr>
<td>ENGL 487</td>
<td>Methods of Literary Resrch (3)</td>
<td>Introduction to resources and methods of research central to the scholarly study of literature.</td>
</tr>
<tr>
<td>ENGL 488</td>
<td>Teaching Writing (3)</td>
<td>Introduction to traditional and contemporary theories of rhetoric and composition, with special attention to their application in classroom practice.</td>
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<tr>
<td>ENGL 489</td>
<td>Teaching Literature (3)</td>
<td>Introduction to the theories and practices of presenting literature in the college classroom.</td>
</tr>
<tr>
<td>ENGL 490</td>
<td>Problems in Rhetoric (3)</td>
<td>Focused examination of a specific historical, theoretical, or practical issues in rhetoric and composition.</td>
</tr>
<tr>
<td>ENGL 491</td>
<td>Literary Criticism: Aristotle (3)</td>
<td>Historical introduction to the significant epochs in the development of literary criticism from ancient to modern times.</td>
</tr>
<tr>
<td>ENGL 492</td>
<td>Literary Theory (3)</td>
<td>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.</td>
</tr>
<tr>
<td>ENGL 493</td>
<td>Perspectives in Medieval Lit (3)</td>
<td>Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.</td>
</tr>
<tr>
<td>ENGL 494</td>
<td>Perspectives in Renaissance Lit (3)</td>
<td>Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.</td>
</tr>
<tr>
<td>ENGL 495</td>
<td>Perspectives in Restoration/Brit (3)</td>
<td>Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.</td>
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</tbody>
</table>
ENGL 515 - Perspectives: 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 - Perspectives: 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 571 - 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 580 - 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 Dscourse Pedagogy (3)
Major rhetorical theories underlying discourse pedagogy, with special attention to the ways in which specific theoretical positions inform curricular practices.

ENGL 625 - Chaucer: Canterbury Tales (3)
A study of Chaucer's writings with special attention to The Canterbury Tales.
ENGL 669 - 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 676 - Twentieth Cent Amer Fiction (3)
Writers and works of prose fiction of the twentieth century America.

ENGL 677 - Twentieth Cent Amer Poetry (3)
Writers and developments in American poetry of the twentieth century.

ENGL 678 - Twentieth Century 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 685 - Studies in Comparative Lit (3)
Writers, works, genres, and issues from a comparative focus that situates literature of the English language in the context of developments in world literature.

English As A Second Language (ESL)

ESL 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.

ESL 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.

ESL 210 - Interim. 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.

ESL 225 - Lit Frch-Spkr Africa & Cribean (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.

ESL 293 - Special Topics (1-3)
Fall and Spring semesters.

ESL 298 - Independent Study (0-3)
Fall and Spring semesters.

ENGL 640 - 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 student. Specific material covered depends on the needs of the student.

ENGL 641 - 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.

ENGL 642 - Intro to Lit for Foreign Stdnt (3)
Introduction to literary techniques: short story, essay, poetry, novel forms; cross-cultural interpretation of values and lifestyles.

ENGL 643 - Comp, Res Writing for For Stdn (3)
Study of U.S. research skills: assessing research topics, incorporating and organizing material, using required citation formats and recognizing different types of papers. Students proceed from shorter essays to a longer research paper. Regular individual conferences.

ENGL 644 - 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.

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 - Interim. 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-Spkr Africa & Cribean (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 Frch-Spkr 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.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREN 432</td>
<td>French Short Story (3)</td>
<td></td>
<td>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 Clezio.</td>
</tr>
<tr>
<td>FREN 433</td>
<td>French Prose: Rebels to 17th C (3)</td>
<td></td>
<td>Humanism, preciosity, classicism, Rabelais, Marguerite de Navarre, Montaigne, Descartes, Pascal, LaFontaine, and LaFayette. Taught in French.</td>
</tr>
<tr>
<td>FREN 434</td>
<td>18th-Century French Prose (3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>FREN 435</td>
<td>Studies in 19th-Century Novel (3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>FREN 436</td>
<td>Paris in the 19th-Century Lit (3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>FREN 441</td>
<td>French Poetry: Orgn to 18th Cen (3)</td>
<td></td>
<td>Marie de France, Fabliaux, Christine de Pizan, DuBellay, Ronsard, Malherbe, LaFontaine, and Molière. Taught in French.</td>
</tr>
<tr>
<td>FREN 442</td>
<td>French Poetry: Romantic to Baud (3)</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>FREN 451</td>
<td>Early Modern French Theatre: Comedy, Tragedy (3)</td>
<td></td>
<td>Students in this course will explore the nature of tragedy and comedy and will acquire a critical awareness of the representation of dramatic personages through the study of French theatre from the Middle Ages through the seventeenth century.</td>
</tr>
<tr>
<td>FREN 452</td>
<td>French Drama: 18th to Romantic (3)</td>
<td></td>
<td>A course on theater and theatricality for Neo-Classicism to the Romantic, 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 Drame: 20th-Century (3)</td>
<td></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></td>
<td>A history of French Cinema by movements and authors. MClis, 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></td>
<td>Examines 20th century Québécois 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></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 Csaire, Senghor, BE, Schweitz-Bart.</td>
</tr>
<tr>
<td>FREN 465</td>
<td>French Cinema II 80's-90's (3)</td>
<td></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 467</td>
<td>Postcolonialism and Violence, Issues of Repre (3)</td>
<td></td>
<td>After examining socio-political conditions that produced violence in individual francophone cultures and countries, we will analyze in which texts (novels, plays, life narratives and testimonies) and films arouse horror, discomfort, denial or connection in readers and spectators.</td>
</tr>
</tbody>
</table>

Prerequisite courses: FREN 410 and FREN 415 or their equivalents. |

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<tr>
<td>FREN 471</td>
<td>Women/Writing Early Mod France (3)</td>
<td></td>
<td>An examination of the role of women in early modern French literature through a study of French literary works by and about women from the 15th through the 17th century. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Labé, Racine, and Molière. Taught in French.</td>
</tr>
<tr>
<td>FREN 485</td>
<td>Seminar on Molière (3)</td>
<td></td>
<td>In this course students study several of Molière's plays, focusing on his great comedies of character in which he ridiculed vice or intemperance through his caricature of the personage who is its incarnation. Students analyze Molière's comic theatre as a form of ethical inquiry that entertains and instructs its audience.</td>
</tr>
<tr>
<td>FREN 496</td>
<td>Inter-Semester Study Abroad (0-3)</td>
<td></td>
<td>For elective credit and language majors. Summer semester.</td>
</tr>
<tr>
<td>FREN 500</td>
<td>Teaching College French (0)</td>
<td></td>
<td>Practice-centered teaching training for college-level French courses. Discussion and application of course development, 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></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></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 Ctr (3)</td>
<td></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></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>
</tbody>
</table>
FREN 510 - Crit Writ, Ori Exprsn, & Rsrch (3)
Taking as a point of departure a specific theme in French literature or culture, this course aims at expanding expository and critical expression in French. Students will strengthen their ability to analyze texts and will develop strategies for carrying out research in French and Francophone studies. Offered every Fall semester.

FREN 531 - Love & Honor in Early Mod Fran (3)
This course will explore the evolution of the concept of honor, as well as the depiction and expression of romantic love, in French literature throughout the Early Modern period. We will analyze literary representation of the heroic figure, particularly as he or she relates to identity and nation building, and we will examine the voice of the lover and the depiction of the beloved, considering the relationship in terms of gender and power.

FREN 533 - French Prose: Origins - 17th C (3)
This course attempts to define the "moralist" and analyze the work of representative writers from the Renaissance through the 17th century in light of this definition. An introductory overview of thought and attitudes marking the Middle Ages is followed by the study of texts by Montaigne, Pascal, La Rochefoucauld, La Bruyere and Madame de Lafayette. Offered occasionally.

FREN 534 - Age of Enlightenment (3)
A study of the 18th-century French "philosophes" and their notion of society and the ideal citizen, followed by a look at the darker side of the Enlightenment, and in particular the "anti-societies" envisioned by Sade. Included is an examination of the role of Enlightenment ideology in the French Revolution. Offered occasionally.

FREN 535 - 19th Century French Novel (3)
This course examines the emergence of the novel as a genre in France. Both literary technique as well as the socio-cultural factors present at the time of the work's creation will be considered. To be studied are selected works by Chateaubriand, Hugo, Balzac, Sand, Stendhal, Flaubert, Zola. Offered occasionally.

FREN 539 - 20th Century French Prose (3)
An examination of the new directions taken by French fiction in light of the development of the notions of modernism and post-modernism. Representative texts ranging from the narrative innovations of Proust through the Existential writing of Camus and Sartre, to the rise of the "New novel" of Duras and Robbe-Grillet, to recent contributions by Perec and Toussaint. Offered occasionally.

FREN 541 - Eary Modern French Poetry (3)
Eustache Deschamps described poetry as "natural music." This course will explore the ways in which the "music" of poetry intensifies its meaning. We will trace the evolution of French poetry from its medieval origins through the seventeenth century. We will explore poetic techniques, devices, and forms.

FREN 542 - 19th Century French Poetry (3)
A study of poetic expression in France during the "Romantic" period and its aftermath. Representative works are examined from the point of view of theme and poetic technique, but also from the perspective of the greater artistic and historical context of the time. Examples from Lamartine, Hugo, Baudelaire, Gautier, and Maeterlinck. Offered occasionally.

FREN 551 - 17th Century French Theatre (3)
Following an introductory overview of Medieval and Renaissance theater, this course focuses on the 17th century and its three "greats" of French drama: Corneille, Racine, Moliere. Play analysis and discussion will take into consideration literary trends of the period (preciosite, realism, and classicism), as well as modern literary criticism. Offered occasionally.

FREN 554 - 20th Century French Theatre (3)
A study of the major trends in 20th-century French theater, from the influence of the Surrealist movement and Existentialist to the Theater of the Absurd of the Post-War period and its Kafkaian undertones. Offered occasionally.

FREN 560 - Contem Wmn Writers: Fran/Quebec (3)
This course focuses on the contributions of women writers to 20th-century Francophone fiction in two countries where feminism has made a mark on intellectual thought: France and Quebec. Selections from the pioneer works of Simone de Beauvoir to the literary experiments of the '80s. Offered occasionally.

FREN 561 - French Cinema (3)
A history of French cinema by themes and authors. Examined are the major current directions, including the influence of Surrealism and the Post-Modern, problems in realism and cinematographic genres, the relation of cinema to French politics. Films are shown and discussed. Offered occasionally.

FREN 563 - Studies in Francophone Lit (3)
An over-view of Francophone literature of Africa and the Caribbean, focusing on imperialism, de-colonization and "negritude" as seen in the works of Cesar, Senghor, Ba, Schwartz-Bart. Offered occasionally.

FREN 566 - Nation, Identity and Culture (3)
This course promotes an understanding of the dynamics at play in contemporary French culture by examining how the State has shaped society from the Revolution of 1789 to now. Through various texts and films, students explore the shifting notions of Nation, Identity and Culture during that period. Offered occasionally.

FREN 567 - Postcolonialism and Violence (3)
After examining socio-political conditions that produced violence in individual francophone cultures and countries, we will analyze ways in which texts (novels, plays, life narratives and testimonies) and films arouse horror, discomfort, denial or connection in readers and spectators.

FREN 571 - Women and Writing in Early Modern France (3)
This course introduces students to the role of women in early modern French literature as symbol/image and as author, through a study of French literary works by and about women. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Lavelle, Racine, and Moliere. Taught in French.

FREN 585 - Seminar on Moliere (3)
This seminar endeavors, through a thorough analysis of Moliere's plays, to recapture the time, the life and the literary theories of one of the world's best playwrights. Video cassettes make it possible to first view the plays, then analyze them in light of Aristotelian and modern criticism. Offered occasionally.

FREN 586 - The World of Baudelaire (3)
The study of Baudelaire-poet, art critic, "man of his time"-as a pivotal figure in the transition from "Romanticism" to the "modern" era in France. Offered occasionally.

FREN 587 - Exoticism in French Literature (3)
A cultural critique of French novels from the Eighteenth to the Twentieth Centuries, including works by Montesquieu, Mme de Duras, Chateaubriand, Balzac, Loti, Levi-Strauss. Discussion of the evolution of exoticism as a genre and representations of exotic in "other" cultures. Offered occasionally.

FREN 593 - Special Topics in French (3)
This course examines 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, Baudelaire, Apollinaire) to the actual areas of the city which inspired their work.

Film Studies (FSTD)
FSTD 104 - Approaching the Arts: Art & Film (3)
This course will focus on the relationship between film and modern art. Motion picture making is a distinctly modern art form and shares characteristics found in modern art. Through art and film, we will examine impressionism, symbolism, expressionism, cubism, futurism, dadaism, abstract art, pop art and performance art.
GR 10 - Oral & Written Proficiency I (0-4)
Continuation of GR 310. Further development of oral and written expression leading to the ability to handle with confidence a wide variety of social situations and writing needs.

GR 20 - 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 310 - Oral & Written Proficiency I (0-4)
Continuation of GR 310. Further development of oral and written expression leading to the ability to handle with confidence a wide variety of social situations and writing needs.

GR 320 - German Culture Studies I (3)
A survey of German cultural history from the Middle Ages through Romanticism as reflected in German literature and other cultural artifacts.

GR 325 - German Culture Studies II (0-3)
A survey of German cultural history from Romanticism through the present day as reflected in German literature and other cultural artifacts.

GR 401 - 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 English.

GR 420 - Modern German Prose (3)
Analysis and discussion of modern German prose by such authors as Max Frisch, Heinrich Böll, Gunter Grass, Martin Walser, Christa Wolf among others. Taught in German.

GR 421 - Language and Linguistics (3)
Crosslisted with FREN 411, RUSS 411 and SPAN 411. Introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes. Taught in English.
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<tr>
<td>HIST 112</td>
<td>Origins of the Modern World, 1500 to Present</td>
<td>An historical approach to understanding the development of the modern world from 1500 to the present. The course will examine the cross-cultural impact of European expansion, the Protestant and Catholic Reformations, the Scientific Revolution, absolutism, the Enlightenment, the French and Industrial Revolutions, nineteenth and twentieth century thought the World Wars, totalitarian and liberation movements, and the challenges of the new global age.</td>
</tr>
<tr>
<td>HIST 260</td>
<td>History of the United States to 1865</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>HIST 261</td>
<td>History of the United States Since 1865</td>
<td>This survey course examines the U.S. from Reconstruction through the present. Required for majors.</td>
</tr>
<tr>
<td>HIST 270</td>
<td>China and Japan To 1600</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 and Japan since 1600</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 Odovacar.</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</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</td>
<td>The High and Late Middle Ages from the rise of universities to 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</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</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>
</tbody>
</table>
HIST 311 - The Age of Absolutism (3)
The rise and fall of dynasties; the Scientific Revolution and Age of Reason; beginnings of Industrialization. 1600-1789.

HIST 312 - FRENCH REVOLUTION and NAPOLEON, 1789-1815
The origins and history of the French Revolution; social, economic, intellectual, institutional, and constitutional changes; European War; the Napoleonic empire and its collapse.

HIST 313 - THE AGE of INDUSTRIALISM and DEMOCRACY
The history of Europe from the Congress of Vienna to the First World War.

HIST 314 - TWENTIETH CENTURY EUROPE: ERA of WARS AND REVOLUTION
Background and events of World War I; the inter-war period and the rise of Fascism and Nazism; the origins and events of World War II.

HIST 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 of the pre-Columbian period to the wars for independence.

HIST 318 - Modern Latin America (3)
a survey of 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 early to the Middle Kingdom to the first confrontation with the west.

HIST 321 - China Since 1644 (3)
From Manchu to Mao Tse Tung.

HIST 322 - The Jesuits in Asia (3)
A study of the work of the Jesuit missionaries in India, China, and Japan from the mid-sixteenth through the mid-eighteenth centuries, concentration on the confrontation of different cultures.

HIST 323 - Africa to 1884 (3)
Population movement and interaction; development of institutions and ideas in African civilizations varying types of politics and revolutionary changes; slavery and the Atlantic encounter; impact of Christianity and Islam.

HIST 324 - Africa since 1884 (3)
Political, economic and, social developments in Africa since 1884. Includes European scramble for and partition of Africa; African initiatives and reaction to imposition of colonial rule; the colonial state and independence movements; nationalism and nation building.

HIST 325 - World in Conflict Since 1945 (3)
Crises of the period after 1945 caused by the weakening of European influence in the world; the decline of Europe and the Cold War; terrorism in the West; the various Mid-East crises; the legacy of imperialism in Africa and Asia.

HIST 326 - Modern France since 1815 (3)
History of France from the restoration of the Bourbons to the organization of the European Community, with special emphasis on the development of and the struggle over French national identity.

HIST 328 - Russia to 1905 (3)
Survey of 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 329 - Russia Since 1905 (3)
Causes and effects of the revolutions of 1905 and 1917. Foreign and domestic evolution of the Soviet state from its origins to its demise; the post-Soviet era - Lenin, Stalin, Krushchev, Gorbachev, Yeltsin, and Putin.

HIST 330 - MODERN EUROPEAN DIPLOMATIC HISTORY from 1870
The origins of the European Community, with special emphasis on the development of Europes diplomacy in the century before World War I.

HIST 331 - MODERN EUROPEAN DIPLOMATIC HISTORY, 1914-1945
How the destruction of World War enervated the democracies vis a vis totalitarianism 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 Republic, the civil war, the Franco era and the democratic period from Adolfo Suarez to Jose Maria Aznar.

HIST 334 - The Spanish Civil War (3)
The history of Spain as seen through its most important upheaval in modern times. The war is used as a focal point to concentrate on the various themes, trends and issues of modern Spanish history.

HIST 335 - Plagues and Peoples: Disease and Society in t
This course examines disease in human societies from the plague to western imperialism. Course goals are to analyze contemporary views of disease, healing, and effects of pandemics. Topics include: sickness and culture, global biological exchange, medicine and magic, disease and industrialization, imperialism, and medical science. Prerequisites: HIST 111, HIST 112.

HIST 336 - ENGLISH HISTORY: THE TUDORS 1485-1603 (3)
A political, social, cultural and religious survey of the period.

HIST 337 - ENGLISH HISTORY: THE STUARTS, 1603-1714 (3)
A political, social, cultural, and religious survey of the period.

HIST 338 - ENGLISH HISTORY: THE VICTORIAN AGE, 1837-1901
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)
A survey 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 341 - Italy: 1860-Present (3)
A survey from the pre-Columbian period to the wars for independence.

HIST 344 - Imperialism & Nationalism (3)
A political, social, cultural and religious survey of the period.

HIST 345 - MODERN EUROPEAN DIPLOMATIC HISTORY from 1870
The origins of the European Community, with special emphasis on the development of Europes diplomacy in the century before World War I.

HIST 346 - MODERN EUROPEAN DIPLOMATIC HISTORY, 1914-1945
How the destruction of World War enervated the democracies vis a vis totalitarianism and Communism; World War II and its aftermath.

HIST 347 - 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 Republic, the civil war, the Franco era and the democratic period from Adolfo Suarez to Jose Maria Aznar.

HIST 348 - 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 349 - Plagues and Peoples: Disease and Society in t
This course examines disease in human societies from the plague to western imperialism. Course goals are to analyze contemporary views of disease, healing, and effects of pandemics. Topics include: sickness and culture, global biological exchange, medicine and magic, disease and industrialization, imperialism, and medical science. Prerequisites: HIST 111, HIST 112.

HIST 350 - ENGLISH HISTORY: THE TUDORS 1485-1603 (3)
A political, social, cultural and religious survey of the period.

HIST 351 - ENGLISH HISTORY: THE STUARTS, 1603-1714 (3)
A political, social, cultural, and religious survey of the period.

HIST 352 - ENGLISH HISTORY: THE VICTORIAN AGE, 1837-1901
A political, social, cultural, and religious survey of the period.

HIST 353 - History of English Law (3)
Introduction to fundamentals of English law-terminology, concepts, and historical development.

HIST 354 - Italy: 900-1860 (3)
A survey 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 355 - Italy: 1860-Present (3)
A survey from the pre-Columbian period to the wars for independence.

HIST 356 - Imperialism & Nationalism (3)
A political, social, cultural and religious survey of the period.

HIST 357 - MODERN EUROPEAN DIPLOMATIC HISTORY from 1870
The origins of the European Community, with special emphasis on the development of Europes diplomacy in the century before World War I.

HIST 358 - MODERN EUROPEAN DIPLOMATIC HISTORY, 1914-1945
How the destruction of World War enervated the democracies vis a vis totalitarianism and Communism; World War II and its aftermath.

HIST 359 - 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 Republic, the civil war, the Franco era and the democratic period from Adolfo Suarez to Jose Maria Aznar.

HIST 360 - 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 361 - Plagues and Peoples: Disease and Society in t
This course examines disease in human societies from the plague to western imperialism. Course goals are to analyze contemporary views of disease, healing, and effects of pandemics. Topics include: sickness and culture, global biological exchange, medicine and magic, disease and industrialization, imperialism, and medical science. Prerequisites: HIST 111, HIST 112.
HIST 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-
Causes of the war; personalities; factors in the Northern victory; the war on the home front; reconstruction; experience of the freedmen.

HIST 349 - The Gilded Age (3)
The rise of industrialism in the United States and the response of various institutions.

HIST 350 - PROGRESSIVE ERA to the JAZZ AGE, 1890-192
A survey of political, social, economic and cultural developments as American society transformed from a rural-agrarian society to an urban-industrial power and form isolationism to a major force in world affairs.

HIST 351 - PROSPERITY, DEPRESSION, AND WAR 1920-1
The 1920's, the New Deal and World War II.

HIST 352 - Contemporary America, 1945 - Present (3)
The Cold War, civil rights, Vietnam, Watergate, the technological revolution and modern society.

HIST 353 - U.S. Diplomatic Hist to 1900 (3)
An examination of the principles and foundations of American foreign policy to the time of the Spanish-American War.

HIST 354 - U.S. DIPLOMATIC HISTORY from 1900 to 1945 (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 375 - Women in Modern Europe (3)
This course surveys the history of European women from the Enlightenment to the present. In addition to restoring women's voices to history, we will examine well-known historical events from the perspective of women's history and examine the historical roots of issues and debates still informing the lives of European women.

HIST 380 - Autobiography and History (3)
The autobiographical genre from St. Augustine's confessions to contemporary autobiography as literature and its relation to history.

HIST 381 - Islamic Civilization (3)
Survey of political, intellectual and cultural currents in the Islamic World, past and present, including aspects of Islam as religion; science, medicine and technology in Islamic societies; art and architecture; philosophy and theology; interaction between Islamdom and Christendom; Islamic history in the Middle East, South Asia, Southeast Asia, and Central Asia as well as Africa; European Colonialism; globalization of Islam and contemporary Islam.

HIST 382 - Islamic Middle East (3)
This is a survey course of the history of the Middle East from the rise of Islam to 16th century. We will examine the rise of Islam, the early Islamic empire/caliphate and aftermath including the process of political fragmentation and cultural continuity in Muslim societies from Spain to North India. We will focus on political, intellectual and religious currents through an examination of primary texts.

HIST 383 - Modern Middle East (3)
The subject of this course is the history of the modern Middle East from the 17th century up to the present. The course will address political, social, and cultural history within the framework of an Islamic civilization and examine modern concerns such as nationalism, colonialism, statehood and impart of outside powers, and the response of the people of the Middle East to this challenge.

HIST 393 - Special Topics (3)
Various topical courses offered from time to time.

HIST 393 - Special Topics (0-3)
Various topical courses offered from time to time.

HIST 490 - Seminar: European History (3)
A limited enrollment seminar exploring a specific topic in European history. Discussion format based on close reading of primary sources.

HIST 491 - Sem: American History (3)
A limited enrollment seminar exploring a specific topic in American history. Discussion format based on close reading of primary sources.

HIST 492 - SEMINAR: NON WESTERN HISTORY (3)
A limited enrollment seminar exploring a specific topic in Non-Western history. Discussion format based on close reading of primary sources.

HIST 493 - Special Topics in History (3)
Various topical courses offered from time to time.

HIST 493 - Special Topics in History (3-4)
Various topical courses offered from time to time.

HIST 494 - Honors Thesis (3)
Writing an Honors Thesis (10,000 word minimum), based on a research paper for a previous 300-400 level history course. Must be recommended by the instructor for the previous course who will supervise the thesis with a second reader. Departmental honors for an A grade. Prerequisite-GPA of 3.5 in history, 3.25 overall.

HIST 495 - Senior Residency (0)
This course is required of senior History majors to indicate graduation.

HIST 496 - Internship/History in Practice (1-6)
A practical application of history through an internship with an archive, library, museum, historical site or project.

HIST 500 - Thry/Prac of Hist: An Intro (3)
This course will examine some of the most influential theories of today's intellectual marketplace which affect the study of history. From historical materialism, through structuralism, semiotics, poststructuralism, postmodernism, and critical theory, to gender and narrative history, we will discuss their intellectual essence as well as their usefulness in terms of the insights they offer to the historian. Apart from reviewing various theoretical approaches, we will also discuss their applications by closely examining selected cases of scholarship on American history which employ them as tools of interpretation and as forms of writing about the past.

HIST 520 - Ancient & Byzantine History (3)
A general examination of the historiography and literature in late ancient and Byzantine history.

HIST 521 - Adv Ancnt & Byzntn Hist (3)
An examination of the historiography and literature in specialized topics in late ancient and Byzantine history.

HIST 525 - Perspectives-Anct & Byzntn His (3)
Lectures and readings on historical events and wider trends in late ancient or Byzantine history.

HIST 530 - Studies Medieval History (3)
An examination of the most important topics in medieval history including historiographic background, literature, and current trends. This course will acquaint the student with the work and thought of the leading scholars in medieval studies as well as differing perspectives.

HIST 531 - Adv Std: Medieval History (3)
An examination of the historiography, literature, and current trends in specialized topics in Medieval history.

HIST 535 - Perspectives Medieval Hist (3)
Lectures and readings on historical events and forces affecting specific periods in Medieval history.

HIST 540 - Stdys Renaissnc & Refrmtn Hist (3)
Study and discussion of secondary literature in Renaissance and Reformation (early Modern European) history.

HIST 541 - Adv Stdys: Renssnc & Refrmtn (3)
Examination of the historiography, literature, and current trends in specialized topics in Renaissance/Reformation History.

HIST 545 - Prsptvs Rnsnc & Rfrmntn Hist (3)
Lectures and readings on events and forces affecting specific periods in Renaissance/Reformation history.

HIST 550 - Stdys Modrn European Hist (3)
An introduction to Modern European history from 1600 to the present. Course offers students the opportunity to become acquainted with historiography, methods, and current debate in the specialty.

HIST 551 - Adv Studies Modrn European His (3)
Examination of the historiography, literature, and current trends in specialized topics in Modern European History.

HIST 555 - Prsptvs Modern European Hist (3)
Lectures and readings on events and forces affecting specific periods in Modern European history.

HIST 560 - Studies in American History (3)
An introduction to methodology and recent literature, and the study of United States history. Topics will range from colonial through contemporary American history.

HIST 561 - Adv Studies American History (3)
Examination of the historiography, literature, and current trends in specialized topics in United States history.

HIST 565 - Perspectvs in American History (3)
Lectures and readings on events and forces affecting specific periods in United States history.
HIST 590 - History Teaching Practicum (3)
Required of all graduate teaching assistants, this course covers teaching methods, lecturing, and other topics necessary to prepare an effective teacher.

HIST 680 - Sem: Ancient/Byzantine Hist (3)
Advanced research on a specific topic in late ancient or Byzantine history. Introduction to source collections, library resources, and other research tools.

HIST 681 - Seminar Medieval History (3)
Advanced research in a specific topic in Medieval history. Introductions to essential source collections, library resources, source criticism, archival methods, paleography.

HIST 682 - Sem Rnssnce & Reformation Hist (3)
Introduction to research in Renaissance and Reformation history, to learn paleographic and codicological skills.

HIST 683 - Seminar in Mod European Hist (3)
An opportunity to undertake advanced research, through primary and archival sources and secondary literature, in a specific area of Modern European history (1600 to the present).

HIST 684 - Seminar in American History (3)
An introduction to advanced research in American history. Readings in secondary literature. Students will undertake research, using also primary and archival sources. Thematic and chronological topics.

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 broad 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 109 - Honors World Geography (3)
This course provides students with a worldwide overview of the relationships between people and place. Emphasis is given to the relationships among physical geography, environment, population, economy and culture.

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 other's public speaking performances.

HR 176 - Honors Intro to Interprofessional Education (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. Interactive learning experiences provide the opportunity to develop knowledge and understanding of each profession's 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.

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 be drawn from a 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 play's history, critical evaluation, and study the play's reception. You'll learn to analyze scripts, develop your own critical observations and apply your scholarship to an independent research project. Spring semester.

HR 289 - HR Intro of African Amer Stud. (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 Stud. (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 551 - Remote Sensing of the Environment and Resour
Fundamental knowledge on the physics of remote sensing, photogrammetry, multispectral, hyperspectral, thermal imaging and RADAR and LiDAR principles are reviewed in lectures while lab assignments cover image processing, environmental modeling and analysis. Course objective is to demonstrate present applications of remote sensing with software training in ENVI+IDL, SARscape, and provide students with the skills and knowledge to apply remote sensing to their own research problems.

IAS 552 - Digital Image Processing (0-2)
Course familiarizes students with state of the art digital image processing techniques and practice remote sensing applications in various fields. Course objective is to introduce students to the principles of remote sensing and recent advances in the discipline.

IAS 553 - GIS and Geospatial Methods for Integrated and
The course introduces basic concepts, theories, and techniques in geographic information system (GIS) and global positioning system (GPS). Geospatial methods and principles of spatial analysis, data base design and data mining with integration of GIS, remote sensing and GPS, and various applications of the techniques are also discussed

IAS 554 - Practices and Applications of GIS and Geospatial
Through Hands-on projects, lectures and computer lab work, this class practices GIS and geospatial technology with real-world applications. Students are trained with spatial analysis, database design, management and data mining using integrated GIS, RS and GPS applications in risk assessment and mitigation, environmental modeling, air pollution, etc.

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.

International Studies (ISTD)
ISTD 110 - Intro to International Studies (1)
This is an introduction to the literature and themes of International Studies. It emphasizes intercultural awareness, cultural interaction, and problem solving in an international context. Offered every semester.

ISTD 290 - Intercultural Sem & Practicum (1-3)
This course develops and studies, intercultural awareness, cultural interaction, and problem solving in an international context. International Studies is the interdisciplinary analysis of global processes that shape international trends and lives of human beings throughout the world. This course gives students a chance to further develop awareness of the methods and topics of International Studies through a broad, humanistic socio-political approach that will serve as a foundation for further international studies in numerous fields offered at Saint Louis University. Seminar-style instruction and discussion will be paired with a practicum element taking advantage of the course¿s unique format and structure.

ISTD 491 - Intern in International Stdyes (0-3)
This course places emphasis on the integration of academic studies with professional practice oriented toward specific career goals. Students are responsible for setting up the internship under the direction of the advisor. Offered every semester.

ISTD 491 - Intern in International Stdyes (3-6)
This course places emphasis on the integration of academic studies with professional practice oriented toward specific career goals. Students are responsible for setting up the internship under the direction of the advisor. Offered every semester.

Italian (ITAL)
ITAL 110 - Communicating in Italian I (0-3)
Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 115 - Communicating in Italian II (0-3)
Expansion of oral and written communication skills in areas of daily life and personal interest.

ITAL 120 - Italian for Speakers of Other Romance Language
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 Ita 110 Plus Ita 115. Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 210 - Intern Italian: Lang & Culture (0-3)
Continued practice in all skills, enabling students. Reading in and discussion of Italian culture.

ITAL 298 - Independent Study (0-3)
Prior approval required of sponsoring professor of department chair.
ITAL 310 - Written Comm. in Italian I (0-3)
Reading and analysis of authentic language materials to develop written expression. Refining of communicative strategies for accurate expression of ideas.

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

ITAL 325 - Love, Sex and Tragedy in the Middle Ages (0-3)
The study of the presence, nature and evolution of themes in the Fourteenth and Fifteenth centuries. No prerequisites. Course will be taught in Italian.

ITAL 330 - Italian Women's Studies (3)
An introduction to the work of Italian women writers, thinkers, filmmakers, and artists through the lens of gender and feminist theory. Emphasis on the study of women's changing roles and experiences in Italian history, and of class, ethnic, and racial differences within Italian women.

ITAL 340 - Dante's Divine Comedy (0-3)
Analysis of one of the most celebrated and controversial works of Western literature. Particular emphasis on the formal aspects of Dante's poem, on the historical, philosophical and theological background, and how it still relates to our own world. No prerequisites. Course taught in English.

ITAL 398 - Independent Study (0-3)
Prior approval required of sponsoring professor and/or department chair.

ITAL 410 - Written Comm. in Italian II (0-3)
Description and exposition of topics of particular interest and special fields competence, correct form and clarity of message will be emphasized.

ITAL 415 - Oral Comm. in Italian II (0-3)
Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

ITAL 420 - Dante's Divine Comedy (3)
Analysis of one of the most celebrated and controversial works of Western literature. Particular emphasis on the formal aspects of Dante's poem, on the historical, philosophical and theological background, and how it still relates to our own world. No prerequisites. Course taught in English.

ITAL 425 - Middle Ages to Renaissance (0-3)
The goal of the course is to have the students have a general idea of the major trends in the central centuries of Italian literature and culture. Taught in Italian. Prerequisite: ITAL-315 or equivalent.

ITAL 430 - An Assembly Manual for the Perfect Prince (0-3)
This is a course about perfect government, as it was imagined by the Italian writers from the 13th to the 18th Centuries. Taught in Italian. Prerequisites: ITAL 315 or equivalent.

ITAL 435 - Themes in Italian Literature of the Nineteenth C
The goal of the course is to explore and analyze major trends in Italian literature and culture of the 19th century. Taught in Italian. Prerequisites: ITAL 315, or equivalent.

ITAL 440 - History of Italian Literature from the Middle Age
This is a course about Italian literature of central Centuries of Italian Literature. The goal of the course is to have the students have a general idea of the major trends in Italian literature and culture of the time. Taught in Italian. Prerequisites: ITAL 310 and ITAL 315, or equivalent.

ITAL 490 - Italian Studies Capstone (0)
In order to synthesize the Italian Studies Certificate Program, students do a research paper. Subject and length to be specified by the department.

ITAL 498 - Advanced Independent Study (0-3)
Prior approval required of sponsoring professor and department chairperson.

Latin (LATN)

LATN 110 - Reading Latin I (3)
Pronunciation, vocabulary, morphology, syntax, and practice in reading. Material includes the first through the fourth declensions; the indicative forms of sum and of the regular verbs; some demonstrative, interrogative, personal, reflexive, possessive, relative, and intensive pronouns.

LATN 115 - Reading Latin II (3)
Review of first semester material. Vocabulary, morphology, syntax, and practice in reading. New material includes the regular verb, some irregular verbs, the fifth declension, the comparison of adjectives, the formation and comparison of adverbs, numerals, constructions of time and place, subordinate clauses, and uses of the subjunctive.

LATN 210 - Intern Latin: Language & Lit (3)
Review of material learned during the first two semesters and coverage of remaining grammar; further vocabulary-extensions; extensive practice in reading continuous Latin prose.

LATN 410 - Intro to Post-Classical Latin (3)
A general review of grammer and varied selections of post-classical Latin prose.

LATN 411 - Medieval Latin Readings I (3)
Readings of selections of medieval prose and poetry from Late Antiquity to about the time of Charlemagne. Usually offered in the Spring. In sequence with LATN 412 and LATN 413.

LATN 412 - Medieval Latin Readings II (3)
Readings of selections of medieval prose and poetry from the time of Charlemagne to the Ottonian Renaissance. Usually offered in the spring. In sequence with LATN 411 and LATN 413.

LATN 413 - Medieval Latin Readings III (3)
Readings of selections of medieval prose and poetry from about 1100-1300 A.D. Usually offered in the spring. In sequence with LATN 411 and LATN 412.

LATN 465 - Latin Literature I (3)
History of Latin literature from its beginning to the end of the Golden Age.

LATN 466 - Latin Literature II (3)
History of Latin literature of the Early Empire.

LATN 495 - Senior Residency (0)
Latin majors must enroll in LATN 495 during their final semester of study.

LATN 498 - Advanced Independent Study (0-6)
Prior permission of sponsoring professor and chairperson required.

LATN 499 - Honors Tutorial in Latin (1-3)
Reserved for Honors Students.

Linguistics (LING)

LING 411 - Language & Linguistics (3)
An introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes.

Mathematics (MATH)

MATH 112 - Introduction to Elementary Algebra I (2)
MATH 112 and MATH 113 together cover the same material as MATH 114, but in two semesters. Credit not given for both MATH 112 and MATH 114. Fall semester.

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)
Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH 132 or MATH 141. Fall, spring and summer. Prerequisite: 2 years of high school algebra or a grade of C- or better in MATH 095 or MATH 096.

MATH 122 - Finite Mathematics (3)
Linear equations and straight lines, matrices, sets and counting, probability and statistics, the mathematics of finance, and logic. Fall and Spring semesters. Pre-requisite: Two years of high school mathematics or grade of "C-" or better in MATH 096.

MATH 124 - Mathematics and the Art of M.C. Escher (3)
Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH 132 or MATH 141. Fall, spring and summer. Prerequisite: 2 years of high school algebra or a grade of C- or better in MATH 095 or MATH 096.

MATH 125 - Math Thinking in Real World (3)
A SLU freshman seminar. In this course, aimed at students in the humanities and social sciences, we study some of the greatest ideas of mathematics that are often hidden from view in lower division courses. Topics selected from number theory, the infinite, geometry, topology, chaos and fractals, and probability. Taught in a computer classroom. Fall and Spring semesters. Pre-requisite: Three years of high school mathematics or a grade of "C-" or better in MATH 126. (An understanding beyond MATH 114 is needed.)

MATH 126 - Statistics Including Sports and Politics (3)
A SLU freshman seminar. Producing data through the use of samples and experiments; organizing data through graphs and numbers that describe the distribution of data; one variable or the relationship between two variables; probability; statistical inference including confidence intervals and tests of significance. Pre-requisite: 3.5 years of high school mathematics or a grade of "C-" or better in MATH 120.

MATH 130 - Elementary Statistics with Computers (3)
Data production and analysis; probability basics, distributions; sampling, estimation with confidence intervals, hypothesis testing, t-test; correlation and regression; crosstabulations and chi-square. Students learn to use a statistical package such as SPSS. Prerequisite: MATH-120 or equivalent.

MATH 132 - Survey of Calculus (3)
Introductory differential and integral calculus, optimization and rate problems, calculus of rational, exponential and logarithmic functions, partial derivatives and applications. Fall, Spring and Summer. Pre-requisite: 3.5 years of high school mathematics or a grade of "C-" or better in MATH 120.

MATH 135 - Discrete Mathematics (3)
Concepts of discrete mathematics used in computer science: sets, sequences, strings, symbolic logic, proofs, mathematical induction, sums and products, number systems, algorithms, complexity, graph theory, finite state machines. Pre-requisite: A grade of "C-" or better in MATH 120 or equivalent.

MATH 141 - Pre-Calculus (3)
Trigonometric functions, graphing, identities, solving triangles, inverse trigonometric functions, polar coordinates, complex numbers, and analytic geometry. Fall and Spring semesters. Pre-requisite: 3.5 years of high school mathematics or a grade of "C-" or better in MATH 120.

MATH 142 - Calculus I (0-4)
Functions; continuity; limits; the derivative; differentiation from graphical, numerical and analytical viewpoints; optimization and modeling; rates and related rates; the definite integral; antiderivatives from graphical, numerical and analytical viewpoints. Fall, spring and summer. Prerequisite: 4 years of high school mathematics or a grade of C- or better in MATH 141.

MATH 143 - Calculus II (4)
Symbolic and numerical techniques of integration, indeterminate forms, infinite series, power series, Taylor series, differential equations; polars, coordinates, applications. Pre-requisite: A grade of "C-" or better in MATH 142.

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. Pre-requisite: A grade of "C-" or better in MATH 120 or MATH 142.

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 cryptography systems. Topics include permutation based codes, block cipher schemes and public key encryption. Prerequisites: 4 years of high school mathematics.

MATH 181 - Informal Geometry (3)
An informal introduction to geometry for Education majors. Does not satisfy the Arts and Sciences requirement in mathematics. Offered occasionally. Pre-requisite: A grade of "C-" or better in MATH 120.

MATH 199 - Honors Course in Mathematics (1-3)
Offered occasionally.

MATH 215 - Computational Linear Algebra (3)
Vectors, matrices and matrix operations, determinants, systems of linear equations, Gaussian elimination, direct factorization, finite-precision arithmetic and round-off, condition number, iterative methods, vector and matrix norms, eigenvalues and eigenvectors, CAS package.

MATH 244 - Calculus III (4)
Three-dimensional analytic geometry, vector-valued functions, partial differentiation, multiple integration, and line integrals. Fall and Spring semesters. Pre-requisite: A grade of "C-" or better in MATH 143.

MATH 266 - Principles of Mathematics (3)
Introduction to the basic techniques of writing proofs and to fundamental ideas used throughout mathematics. Topics covered include formal logic, proof by contradiction, set theory, mathematical induction and recursion, relations and congruence, functions. Fall and Spring semesters. Pre-requisite: A grade of "C-" or better in MATH 142.

MATH 269 - Mathematical Problem Solving (1)
Intended primarily to train students for the William Lowell Putnam Mathematical Competition, this course covers a mélange of ingenious techniques for solving mathematics problems cutting across the entire undergraduate spectrum, including precalculus, calculus, combinatorics, probability, inequalities. Coverage tailored to students' interests. May be repeated for credit. Fall semester. Prerequisite: None.

MATH 298 - Independent Study (0-3)
Prior approval of sponsoring professor and chair required.

MATH 310 - Introductory Linear Algebra (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. Pre-requisite: A grade of "C-" or better in MATH 143 and a knowledge of vectors.

MATH 311 - Linear Algebra for Engineers (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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 320</td>
<td>Numerical Analysis (3)</td>
<td>Review of calculus; root finding, nonlinear systems, interpolation and approximation; numerical differentiation and integration. Pre-requisite: MATH 143.</td>
</tr>
<tr>
<td>MATH 355</td>
<td>Differential Equations I (3)</td>
<td>Solution of ordinary differential equations, higher order linear equations, constant coefficient equations, systems of first order equations, linear systems, equilibrium of nonlinear systems, Laplace transformations. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 360</td>
<td>Combinatorics (3)</td>
<td>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.</td>
</tr>
<tr>
<td>MATH 370</td>
<td>Advanced Mathematics for Engineers (3)</td>
<td>Vector algebra; matrix algebra; systems of linear equations; eigenvalues and eigenvectors; systems of differential equations; vector differential calculus; divergence, gradient and curl; vector integral calculus; integral theorems; Fourier series with applications to partial differential equations. Fall and Spring semesters. Pre-requisite: MATH 355.</td>
</tr>
<tr>
<td>MATH 371</td>
<td>Vector Analysis (3)</td>
<td>Vector algebra, differential and integral calculus of vector functions, linear vector functions and dyadics, applications to geometry, particle and fluid mechanics, theory of vector fields. Offered occasionally. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 401</td>
<td>Elementary Theory of Probability (3)</td>
<td>Counting theory, axiomatic probability, random variables, expectation, limit theorems. Applications of the theory of probability to a variety of practical problems. Credit not given for both MATH 401 and MATH 403. Fall semester. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 402</td>
<td>Intro Mathematical Statistics (3)</td>
<td>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.</td>
</tr>
<tr>
<td>MATH 403</td>
<td>Probability and Statistics for Engineers (3)</td>
<td>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.</td>
</tr>
<tr>
<td>MATH 405</td>
<td>History of Mathematics (3)</td>
<td>The development of several important branches of mathematics, including numeration and computation, algebra, non-Euclidean geometry, and calculus. Offered occasionally. Pre-requisite: MATH 143.</td>
</tr>
<tr>
<td>MATH 411</td>
<td>Introduction to Abstract Algebra (3)</td>
<td>Elementary properties of the integers, sets and mappings, groups, rings, integral domains, division rings and fields. Fall semester. Pre-requisite: MATH 315.</td>
</tr>
<tr>
<td>MATH 412</td>
<td>Linear Algebra (3)</td>
<td>Advanced linear algebra, including linear transformations and duality, elementary canonical forms, rational and Jordan forms, inner product spaces, unitary operators, normal operators and spectral theory. Spring semester. Pre-requisite: MATH 411.</td>
</tr>
<tr>
<td>MATH 415</td>
<td>Number Theory (3)</td>
<td>Introduction to algebraic number theory. Topics will include primes, Chinese remainder theorem, Diophantine equations, algebraic numbers and quadratic residues. Additional topics will vary from year to year. Offered occasionally. Prerequisite: MATH 411.</td>
</tr>
<tr>
<td>MATH 421</td>
<td>Intro to Analysis (3)</td>
<td>Real number system, functions, sequences, limits, continuity, differentiation, integration and series. Fall semester. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 422</td>
<td>Metric Spaces (3)</td>
<td>Set theory, metric spaces, completeness, compactness, connected sets, category. Spring semester. Pre-requisite: MATH 421.</td>
</tr>
<tr>
<td>MATH 423</td>
<td>Multivariable Analysis (3)</td>
<td>Introduction to analysis in multidimensional Euclidean space. Sequences and Series of functions, Differentiability, Integrability, Inverse and Implicit function theorems, Fundamental Theorems of Multivariable Calculus (Green's Theorem, Stokes Theorem, Divergence Theorem). Spring semester. Prerequisite: MATH 421.</td>
</tr>
<tr>
<td>MATH 425</td>
<td>Theory of Numbers (3)</td>
<td>Fundamental concepts in number theory, with applications to solutions of diophantine equations of the first and second degree. Offered occasionally. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 441</td>
<td>Foundations of Geometry (3)</td>
<td>Historical background of the study of Euclidean geometry; development of two-dimensional Euclidean geometry from a selected set of postulates. Offered occasionally. Pre-requisite: MATH 142.</td>
</tr>
<tr>
<td>MATH 447</td>
<td>Non-Euclidean Geometry (3)</td>
<td>The rise and development of the non-Euclidean geometries with intensive study of plane hyperbolic geometry. Offered occasionally. Pre-requisite: MATH 142.</td>
</tr>
<tr>
<td>MATH 451</td>
<td>Introduction to Complex Variables (3)</td>
<td>Complex number system and its operations, limits and sequences, continuous functions and their properties, derivatives, conformal representation, curvilinear and complex integration, Cauchy integral theorems, power series and singularities. Fall semester. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 452</td>
<td>Complex Variables II (3)</td>
<td>This course is a continuation of MATH 451. Topics covered include series, residues and poles, conformal mapping, integral formulas, analytic continuation, and Riemann surfaces. Spring semester. Pre-requisite: MATH 451.</td>
</tr>
<tr>
<td>MATH 453</td>
<td>Geometric Topology (3)</td>
<td>An introduction to the geometry and topology of surfaces and three dimensional spaces. Topics covered Include Euclidean, spherical and hyperbolic geometry, topology of surfaces, knot theory, and the fundamental group. Prerequisite: MATH 451.</td>
</tr>
<tr>
<td>MATH 455</td>
<td>Nonlinear Dynamics and Chaos (3)</td>
<td>Bifurcation in one-dimensional flows. Two-dimensional flows, fixed points and linearization, conservative systems, index theory, limit cycles. Poincare-Bendixon theorem, bifurcations. Chaos, the Lorenz equation, discrete maps, fractals, and strange attractors. Pre-requisite: MATH 355.</td>
</tr>
<tr>
<td>MATH 457</td>
<td>Partial Differential Equations (3)</td>
<td>Fourier series, Fourier Integrals, the heat equation, Sturm-Liouville problems, the wave equation, the potential equation, problems in several dimensions, Laplace transforms numerical methods. Pre-requisite: MATH 355.</td>
</tr>
<tr>
<td>MATH 463</td>
<td>Graph Theory (3)</td>
<td>Basic definitions and concepts, undirected graphs (trees and graphs with cycles), directed graphs, and operation on graphs, Eulers formula, and surfaces. Offered occasionally. Pre-requisite: MATH 244.</td>
</tr>
<tr>
<td>MATH 465</td>
<td>Cryptography (3)</td>
<td>Classical cryptographic systems, public key cryptography, symmetric block ciphers, implementation issues. Related and supporting mathematical concepts and structures. Pre-requisite: MATH 143</td>
</tr>
<tr>
<td>MATH 498</td>
<td>Advanced Independent Study (0-6)</td>
<td>Prior permission of sponsoring professor and chair required.</td>
</tr>
</tbody>
</table>
**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)**
Calculation of residues, contour integration, multi-valued functions, series solutions of differential equations, Sturm-Liouville theory, special functions, integral transforms, discrete Laplace and Fourier transforms, basic numerical methods, finite difference methods, and their applications to partial differential equations. Offered every Spring semester.

**MATH 510 - Algebra (3)**
Simple properties of groups, groups of transformations, subgroups, homomorphisms and isomorphisms, theorems of Schreier and Jordan-Hoelder, mappings into a group, rings, integral domains, fields, polynomials, direct sums and modules. Offered every Fall semester.

**MATH 512 - Algebra II (3)**
Rings, fields, bases and degrees of extension fields, transcendental elements, normal fields and their structures. Galois theory, finite fields; solutions of equations by radicals, general equations of degree n. Offered every Spring semester.

**MATH 521 - Real Analysis I (3)**
The topology of the reals, 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 Weierstress 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.

**MH 490 - Senior Practicum (3)**
Under supervision of a faculty member, students conduct research on a topic of their own interest. Offered occasionally.

**MATH 619 - Introduction to 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 620 - Topics in Analysis (3)**
Several 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 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 - Representation Theory of Lie Groups (3)**
Representation theory of Lie groups, irreducibility and complete reducibility, Cartan subalgebra and root space decomposition, root system and classification, coadjoint orbits, harmonic analysis on homogeneous spaces. Offered every other year.

**MATH 628 - Topics in Analysis (3)**
Various topics are offered to bring graduate students to the forefront of a research area in analysis. Times of offering in accordance with research interests of faculty. Offered occasionally.

**MATH 631 - Algebraic Topology (3)**
Homotopy theory, homology theory, exact sequences, Mayer-Vietoris sequences, degrees of maps, cohomology, Kunneth formula, cup and cap products, applications to manifolds including Poincare-Lefshetz duality. Offered every other year.

**MATH 632 - Topology of Manifolds (3)**
Examples of manifolds, the tangent bundle, maps between manifolds, embeddings, critical values, transversality, isotopies, vector bundles and bubular neighborhoods, cobordism, intersection numbers and Euler characteristics. May be taught in either the piecewiselinear or differentiable categories. Offered every other year.

**MATH 636 - 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 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.

**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 - Indiv/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 200 - Cross-Cultural Preparation for Study Abroad (1)
The course is for students from all fields who aspire to develop cross-cultural competence through studying abroad. Students will deepen their understanding of cultural influence on behavior and values, acquire knowledge about the country they will be going to, and develop skills for cross-cultural encounters.

MLNG 201 - Cross-Cultural Inquiry for Study Abroad (1)
This 1-credit course gives students who simultaneously take MLNG 200, also 1 credit, the opportunity to analyze cultural influences further, research their host countries more extensively, and examine more deeply what studying abroad can add to their lives. Co-requisite MLNG 200.

MLNG 202 - Cross-Cultural Re-entry from Study Abroad (1)
The course gives students a framework for moving from questions of simply what happened while studying abroad to deeper questions of what the cultural journey students have returned from can mean in their lives. Students reflect on what cross-cultural competence signifies and how studying abroad developed their abilities.

MLNG 320 - Israeli Culture: From the Birth of Zionism to t
Introduction to modern Israel, its culture and people. From the birth of Zionism in nineteenth century Europe, to the ingathering of the Jewish people, the creation of the State of Israel, and on to the present. Topics include conflicts between Jews and Palestinian Arabs, between religious and secular Israelis and gender issues.

Manresa Program (MP)
MP 200 - Foundations for Catholic Stud (3)
This course provides the background knowledge and categories necessary for further course work in the Manresa Certificate Program: the basics of Catholic belief, Catholic spirituality and practices, the history and cultural influence of Catholicism in selected areas of art, culture, and society.

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 a final paper. Fulfills Arts & Sciences Core Arts requirement for non-majors. May be used as a music literature elective for music majors.
MUSC 116 - Music in Saint Louis (3)
Music in St. Louis examines the rich and varied history of music in St. Louis including the development of Ragtime, the St. Louis Symphony, The MUNY, Opera Theatre of St. Louis and the emerging hip hop scene of the last 15 years. Requirements include papers, exams, and one field trip.

MUSC 126 - Piano for Beginners I (2)
Piano for Beginners 1 is designed for all students with little or no previous training. The course introduces basic keyboard knowledge and techniques: Treble/bass clef notation, rhythm symbols and patterns, key signatures, five-finger exercises, primary chords, common musical terms, and simple solos and duets.

MUSC 127 - Piano II: Upper Elementary (2)
Piano for Beginners 2 is designed for students at Late Elementary-Early Intermediate level with limited prior training in music-reading and keyboard skills. Students should already be comfortable playing simple melodies and basic accompaniments. Studies: major/minor scales (one-octave), progressions, harmonization/transposition techniques, individually assigned solos. Techniques applicable to all musical styles.

MUSC 140 - Lower Division Class Music (0-3)
Small group instruction in class voice or instrumental family. An Applied Music Fee is required.

MUSC 140 - Lower Division Class Music (1-2)
Small group instruction in class voice or instrumental family. An Applied Music Fee is required.

MUSC 141 - Applied Music (1-2)
Fourteen half-hour private studio lessons per semester in voice, piano, guitar, organ, brass, woodwind, percussion, or string instruments. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of teachers is required. An Applied Music Fee is required. Fulfills one (1) credit toward A&S Fine Arts requirement; may repeat for Core credit.

MUSC 201 - Applied Music: Voice (1-2)
Private studio lessons in voice. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 202 - Applied Music: Piano (1-2)
Private studio lessons in piano. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 203 - Applied Music: Guitar (1-2)
Private studio lessons in guitar. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 204 - Applied Music: Woodwinds (1-2)
Private studio lessons in woodwind instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 205 - Applied Music: Brass (1-2)
Private studio lessons in brass instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 206 - Applied Music: Strings (1-2)
Private studio lessons in string instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers is required.

MUSC 207 - Applied Music: Percussion (1-2)
Private studio lessons in percussion instruments. An Applied Music Fee is required. Variable credit course: One credit hour, fourteen half-hour lessons per semester; two credit hours, fourteen one-hour lessons per semester. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of music teachers 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 236 - Music Literature Seminar (3)
Seminar offered on varying musical genres, including "American Popular Music," "The Oratorio," "Piano Repertoire," "Italian Opera," and "The Symphony." Significant stylistic characteristics of music and composers in musical, social, historical frameworks. Course work includes research/paper/presentation, concert attendance, formal analysis of musical examples. Prerequisite: Students should already be musically literate, familiar with standard musical notation and terms.

MUSC 240 - Vocal Coaching (1)
A studio course for advanced voice students. Individual half-hour sessions weekly preparing advanced vocal repertoire with a professional vocal coach. Musicianship studies; diction and translation work in English, German, Italian, and French; and professional performance techniques for juries, recitals, contests, and auditions. Co-requisite: enrollment in MUSC201 (Applied Music: Voice Lessons).

MUSC 250 - Intermediate Piano I (2)
Intermediate Piano 1 is designed for students with several semesters/years of previous training already playing at Early/Mid-Intermediate level (Bach Minuets, Für Elise, simple sonatinas). Studies include two-octave major/minor scales, arpeggios, chord progressions, transposition/harmonization. Solos are assigned individually from standard keyboard repertoire; techniques are applicable to all styles. Prerequisite: MUSC127 or consent of instructor.

MUSC 251 - Intermediate Piano II (2)
Intermediate Piano 2. Students should be at Mid-Late Intermediate level or above (sonatas, sonatinas, Bach inventions and preludes). Course work includes advanced major/minor scales, harmonization, transposition, sight-reading, and preparation for the Piano Proficiency Exam (required of music majors). Repertoire is assigned individually from standard classical works. Prerequisite: MUSC250 or consent of instructor.

MUSC 327 - Music Theory III (3)
Third course in the required sequence for music majors. Study of secondary dominants, chromaticism and altered chords, modulations, and binary-tertary forms; traditional and contemporary harmonic usage.
MUSC 328 - Counterpoint (3)
Required of theory majors. Study of two, three, and four-part writing of common period style and analysis of contrapuntal forms.

MUSC 329 - Music Theory IV (3)
Fourth course in the required sequence for music majors. Continuation of the study of the complex harmonic vocabulary of the late 19th/20th centuries, including extended chromaticism and tertian harmony, modes, Neapolitan and augmented sixth chords, enharmonic modulations, serialism, parallelism, aleatoric works, pandiatonicism, etc.

MUSC 330 - History of Music I (3)
In this class students will thoroughly examine the traditional canon of Western European Art Music from antiquity through the Middle Ages, Renaissance, Baroque eras, ending with the music of J.S. Bach in 1750. The course includes lecture/discussions, listening, score study, and reading of primary and secondary sources. In addition to mastering factual data, students will understand and be able to discuss the role of music in Western culture from Rome to 1750 and recognize important works.

MUSC 331 - History of Music II (3)
In this class students will thoroughly examine the traditional canon of Western European Art Music from the middle of the eighteenth century through the Classical, Romantic and Modern eras, ending with the music of the last 20 years. The course includes lecture/discussions, listening, score study, and reading of primary and secondary sources. In addition to mastering factual data, students will understand and be able to discuss the role of music in Western culture from 1750 to the present and recognize important works.

MUSC 335 - Music of Women Composers (3)
A survey course studying representative music written by women composers from the Middle Ages to the present. Keyboard, vocal, and instrumental works will be examined. Writings about specific women composers will be discussed, and recordings and scores will be compared with works from the music history canon. Course work will require reading, listening to specific works, and attendance at concerts.

MUSC 336 - Music Literature Seminar (3)
A seminar offered periodically, on varying historical and musical subjects; examples include "American Popular Music," "History of the Oratorio," and "Piano Repertoire." Course covers the significant characteristics of selected musical style periods, genres, or composers, examined in their musical, social, and historical frameworks. Course work includes presentation of a research paper, two exams, reading and listening assignments, formal of musical examples, and attendance at live musical presentations.

MUSC 341 - Applied Music (0-2)
Fourteen half-hour private studio lessons per semester in voice, piano, guitar, organ, brass, woodwind, percussion, or string instruments. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of teachers is required. An Applied Music Fee is required. Fulfills two (2) credits toward A&S Fine Arts requirement; may repeat for Core credit.

MUSC 341 - Applied Music (1-2)
Fourteen half-hour private studio lessons per semester in voice, piano, guitar, organ, brass, woodwind, percussion, or string instruments. Appropriate technical exercises and repertoire are assigned individually. End of semester jury before a panel of teachers is required. An Applied Music Fee is required. Fulfills two (2) credits toward A&S Fine Arts requirement; may repeat for Core credit.

MUSC 342 - University Chorale (0-1)
Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude. Repertoire is chosen from the Renaissance through the Twentieth Century. University Chorale provides an artistic opportunity for singers to be exposed to high quality choral music in a public concert. With this context, singers will also be taught singing skills for enhanced vocal abilities. All of the primary basics of healthy singing and musicality will be stressed. This includes (1) a deeper understanding and application of breathing skills, (2) understanding and applying motions and movements that underlie both relaxation and released energy, (3) developing mental imagery so that the process of singing takes place internally, (4) learning the correct diction for all languages in the repertoire, and (5) principles of sustained expressive singing.

MUSC 342 - University Chorale (0-2)
Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude. Repertoire is chosen from the Renaissance through the Twentieth Century. University Chorale provides an artistic opportunity for singers to be exposed to high quality choral music in a public concert. With this context, singers will also be taught singing skills for enhanced vocal abilities. All of the primary basics of healthy singing and musicality will be stressed. This includes (1) a deeper understanding and application of breathing skills, (2) understanding and applying motions and movements that underlie both relaxation and released energy, (3) developing mental imagery so that the process of singing takes place internally, (4) learning the correct diction for all languages in the repertoire, and (5) principles of sustained expressive singing.

MUSC 344 - University Mastersingers (0-1)
A highly selective small vocal ensemble, with frequent public performances of early choral music and a capella works. Entrance by audition only. An advanced concert choir of approximately thirty five carefully chosen singers, with a selected core (16-18 singers) featured in Fall madrigal concerts from the Renaissance. For the fall semester considerable emphasis will be to prepare concert music ranging from 20th century spirituals to a wide variety of traditional classical works and to madrigals for the smaller select ensemble from the Renaissance period. A full-length oratorio is prepared for the spring semester. Concert engagements should be anticipated throughout the semester. The Mastersingers also play a significant role as ambassadors for the University.

MUSC 346 - Instrumental Ensembles (0-1)
Jazz Ensemble Class consists of rehearsal of music from the jazz repertoire with the goal of public performance at the end of the semester. The primary focus of the band is a traditional big-band (5 saxes, 4 trumpets, 4 trombones, rhythm), and smaller, improvisation oriented combos will be draw from the larger group. Guitar Ensemble The goal of this course is to work together to prepare and present a program of guitar ensemble music for a public concert. Students are exposed to a new repertoire, and gain experience in working with other musicians. Symphonic Band Large instrumental ensemble for winds, brass, and percussion instruments. Preparation and performance of high-level music written or arranged for large concert band. String Ensemble Smaller chamber group (4-16 students) for violins, violas, cellos, and string basses, rehearsing and performing high-level music written or arrange3d for string ensemble or string symphony.

MUSC 385 - Junior Recital/Research (0)
Preparation for Senior Capstone, taken during fifth or sixth semester, under supervision of primary music advisor. Performance Majors: Junior Recital, 30-40 minutes long, comprising representative classical works at appropriate performance level. Studies Majors: Examination of standard research tools & techniques, producing working bibliography of musical reference materials.

MUSC 427 - Music Analysis (3)
Required of theory majors. Study of recent theoretical concepts and application of them to the analysis of musical structures of various periods; emphasis on contemporary composition.

MUSC 441 - Conducting (3)
Theory and practice of conducting vocal and instrumental organizations. Required of music majors.
PHIL 336 - Medical Ethics (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 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 332 - 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 342 - Environmental and Ecological Ethics (3)
This course will survey a number of environmental problems, looking at philosophical and ecological approaches to the issues. Topics may include: the moral status of animals, plants, ecosystems and species: poverty vs. the environment; global justice; consumerism; motivating people to care for the environment; mass extinctions; global climate change. Prerequisites: PHIL 105 and 205.

PHIL 343 - Philosophy of Law (3)
A critical survey of the major Western conceptions on the nature of law and on the relationship between law and morality.

PHIL 345 - Disaster Narratives (3)
To help students reflect on the nature and implications of disasters, including disease, climate change, and war. We will consider disasters from the standpoint of their real-life effects upon human beings, both with respect to innocent victims caught by forces beyond their control and with respect to perpetrators of disasters.

PHIL 348 - Jewish Life: Bible to Mid Ages (3)
This course offers a study of the concept of peoplehood during the Biblical period, the response to the rise of Christianity, the destruction of the Second Temple and the use of Rabbinic law and lore. Students will also have the opportunity to experience Jewish life through an understanding of the holiday cycle, the life cycle and attendance at a local synagogue for Sabbath worship. Every fall.

PHIL 349 - Jewish Life: MidAge to ModTime (3)
This course offers a study of the Golden Age of Spain, Jewish Mysticism, the Enlightenment, 19th century Nationalism, Zionism, the Holocaust and the rise of Modern Israel. Students will examine how these historical phenomena shaped the modern Jewish concepts of Torah, God, Israel and ritual observance. Jewish philosophers from Maimonides to Martin Buber will be studied and students will have an opportunity to attend a local synagogue to experience Sabbath worship. Every spring.

PHIL 350 - The Stranger as a Sociological/Philosophical P
This course examines the philosophical, sociological, and literary texts that explore the critical and moral potential that strangers offer for individuals, cultures, and societies and for sociological and philosophical theory. The course will also seek to understand better structures and processes of exclusion. Prerequisites: PHIL 105 and 205.

PHIL 360 - Science and Religion (3)
This course surveys the relationship between scientific and religious thought from the perspective of major developments in the history of science. Prerequisites: PHIL 105 and 205.

PHIL 365 - Topics in Science, Tech & Soc (3)
Issues and themes connected with the relationships between science, technology, and human values: e.g., the role of science and technology in society; technology and ethics; critical theory of technology; philosophy of engineering; artificial intelligence and human nature; and science as a social process. Prerequisites: PHIL 105 and 205.

PHIL 380 - Language & 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 380 - Language and Argument (3)
The critical assessment of arguments and argumentative processes as found in actual social contexts and institutions. The course draws on the range of perspectives and tools available from formal and informal logic, dialectical analysis, rhetoric, linguistic philosophy, fallacy theory, and social analysis. Prerequisites: PHIL 105 & 205

PHIL 404 - Symbolic Logic (3)
This course develops a theory of valid reasoning. The logic (and semantics) of propositions, quantifiers, properties, relations and identity are covered. It also examines the concepts of consistency, logical truth, logical form, logical equivalence, validity, and related notions. The student should emerge more attuned to how deductive arguments work in actual use and able to evaluate them. Prerequisite: PHIL 105 and 205 or two mathematics courses or some combination of these.

PHIL 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 407 - Reasoning: Probability & Uncertainty (3)
This course explores philosophical problems of reasoning under conditions of uncertainty, and major approaches to solving such problems. Included are discussions of concepts of probability, statistical inference, and scientific evidence. Prerequisites: PHIL 105 and 205, or two mathematics courses or some combination of these.

PHIL 408 - Advanced Symbolic Logic (3)
This course examines the meta-theory of sentential and first-order logic. The proof theory and model-theoretic semantics for a standard formal language will be developed. Included are proofs of completeness, compactness, and Loewenheim-Skolem theorems. Problems in the philosophy of logic may be raised along the way. Prerequisites: PHIL 404.

PHIL 409 - Topics in Advanced Logic (3)
This course examines some non-classical systems of logic. Examples include one or many of the following: modal, intuitionistic, paraconsistent, free, fuzzy, and multi-valued logics and their metatheories. The course may cover probability theory, computability theory, or the philosophy of logic. Such topics in the philosophy of logic include possible worlds, necessity, existence, logical consequence, logicism, and theories of conditionals. Prerequisite: PHIL 404.

PHIL 410 - Survey of Epistemology (3)
This course surveys central problems of epistemology. What is knowledge? What is justification? Do we know anything at all? Topics may include: various puzzles and paradoxes (including the lottery and surprise exam paradoxes); the problem of skepticism; foundationalism and coherentism; externalism and internalism; defeasibility; truthtracking; reliabilism; virtue epistemology; proper function; and contextualism. Prerequisites: PHIL 105 and 205.

PHIL 412 - Topics in Epistemology (3)
In this course we concentrate on an epistemological topic, such as skepticism, contextualism, virtue epistemology, or the value of knowledge. Prerequisites: PHIL 105 and 205.

PHIL 415 - Philosophy of Science Survey (3)
This course explores some of the most prominent themes in recent philosophical studies of the sciences. Students should emerge with a deeper understanding of the meaning and status of scientific research and knowledge. Readings include discussions of particular endeavors from a range of scientific disciplines. Prerequisite: PHIL 105 and 205.

PHIL 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 421 - Topics in Metaphysics (3)
Through an examination of one or more topics in contemporary metaphysics (including but not limited to: individuation of concrete particulars; propositions, facts and events; necessity and possibility; persistence through time; realism-versus-anti-realism; vagueness; free will; personal identity; material constitution). Prerequisites: PHIL 105 and 205.

PHIL 422 - Survey Philosophy of Language (3)
This course surveys classical issues in contemporary philosophy of language. Topics include: meaning; truth; reference and descriptions; names and demonstratives; propositional attitudes; modality. This introductory course presupposes no previous acquaintance with philosophy of language. It is not, however, an elementary course since philosophy of language discussions reach into other areas of philosophy, such as logic, epistemology, and metaphysics. Prerequisites: PHIL 105 and 205.

PHIL 426 - Philosophy of Mind (3)
In this course, we will survey a range of topics in the philosophy of mind, including: the mind-body problem; physicalism; dualism; mental causation; consciousness; mental representation. Prerequisites: PHIL 105 and 205.

PHIL 428 - Biology and Mind (3)
Courses in physiological psychology say little about higher-level cognitive capacities, whereas cognitive psychology courses often ignore their neural underpinnings. In contrast, Biology and Mind employs a framework that combines neurobiological and cognitive considerations. Employing this framework, we first examine visual perceptual and imaging capacities, after which we explore philosophical issues concerning the conscious, causal, and creative aspects of such cognition. Prerequisites: PHIL 105 and 205.

PHIL 430 - Survey of Ethical Theory (3)
A survey of recent ethical theory, focusing on two questions. First, what is the nature of morality? E.g., are there objective moral facts? Second, what does morality require of us? E.g., can it ever be immoral to promote the best consequences? Prerequisites: PHIL 105 and 205.

PHIL 431 - Topics in Ethics (3)
An in-depth examination of one or more topics in ethics. Topics might include: virtue ethics; metaethics; moral realism and anti-realism; well being; happiness; moral evil; moral responsibility; ethics and human nature; recent work in deontological ethics (and/or consequentialism); theories of pratical reason; morality and the emotions; moral relativism; moral psychology; and God and morality. 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 435 - Survey of Social and Political Philosophy (3)
This course will read and consider critically the works of selected major figures in the history of social-political philosophy. Prerequisites: PHIL 105 and 205.

PHIL 436 - Topics in Social & Political Philosophy (3)
This course considers in depth selected issues in social-political theory, such as equality, democracy, rights, critical social theory, intersubjective understanding, collective action and solidarity, and social explanation. Prerequisites: PHIL 105 and 205.

PHIL 440 - History of Ancient Greek Philosophy (3)
This course engages classical philosophical problems through close study of one or more of the main figures or issues in ancient Greek thought. Prerequisite: PHIL 105 and 205.

PHIL 450 - Medieval Philosophy (3)
The course introduces students to some of the central texts and thinkers of the medieval period (c.400-1500 a.d.). The aim of the course is to engage students in the scholarly work of reading and interpreting medieval philosophical texts and in the philosophical work of evaluating the arguments and positions such texts contain. Prerequisite: PHIL 105 and 205.

PHIL 455 - Topics in Medieval Philosophy (3)
A systematic treatment of a particular topic or figure from the Middle Ages. Potential subject matter might involve the philosophical views of a particular scholar (e.g. Augustine) or it might involve the development of thought on a general topic (e.g. free will). Prerequisites: PHIL 105 and 205.

PHIL 456 - Philosophy of Thomas Aquinas (3)
A systematic treatment of important topics in the thought of Thomas Aquinas, including theories in metaphysics, epistemology, philosophy of human nature and action, ethics, and philosophical theology. Prerequisites: PHIL 105 and 205.

PHIL 460 - History of Modern Philosophy (3)
A survey of developments in Western philosophy from the seventeenth through nineteenth centuries. The course examines Descartes, Leibniz, Locke, Hume, and Kant, and may cover other figures (e.g. Spinoza, Berkeley, Hobbes, or Hegel) at the instructor's discretion.

PHIL 465 - Topics in Modern Philosophy (3)
Examines select themes and/or thinkers in the history of philosophy from the seventeenth through the nineteenth century. Topics may include a specific thinker (e.g. Descartes), a related group of thinkers (e.g. the rationalists), or a philosophical topic as discussed in the modern period (e.g. social contract theory). Prerequisites: PHIL 105 and 205.

PHIL 470 - Contemporary German Philosophy (3)
Nineteenth and twentieth century philosophical thought in Germany.

PHIL 471 - Survey Continental Philosophy (3)
This course will cover the nineteenth and early twentieth century origins of continental philosophy; the relation between the philosophies of Edmund Husserl and Martin Heidegger; and the directions continental philosophy has taken subsequently, such as existentialism, phenomenology, deconstruction, and critical theory. Prerequisites: PHIL 105 and 205.

PHIL 472 - Topics Continental Philosophy (3)
This course takes up major topics discussed within continental philosophy, such as: intentionality; phenomenological methodology; freedom; the life-world; consciousness; intersubjectivity; deconstruction; ethics; the body; death; being; temporality; and transcendental foundations. Prerequisite: PHIL 105 and 205.

PHIL 475 - Latin American Philosophy (3)
Survey of Latin American philosophy, with an emphasis on twentieth-century works. Themes include the origins of Latin American thought, the philosophical repercussions of political independence, positivism in Latin America, the question of Latin American identity, and the possibility of a distinctive Latin American philosophy. Pre-requisites: PHIL 105; PHIL 205.

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

PHIL 480 - Topics and Movements in Contemporary Philos
Specific theme and focus of course to be determined by instructor. Course offered at Departmental discretion.

PHIL 481 - Philosophy of Feminism (3)
A critical examination of the feminist challenge to traditional conceptions of law, morality and epistemology. The philosophical and methodological assumptions underlying the feminist challenge will be explored.

PHIL 482 - 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 483 - Person and Action: The Philosophical Anthrop
Using the writings of Karol Wojtyla (Pope John Paul II) on the philosophy of human nature (The Acting Person) and special ethical issues (War, Labor, Sexuality, Justice), this course will suggest the outlines for a systematic philosophy based upon Thomism, phenomenology, personalism, and collectivism. Prerequisites: PHIL 105 and 205.

PHIL 484 - Catholic Social Thought (3)
This course focuses on understanding the meaning of social justice as it has developed in the Catholic intellectual tradition, especially as expressed in the social encyclicals of the last 100 years. Prerequisite: PHIL 105 and 205.

PHIL 485 - Topics in Philosophical Anthropology (3)
This course is an intensive treatment of a topic or topics within the ongoing discussion about what it means to be a human person. For example: human nature and uniqueness; immortality; embodiment; love and friendship; freedom; and other topics related to the quest to understand what it means to be human. Prerequisite: PHIL 105 and 205.

PHIL 486 - Prob in Philosophy of Religion (3)
This course consists in an in-depth examination of one or two topics in the Philosophy of Religion, broadly construed. Specific topics might include issues such as: the problem of evil; God's nature and attributes; proofs for God's existence; faith and reason; religion and morality; the meaning and nature of religion, etc. Prerequisite: PHIL 105 and 205.

PHIL 487 - Systematic Survey (3)
This course, principally for student in the College of Philosophy and Letters, serves as a "capstone course." Students write small papers on philosophy of human nature, epistemology, ethics, and philosophy of God and mutually criticize each other's papers. Finally, they produce their own full synthesis. Prerequisites: PHIL 105, 205 and permission of the instructor.

PHIL 495 - Senior Residency (0)
Required of all undergraduate philosophy majors in the semester during which they plan to graduate.

PHIL 510 - Problems in Epistemology (3)
Topics such as the meaning of truth and knowledge, and the diversity of kinds and contexts of knowing. Offered annually.

PHIL 520 - Problems in Metaphysics (3)
Topics such as substance, identity, time, space, and being. Offered annually.
PHIL 530 - Problems in Ethical Theories (3)
Questions such as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

PHIL 540 - Probs in Soc & Pol Philosophy (3)
Topics such as the state, rights, sovereignty, democracy, freedom, property, and the meaning of justice. Offered annually.

PHIL 580 - Systematic Synthesis (3)
Discussions of human nature, knowledge, ethics, and God culminate in individually formulated syntheses of students’ views on the fundamental problems of philosophy. Offered annually.

PHIL 600 - Sem on Maj Philosophr 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 Epistem (3)
The epistemological position of a major theorist, such as Descartes, Hume, Kant, Husserl, Habermas, Popper, or Peirce is examined. Offered annually.

PHIL 620 - Philosophy of Science (3)
Major figures and issues in the philosophy of science such as the nature of scientific theory, scientific objectivity, relativism in science. Offered every other year.

PHIL 622 - Advanced Logic (3)
An axiomatic survey of the first-order predicate calculus, and of first-order theories in general, terminating in proofs of Godel’s theorems. Offered occasionally.

PHIL 626 - Prob in Philosophy of Religion (3)
Explores problems such as the nature of God, proofs for God’s existence, divine properties, etc. Offered every other year.

PHIL 630 - Advanced Ethics (3)
Extensive examination of such questions as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

PHIL 632 - Advanced Metaphysics (3)
Thorough exploration of such topics as substance, identity, time, space, and being. Offered annually.

PHIL 634 - Advanced Epistemology (3)
Examination in depth of topics such as the meaning of truth and knowledge and the diversity of kinds and contexts of knowing. Offered annually.

PHIL 636 - Sem in Political Philosophy (3)
Exhaustive study of such topics as the state, rights, sovereignty, democracy, freedom, property, and the meaning of justice. Offered annually.

PHIL 638 - Seminar in Aesthetics (3)
Analyses of the meaning of beauty and the character of aesthetic judgments. Offered occasionally.

PHIL 640 - Ancient Philosophy (3)
An advanced level seminar in which major figures and topics in the ancient period are examined. Offered annually.

PHIL 645 - Medieval Philosophy (3)
Seminar study on a sophisticated plane of major philosophers and issues of the medieval era. Offered annually.

PHIL 650 - Modern Philosophy (3)
Major philosophers and issues of the modern period. Offered annually.

PHIL 655 - Contemporary Philosophy (3)
Major philosophers and issues in contemporary philosophy. Offered annually.

PHIL 680 - Prospectus (3-6)
A survey of the area of proposed dissertation research. Research questions are posed. Interest in the topic is focused. Culminates in a written prospectus and its oral defense before the potential dissertation committee. Offered every semester.

Physics (PHYS)

PHYS 101 - Physics and the World Around Us (3)
Basic concepts of physics emphasizing the meaning of modern developments of the science. High school mathematics required. Fulfills three credit hours of the general science requirement. For non-science majors; does not apply toward the area of concentration with a major in physics.

PHYS 105 - Intro to Physics of Human Body (3)
Discusses the physics of certain aspects of the working of the human body. Fulfills three credit hours of the general science requirement. Primarily for non-science major in physics.

PHYS 111 - Introduction to Physics (1)
Broad survey of physics. Introduction to computational and laboratory methods. Enrollment limited to students majoring in physics.

PHYS 113 - Introduction to Astronomy (1-3)
Modern concepts of the physical nature of the astronomical universe. Fulfills three credit hours of the general science requirement. For non-science majors; does not apply toward the area of concentration with a major in physics.

PHYS 115 - Einstein's Universe (3)
The life and science of Albert Einstein and his multi-faceted impact on modern physics and society is explored. Primarily for non-science majors, may be taken as allied elective by physics majors. Preq: High School Algebra or equivalent.

PHYS 122 - General Physics I (0-4)
Prerequisite: High school algebra. Lectures, demonstrations, and laboratory in mechanics and heat. For School of Allied Health Professions students only. Fall semester.

PHYS 124 - General Physics II (0-4)
Lectures, demonstrations and laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. For School of Allied Health Professions students only. Spring semester. Prerequisite: PHYS122.

PHYS 131 - Physics I (3)
Lectures and demonstrations in mechanics and heat. PHYS132 should be taken concurrently with PHYS131. Fall semester. Prerequisite: High school algebra and trigonometry.

PHYS 132 - Physics I Laboratory (1)
Should be taken concurrently with PHYS131. Laboratory in mechanics and heat. Fall semester.

PHYS 133 - Physics II (3)
Lectures and demonstrations in electricity, magnetism, wave motion, sound, optics and modern physics. PHYS134 should be taken concurrently with PHYS133. Prerequisite: PHYS131. Spring semester.

PHYS 134 - Physics II Laboratory (1)
Laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. Should be taken concurrently with PHYS133. Spring semester.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 135</td>
<td>Aviation Physics (0-4)</td>
<td>Units and measurement; vectors; force and motion; energy; momentum; gravitation; forces of drag and lift; rotational motion; equilibrium of forces during flight; harmonic motion; selected topics in fluid mechanics and thermodynamics; electricity; electrical energy; magnetism; electromagnetic induction; linear and wave optics; atmospheric optics; laboratory experiments relating to the topics above. Fall and Spring semesters. Prerequisite: MATH115 or equivalent.</td>
</tr>
<tr>
<td>PHYS 136</td>
<td>Aviation Physics II (0-4)</td>
<td>Topics in sound, electricity, magnetism, and optics are covered at an introductory level with emphasis on aviation examples. Primarily for non-science majors, may be taken as allied elective by physics majors. Prereq: PHYS 135.</td>
</tr>
<tr>
<td>PHYS 161</td>
<td>Engineering Physics I (3)</td>
<td>Calculus and vector approaches to study of kinematics, statics and dynamics; work and energy; impulse and momentum; circular motion and gravity; rotational motion and equilibrium; vibrations, waves and sound; heat; fluid mechanics; elasticity. Prerequisite: MATH142.</td>
</tr>
<tr>
<td>PHYS 162</td>
<td>Engineering Physics I Laboratory (1)</td>
<td>Laboratory experiments to illustrate and supplement material in PHYS161. Corequisite: PHYS161 Fall and Spring semesters.</td>
</tr>
<tr>
<td>PHYS 163</td>
<td>Engineering Physics II (3)</td>
<td>Calculus and vector approaches to study of electric charges, forces, fields and potentials; electric current; magnetic forces and fields; electromagnetic waves; light and geometrical optics; mirrors and lenses. Prerequisite: MATH153, PHYS161 and PHYS162 Corequisite: PHYS164. Fall and Spring semesters.</td>
</tr>
<tr>
<td>PHYS 164</td>
<td>Engineering Physics II Laboratory (1)</td>
<td>Laboratory experiments to illustrate and supplement material in PHYS163. Prerequisite: MATH152, PHYS161 and PHYS162 Corequisite: PHYS163. Fall and Spring semesters.</td>
</tr>
<tr>
<td>PHYS 261</td>
<td>Modern Physics (3)</td>
<td>Lectures three hours per week. At the level of Beiser¿s Concepts of Modern Physics. Prerequisite: One year General Physics. Prerequisite or Corequisite: MATH143. Spring semester.</td>
</tr>
<tr>
<td>PHYS 262</td>
<td>Modern Physics Lab (1)</td>
<td>Prerequisite: One year General Physics. Prerequisite or Corequisite: MATH143 &amp; PHYS261. Spring semester.</td>
</tr>
<tr>
<td>PHYS 275</td>
<td>Co-Op with Industry (0)</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. Prerequisite: Sophomore standing. Offered every semester.</td>
</tr>
<tr>
<td>PHYS 311</td>
<td>Classical Mechanics (3)</td>
<td>The elementary theory of the statics, kinematics and dynamics of particles and rigid bodies. At the level of Symon¿s Mechanics. Prerequisite: MATH244.</td>
</tr>
<tr>
<td>PHYS 312</td>
<td>Advanced Classical Mechanics (3)</td>
<td>Continuation of PHYS311, continuum mechanics and introduction to the analytical methods of Lagrange and Hamilton. Prerequisite: PHYS311.</td>
</tr>
<tr>
<td>PHYS 331</td>
<td>Optics (3)</td>
<td>Lectures and demonstrations three hours per week. Physical and geometrical optics. One year General Physics, MATH 244.</td>
</tr>
<tr>
<td>PHYS 332</td>
<td>Optics Laboratory (1)</td>
<td>The fundamental experiments of modern optics are repeated in this course. Three hours per week. It is to be taken concurrently with PHYS331.</td>
</tr>
<tr>
<td>PHYS 341</td>
<td>Thermodynamics and Statistical Mechanics (3)</td>
<td>At the level of Schroeder¿s Thermal Physics. Prerequisite PHYS163 &amp; MATH244 Corequisite: MATH355.</td>
</tr>
<tr>
<td>PHYS 351</td>
<td>Analog &amp; Digital Electronics (0-4)</td>
<td>Lecture-laboratory six hours per week. Fundamentals of digital circuits with applications to computers. Operational amplifiers. Interfacing of computers with experimental equipment for data collection and control. One year General Physics, MATH 244.</td>
</tr>
<tr>
<td>PHYS 375</td>
<td>Co-Op with Industry (0)</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 second experiential learning session. Grading system is determined by department offering course. Prerequisite: PHYS275. Offered every semester.</td>
</tr>
<tr>
<td>PHYS 376</td>
<td>Internship with Industry (0-3)</td>
<td>A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing. Offered every semester.</td>
</tr>
<tr>
<td>PHYS 386</td>
<td>Physics Research I (0)</td>
<td>First of three course sequence required for B.S. degree in Physics.</td>
</tr>
<tr>
<td>PHYS 401</td>
<td>Topics in Modern Physics (3)</td>
<td>Survey of kinetic theory, atomic, molecular, solid state, nuclear, and particle physics. Prerequisite: PHYS261 and MATH-355 or equivalent.</td>
</tr>
<tr>
<td>PHYS 421</td>
<td>Electricity &amp; Magnetism I (3)</td>
<td>Lecture three hours per week. At the level of Griffiths, Introduction to Electrodynamics. Spring semester, Prerequisite: MATH355.</td>
</tr>
<tr>
<td>PHYS 422</td>
<td>Electricity &amp; Magnetism II (3)</td>
<td>Lecture three hours per week. Electromagnetic Fields at an advanced level, a continuation of PHYS421. Prerequisite: PHYS421. Fall semester.</td>
</tr>
<tr>
<td>PHYS 441</td>
<td>General Relativity (3)</td>
<td>This course is an introduction to Einstein¿s Theory of General Relativity. The special theory of relativity is reviewed, tensor analysis is introduced, and the general theory is approached through an examination of curved spacetime and geodesic trajectories. Applications including black holes and cosmology are explored. Prereq: PHYS 261, MATH 355.</td>
</tr>
<tr>
<td>PHYS 461</td>
<td>Quantum Mechanics (3)</td>
<td>At the level of Griffiths, Introduction to the Quantum Mechanics. Prerequisites: PHYS 261 and PHYS 311, MATH 355.</td>
</tr>
<tr>
<td>PHYS 462</td>
<td>Application of Quantum Mechanics (3)</td>
<td>Further development of Quantum Mechanics with applications to statistical mechanics, quantum optics, atomic, nuclear, particle and solid state physics. Spring semester. Prerequisite: PHYS 461.</td>
</tr>
<tr>
<td>PHYS 475</td>
<td>Co-Op with Industry (0)</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 third experiential learning session. Grading system is determined by department offering course. Prerequisite: PHYS375. Offered every semester.</td>
</tr>
<tr>
<td>PHYS 476</td>
<td>Internship with Industry (0-3)</td>
<td>A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisite: PHYS376 or Senior standing. Offered every semester.</td>
</tr>
<tr>
<td>PHYS 487</td>
<td>Physics Research II (0)</td>
<td>Second of three course sequence required for B.S. degree in Physics.</td>
</tr>
<tr>
<td>PHYS 488</td>
<td>Senior Inquiry: Research Project (3)</td>
<td>Third of three course sequence required for B.S. degree in Physics (3 Cr), or satisfies senior inquiry requirement for B.A. degree in Physics (0-3 Cr).</td>
</tr>
<tr>
<td>PHYS 498</td>
<td>Advanced Independent Study (1-3)</td>
<td>Prior permission of sponsoring professor and chairperson required.</td>
</tr>
</tbody>
</table>
**Political Science (POLS)**

**PLS 100 - Introduction to Law (2)**
The purpose of the course is to provide students an introduction to the law and legal principles. The structure of the court system, civil litigation and methods of alternative dispute resolution will be examined. Elements of the following areas of substantive law: torts, contracts, property, trusts and estates, corporations, family law, and criminal law and procedure will be examined.

**PLS 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 Trail 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 (0-3)**
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 292 - Law: Service Learning (2-3)**
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)**
Introduction to Trial Practice is an academic course with a competition component. Students are required to study elements of trial practice and principles of evidence. Grades will be based on required papers, tests, interpersonal team skills, and competition results.

**PLS 295 - 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 AMCA regional competition.

**PLS 333 - Law and Government (3)**
The purpose of this course is to orient students to the American legal system. Particular attention will be paid to the various sources of law. Students will be taught how to find the law and analyze and interpret the law.

**PLS 350 - Introduction to Environmental Law (3)**
This course will provide an overview of environmental law. The course will address the following environmental laws: common law environmental remedies; National Environmental Policy Act; the Clean Air Act; the Water Pollution Act; Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Endangered Species Act; Toxic Substances Control Act; and the Federal Insecticide, Fungicide, and Rodenticide Act. The students will be taught the basic provisions of these laws and how to identify when factual situations trigger the application, requirements, and restriction of these laws.

**PLS 400 - Comparative Legal Systems (3)**
This course will build on the students' understanding of the American system of law. This course will broaden students' perspective of legal systems beyond their region. The student will also learn more about their own jurisdiction within the context of this global system. We will offer two different sections of this course which we will alternate. One section will focus on religious law. The other section will focus on a comparative analysis of nation-state's laws.
POL 253 - Soviet and Post Soviet Politics (3)
This course uses the experience of the Soviet Union and Russia to understand change in political and economic systems, from collapse of existing governments to the revolutionary reconstruction of society to growing autocracy. Past developments are used to illuminate political and economic changes occurring since the collapse of communism.

POL 254 - Ethnicity and Internal War (3)
This course investigates conflicts within existing states, especially conflicts that appear to be based in the primary collective identity and cultural and personal features of individuals. It examines conflicts in Yugoslavia, Northern Ireland, and South Africa, and in other areas of the world. Fulfills the A&S core Cultural Diversity requirement.

POL 255 - Political Systems of the Sub-Sahara (3)
Examines governmental institutions and political processes. Emphasis is on traditional political systems, colonialism and the African experience, rise of nationalism, single-party systems, military regimes, and competitive party systems. The simple formulation of these themes presupposes comparisons among some the many cultures of Africa.

POL 256 - The Politics of Asia (3)
Course examines the three waves of: 1. Asias traditional order and both its collapse adn 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 Asias quest for modernization.

POL 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.

POL 260 - Introduction to International Political Econ
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.

POL 261 - Introduction to Diplomacy (3)

POL 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.

POL 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.

POL 266 - Middle East/International Pol (3)
Analysis of the major issues of Middle East politics and of their effects on the course of international relations. Examination of the foreign policies of all the states of the region in their historical context. Discussion of current trends.

POL 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.

POL 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 352 - Communism, Capitalism and Social Justice (3)
This course examines the Marxist critique of capitalism, focusing on theoretical and practical solutions to the problems of politics in Marxist thinking. Students will investigate why real-world Communist systems largely failed to achieve the goals to which they were dedicated and will examine alternative models of social and economic organization.

POLS 353 - Comparative Revolutions (3)
This course is a theoretical and historical examination of the nature of revolutions, their origins, progress and results. Special focus is given to the Bolshevik, Chinese, Nicaraguan, and Iranian revolutions, and to the collapse of communist regimes in Eastern Europe.

POLS 356 - Political Process - Latin America (3)
In-depth survey of the main political, social and economic issues and processes in Latin America for the last twenty years. Course analyzes current trends and the impact of globalization, changing gender roles, and new social movements of peasants and indigenous peoples. U.S.-Latin American relations considered in historical perspective.

POLS 357 - Third World Development (3)
This course focuses broadly on the challenge of development in the Third World, and especially on the political dimensions of the process of development. It analyzes critical variables that influence the development path of Third World nations, with particular emphasis on culture, economics, socialism, and democratization. The second part of this course explores the dynamics of developing countries by examining cases from Latin America, Africa, and Asia.

POLS 360 - Problems of Globalization (3)
This course explores the political, economic, and cultural dimensions of globalization. It examines the following key question: What causes globalization? What are its effects? How can countries cope with these effects? Other topics examined include state autonomy, the democratic deficit, the IMF and WTO, equity, cultural imperialism and social justice.

POLS 361 - Multilateral Diplomacy (3)
Characteristics of multilateral diplomacy. How it is carried out; methods and techniques. Multilateral negotiations. In what ways multilateral diplomacy differs from bilateral diplomacy. Various forms of multilateral diplomacy and what they contribute to the management of international problems.

POLS 362 - International Organization and the 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 364 - International Law (3)
The course examines the nature of the international legal system, how the law is made and applied, and the challenges presented by global society. It studies the main components of this body of law such as jurisdiction, the law of the sea, law of treaties, settlement of disputes and the laws of war.

POLS 365 - International Relations of Africa (3)
Examines the major goals and objectives which African states project and endeavor to attain in the international political and economic system. Impact of the international system on African states.

POLS 367 - Pol Devlpmnt in Contemp Spain (3)
A century of political reshuffling. Study of historical factors in the political development of Spain and their consequences in contemporary politics. Focus on the Second Republic, the Spanish Civil War, Franco, the Church and religion, the establishment of the new middle classes, the reign of King Juan Carlos I, the Spanish Armed Forces, and the emergence of democratic Spain.

POLS 371 - Ancient and Medieval Classics in Political Tho
This course traces the development of Western political thought from its beginnings in the Greek city-state to the end of the Middle Ages. Thinkers addressed may include: Plato, Aristotle, Cicero, Augustine, Aquinas. Alternate years
POLS 450 - Russian Political Culture (3)
This course examines the fundamental political beliefs and values of Russians, focusing on whether Russians today have the right attitudes to sustain democratic institutions. To understand what people think, we examine various kinds of sources: works of fiction, political philosophies, historical analyses, first-hand accounts, ethnographies, and quantitative public opinion studies.

POLS 451 - Seminar: Democratization (3)
This course examines the 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 Economy (3)
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 liberalism 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 484 - Inquiry: Politics of Health (3)
Course offers students political and analytical insights into understanding health policy issues in the U.S. and developing world. It examines how power relations and values affect choices on health issues. Of particular interest in this course is the AIDS pandemic in Africa. Prequisite: Methods or permission of instructor.

POLS 485 - Inquiry: Politics of Health (3)
This course examines the gap between the "is" and the "ought" of political systems, and portrays the politics of the future as emerging from human choice based on core values. Students will then construct their own future systems based on their core values. Prerequisite: Methods or permission of the instructor.

POLS 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. Advanced students. 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. Senior standing required. Permission of the Department Chair and Thesis Director required.

POLS 495 - Senior Residency (0)
Required of all graduating seniors in their final semester.

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 497 - Political Science Internship (0-6)
Student work in political science relevant area, such as on research projects with professor, with research governmental agencies, legislators, or legal institutions. For advanced students. Permission of instructor required.

POLS 498 - Advanced Independent Study (1-6)
Students examine a topic of their own choosing and write a substantial paper under the direction of a professor. Permission of the instructor is required.

POLS 518 - Graduate Internship (1-3)
Interns work in Government agencies/offices, nonprofit organizations, or interest groups under the guidance of a preceptor from the sponsoring organization and under a course director from the political science department who develop a graduate level professional experience following department internship guidelines. Every semester.

POLS 550 - Russian Political Culture (3)
This course examines the fundamental political beliefs and values of Russians, focusing on whether Russians today have the right attitudes to sustain democratic institutions. To understand what people think, we examine various kinds of sources: works of fiction, political philosophies, historical analyses, first-hand accounts, ethnographies, and quantitative public opinion studies.

POLS 551 - Democratization (3)
This course examines the nature of democracy and the recent trend toward democratic reform, focusing especially on the experiences of Central Europe and Latin America. The course also examines the relationship between political and economic reform and between democratic and market systems.
POLS 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 578 - Graduate Internship (1-3)
Interns work in government agencies/offices, nonprofit organizations, or interest groups under the guidance of a preceptor from the sponsoring organization and under a course director from the political science department who develop a graduate level professional experience following department internship guidelines. Every Semester.

POLS 584 - Politics of Health (3)
Course offers students political and analytical insights into the understanding of health policy issues in the U.S. and developing world. It examines how power relations and values affect choices on health issues. Of particular interest in this course is the AIDS pandemic in Africa. Prerequisite: Methods or Permission of the instructor.

POLS 585 - Politics of the Future (3)
This course examines the gap between the "is" and the "ought" of political systems, and portrays the politics of the future as emerging from human choice based on core values. Students will then construct their own future systems based on their core values. Prerequisite: Methods or permission of the instructor.

POLS 588 - Graduate Capstone Internship (3-6)
Interns work in government agencies/offices, non profit organizations, or interest groups under similar conditions to POLS 518. In addition, interns prepare either a Policy Recommendation Paper, formal Grant Proposal, or Professional Quality Paper as specified in department capstone guidelines. Every Semester.

POLS 598 - Graduate Independent Study (1-3)
Students embark on a course of individual study on a course not available in the regular curriculum in an area of faculty expertise. Schedule and workload are to be determined by the faculty instructor in accordance with the mutually agreed upon pedagogical objectives of the course. Every Semester.

POLS 670 - American Political Thought (3)
This course focuses on selected ideas, issues, and institutions that have been central to the U.S. Constitution and the practice of American constitutionalism, from the founding era to the present. Readings emphasize seminal works in American political thought, which are supplemented by historical accounts, illustrative literature, and contemporary analyses. Offered every year.

Pre-Professional Health Std (PPHS)

PPHS 100 - Foundations of Medicine (1)
This course provides a broad survey of premedical studies, the preparation for medical school admission and the medical profession. The class will address the specifics of medical school admission requirements and processes, academic coursework at the undergraduate and professional school level, the training of the physician and typical routines of a medical practice. The sequence of events from undergraduate coursework to becoming a licensed physician will be discussed. The class will examine how this sequence plays an integral part in the development of a capable physician.

PPHS 102 - Intro to Helping Professions (2)
This course explores career opportunities in the helping professions. Eleven professions are reviewed including clinical laboratory science, communication sciences and disorders, education, health information management, nuclear medicine technology, nursing, nutrition and dietetics, occupational science, physical therapy, psychology and social work. Students receive presentations from faculty in each of these areas and engage in a number of assignments to increase their knowledge of those professions in which they are most interested.

PPHS 105 - Freshmen Sem - Medical Scholar (0)
This course is required (and is limited to) freshman Medical Scholars. A variety of activities are planned with some lectures, hands-on activities, and networking with the SLU School of Medicine students and faculty.

PPHS 193 - Foundations of Medicine (1-2)
This course provides a broad survey of the premedical studies, the preparation for medical school admission and the medical profession. Throughout the course, the class will address the major topics of medical school admission requirements and processes, the academic coursework at both the undergraduate and professional levels, the training of the physician and the typical routines of a medical practice. The course follows the chronological sequence a traditional student will follow to become a licensed medical doctor. The class will look at these chronological events and examine how they play an integral part into the development of a capable physician.

PPHS 200 - Intro to Medical Research (2)
This course is designed to introduce undergraduate students to clinical research in an academic medical setting. Throughout the course, the class will address a range of topics including medical ethics, research modalities and tools in evaluating studies. Student should have completed three semesters of premedical coursework and attain the permission of PPHS to be eligible to participate in this class.

PPHS 201 - Intro to Medical Research-Lab (1)
This course is designed to introduce undergraduate students to clinical research in an academic medical setting. Throughout the course, the class will address a range of topics including medical ethics, research modalities and tools in evaluating studies. Students need to completed three semesters of premedical coursework, have successfully completed PPHS-200 and attain the permission of PPHS to be eligible.

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 - Foundations of Research Methods and Statistic
Fosters understanding of psychology as a science. Integrates introduction to basic designs, hypothesis generation, ethics, and writing conventions with computation of descriptive statistics and conceptual overview of inferential techniques. Preparation for: reading empirical articles, applied and advanced courses, working on faculty research, senior inquiry research projects. Team exercises in lab.

PSY 290 - Intercultural Sem & Practicum (1-3)
Theoretical and practical introduction to intercultural awareness. Discussion of readings and issues in weekly seminars. Consideration of cultural conditioning, values, and assumptions of participants and of international students in student-led conversation groups and extracurricular activities. Meets new core curricular requirement in cultural diversity.

PSY 306 - Psychologica Res Meth/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 323 - Developmental Psych: Adol (3)
Introduction to theory and research in the developmental psychology of adolescence. Emphasis given to the diversity of normative psychological development from puberty to adulthood, including aspects of physical, cognitive, social, emotional, and identity development.

PSY 330 - Social Psychology (3)
Introduction to the scientific study of social behavior focusing on how people relate to, think about, and influence each other. Topics include attitude formation and change, social cognition, conformity, group decision-making, aggression, altruism, prejudice, and interpersonal attraction and relationships.

PSY 331 - Personality Theory (3)
Dominant personality theories of Freud, Jung, Adler, Skinner, Maslow, Rogers, Kelly, etc., are presented within a historical and contemporary context. Emphasis on application of theory to personal situations through small group discussions and student log.

PSY 341 - Psychology of Work: Introduction to Industrial
This course will provide students with an overview of the field of organizational behavior and assist them in developing self knowledge useful to their pursuits in organizational settings. Primary areas of concentration include issues related to individuals, groups/teams, organizations and countries/cultures. Prerequisites: PSY 100, PSY 205 Encouraged.

PSY 345 - Counseling for Helping Profess (3)
Combines theory and practice to examine topics affecting helpers and those seeking assistance, including cultural, legal, and ethical issues confronting professional helpers. Emphasis on establishing rapport, attending, and other basic counseling skills. Some advanced skills and interventions are presented to facilitate effective helping.

PSY 401 - Adv. Res Meth & Stats (0-4)
Course combines statistics, research design, research methods and actual research experience. Inferential statistics including probability theory, sampling distributions, t-test, correlation, factorial analysis of variance and non-parametric. Methodologies including quasi-experiments and special control procedures. Students do at least one research project including analysis of results and write-up in American Psychological Association format: laboratory. Offered once a year.

PSY 411 - Sensation & Perception (3)
A survey of psychophysics, sensory systems; object, space, and event perception.

PSY 413 - 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 435 - Health Psychology (3)
The course is an overview of health psychology from a social psychological perspective. Topics include: Theories of health behavior, stress and coping, personality, social support, smoking, alcohol use, weight control, chronic illness, health care utilization and adherence, and designing persuasive interventions.
PSY 439 - Abnormal Psychology (3)
A survey of mental disorders, their signs, symptoms, underlying causes and treatment, with more emphasis on signs and symptoms.

PSY 441 - Organizational Psychology (3)
Interaction among person, environmental and organizational factors as they relate to such topics as personnel selection, motivation, job satisfaction, management, leadership, etc. in profit-making organizations.

PSY 442 - Psycholgy Tests & Measuremnts (3)
Theory and techniques in the measurement of intelligence, personality special aptitudes and interests. Emphasis on test construction, evaluation and interpretation.

PSY 446 - Marital Rel, Sexuality & Paren (3)
Explores the interrelationships among marital relations, sexuality, and parenting integrated by the theme of psychological communication. Format is lecture/discussion.

PSY 447 - Small Group Behavior (3)
Experiential learning course: from learning basic human communications skills to applying these skills in small groups. Effective small groups functioning from the viewpoint of systems theory. Topics: participative management, decision making, problem solving, organizational change, etc.

PSY 448 - Psychology and Law (3)
Examines laws, the legal system, and legal processes from the perspective of principles in psychology, as well as the use and effect of psychology in the formation and implementation of laws; and examines the influence of law on social science research and medical/mental health professions.

PSY 472 - Studies: Developmental (3)
Prerequisites: PSY 101 for all upper division courses. PSY 321 is strongly recommended for course.

PSY 479 - Practicum (1-6)
Requires volunteering (e.g., 135 hours earns 3 credits) at a human services agency or other psychology-related organization arranged by the student. Student keeps a journal or writes final reflection for a supervising faculty member recruited by the student. Does not satisfy senior inquiry requirement. Majors only.

PSY 480 - Undergraduate Research (1-6)
Outside-the-classroom research activity done under faculty supervision.

PSY 486 - History of Psychology Capstone (3)
Covers the history of modern experimental and applied psychology, from psychology's origins in philosophy to contemporary developments. Includes the beginnings of scientific psychology, early theoretical systems, the social context of developments in psychology, and the contributions of ethnic minorities and women. May be used to satisfy senior inquiry requirement. Majors only.

PSY 487 - Capstone Practicum Project (3)
Requires 90 hours volunteering at a human services agency or other psychology-related organization arranged by the student who meets concurrently with a supervising faculty member, keeps a journal, and writes a related 10-page paper. May be used to satisfy senior inquiry requirement. Majors only.

PSY 488 - Capstone Research Project (3)
Student arranges with a supervising faculty member to carry out an individual research project, including study design, IRB approval, data collection and analysis, and APA-style report. May be used to satisfy senior inquiry requirement. Majors only.

PSY 490 - Critical Thinking about Psych (3)
Designed to integrate and apply students' knowledge of psychology. Working in teams, students review the psychological literature and conduct interviews to propose critically informed and empirically grounded action plans addressing a psychology-related topic in the news. May be used to satisfy inquiry requirement. Majors only.

PSY 501 - Seminar in Research (0)
An introduction to faculty research activities for first-year graduate students in psychology.

PSY 503 - Clinical Assessment I (3)
Theory, research, and concepts in clinical assessment, with emphasis on cognitive abilities.

PSY 504 - Clinical Assessment II (3)
Theory, research and concepts in assessment of personality and behavioral disorders for individuals and groups.

PSY 508 - 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-Experimntl/Correlatnl 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 operant and respondent conditioning and their application to behavior analysis.

PSY 522 - Lifespan Dev Psychology (3)
Psychopathology, assessment, and intervention clinical coursework and permission of the instructor. Survey of cognitive, social, and emotional growth across the lifespan and cultural forces that influence development at different stages. Clinical implication (psychopathology, assessment, intervention) are addressed for each developmental stage.

PSY 524 - Adv Developmental Psychology (3)
Selective introduction to theories, methodologies, ethics, and empirical findings of developmental psychology, with a focus on the early stages of the lifespan and an emphasis on individual diversity and the social factors and social contexts that affect development.

PSY 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 desensitization, implosive therapy, covert sensitization and covert reinforcement, assertion training, aversion therapies, token economics, and contingency contracting.

PSY 576 - 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 Psych (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. Special emphasis is placed on the implementation of research projects from data collection through analysis, to written completion and publication.

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 examined the issues in practice and has a clinical-/professional-practice emphasis.

PSY 604 - Topics: Assessment (3)  
Survey of selected measures and research.

PSY 605 - Advanced Multivariate Analysis (3)  
Theory and application of factor analysis and other multivariate techniques.

PSY 606 - Topics: Quantitative Psych (3)  
Selected topics from the quantitative aspects of psychology, such as information theory, decision theory, Bayesian analysis, computer applications, etc.

PSY 616 - Topics: Learning Theory (3)  
Selected current theoretical issues in learning theory.

PSY 619 - Topics: Experimental Psych (3)  
Advanced seminar in newly developing areas of experimental psychology.

PSY 629 - Topics: Developmental Psych (3)  
Advanced seminar in newly developing 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 interpretive 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 - Cnslttn Skills: Theory/Practi (3)  
Theories, types and goals of consultation as well as relevant research associated with each type of consultation. Primary focus on training in systems consultation and its evaluation.

PSY 665 - Theories of Child Psychotherap (3)  
Study of diverse approaches to intervention with children and adolescents. Equal emphasis on recent literature pertaining to research and to practice.

PSY 666 - Psychodynamic Psychotherapy (3)  
Theoretical and empirical literature pertaining to psychodynamic orientations in various modes of psychotherapy.
PSY 668 - Neuropsychological Assessment (3)
An overview of the specialty area of neuropsychology. Emphasis is placed on understanding functional neuroanatomy and disorders with known neurobehavioral sequelae. Several approaches to assessment of neuropsychological functioning are reviewed.

PSY 669 - Topics: Intervention Strategies (3)
Advanced seminar in newly developing areas of intervention strategies.

PSY 678 - Community Psych & Primary Prevention (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, 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 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 Methods 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 614 - Interpretive Phenomenology: Research Metho
The course will examine phenomenology as a methodology for
understanding human actions and for conducting research into human
practices. The hermeneutic turn for developing knowledge for practice
disciplines (e.g., education, psychology, family therapy, nursing, social
work, public administration, and medicine) will be addressed together with
issues and skills in conducting interpretive research. Post-modern
conceptions of validity for evaluating interpretive research will also be
examined.

RMET 625 - Anal. of Variance & Exp. Desig (3)
Consideration of analysis of variance hypothesis testing and confidence
interval procedures for single and multiple independent variables. Designs
and analyses to increase experimental precision and control extraneous
variation are emphasized. Offered every Fall semester and Summer.

RMET 650 - Multivariate Statistical Anal. (3)
Discussion of multivariate statistical techniques with emphasis on
applications (knowing when to use, setting up and interpreting computer
programs, and interpreting journal article applications). Emphasis is on
broad interpretative principles rather than on specific mathematical details.
The techniques to be discussed include multiple regression, canonical
correlation, principal components, factor analysis, discriminant function
analysis, MANOVA, and MANCOVA. Offered every Spring semester and
Summer.

RMET 680 - Structural Equation Modeling (0-3)
Study of techniques used to test causal models in correlational research.
Begins with classical path analysis, then covers LISREL model to test
causal and confirmatory factor analysis models using latent variables.
Emphasis on applications, studying several reported applied research
studies. Analyzing data sets using SPSS and writing up computer results
in journal format. Offered every Spring semester.

Russian (RUSS)

RUSS 110 - Communicating in Russian I (0-3)
Introduction to Russian: speaking, listening, reading, and writing.
Emphasis on the acquisition of communicative skills in simple situations
related to personal interests and daily and academic life. Fall Semester.

RUSS 115 - Communicating in Russian II (0-3)
Continuation of RUSS 110. Offered Spring semester.

RUSS 210 - Inter Russian: Lang & Culture (0-3)
Continued practice in speaking, emphasis on functional skills. Gerunds
and participles. Readings in and discussion of culture. Offered Fall
semester.

RUSS 222 - Russian Culture & Civilization (3)
Understanding Russia today through a comprehensive outline of its
multinational, multicultural past: origins, geography, language;
Christianization; Westernizers vs. Slavophiles; the new Soviet person;
Women in Russia; Russia and the Arts; Breakup of the Soviet Union.
Readings in English. Fulfills Cultural Diversity Requirement.

RUSS 261 - Russian Fairy Tales (1)
This course represents a historical and literary introduction to witches,
demons, vampires and other dark forces in the Russian folk tradition.
Examining classic fairy tales, modern fiction, and visual representations
on film and on the web, students will gain an appreciation for the
significance of this tradition in Russian culture. No pre-requisites.

RUSS 262 - A Taste of Russia (1)
This course is designed to introduce students to Russian culture with
particular focus on Russian customs, traditions and attitudes toward food.
Exploring the concept of Russian cuisine in literature, arts, holidays, and
culture traditions, students will develop a better understanding and
appreciation of Russian cultural identity and lifestyle. No pre-requisites.

RUSS 307 - Scientific Russian (3)
Introduction to scientific prose in Russian. Emphasis on word formation
and the acquisition of scientific terminology. No spoken Russian required.
Fall semester.

RUSS 310 - Oral & Written Proficiency I (0-3)
Extensive review and refinement of grammar skills. Continued emphasis
on speaking. Regular writing assignments. Fall semester.

RUSS 315 - Oral & Written Prof in Russ II (0-3)
Continuation of RUSS 310. Offered Spring semester.

RUSS 320 - Saints and Sinners in Russian Literature and
Culture (3)
Semester-long study of one major Russian author: Pushkin, Lermontov,
Dostoevski, Turgenev or Chekhov; or one genre: short
story, novel, poetry.

RUSS 325 - Scientific Russian & 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 (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 grammars, syntax,
and word formation.

RUSS 420 - Topics in Russian Literature (3)
Semester-long study of one major Russian author: Pushkin, Lermontov,
Gogol, Tolstoy, Dostoevski, Turgeniev 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 118 - World Geography (3)
This course provides students with a worldwide overview of the
relationship between people and place. Emphasis is given to the
relationships among physical geography, environment, population,
economy and culture. No prerequisites.
SOC 120 - Introduction to Anthropology (3)
This course provides an introduction to the primary theories, concepts, and methodologies relating to anthropology. The main subfields of cultural anthropology, archaeology, biological anthropology, linguistics, and applied anthropology are surveyed and their integration is highlighted for a more in-depth understanding of the complexities in modern human societies and behavior.

SOC 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 200 - Research Methods (3)
Students are introduced to key issues involved in sociological research, the design of research to answer distinct types of questions, the nature and techniques of measurement and the major modes of data collection and analysis.

SOC 210 - Classical Social Theory (3)
This course provides an overview of social science theories, major theorists, and theoretical formulations. It emphasizes key assumptions, assessing the strengths and weaknesses of each theory, and the historical development of social theory.

SOC 211 - Sociology of Sport (3)
This course investigates the institution of organized sports from sociological perspectives. It reveals how sports reflect American society and contribute to the social construction of that society. The course examines the culture, socialization, social structure, deviance, discrimination, stratification, economics, and politics as it appears in professional and amateur athletics.

SOC 220 - Cultural Anthropology (3)
This course provides an introduction to the theoretical foundations and methodological approaches of Cultural Anthropology. It focuses on the concept of culture and how it relates to various topics, including ethnicity, language, adaptive strategies, kinship, political systems, gender, and religion. The purpose of the course is to give students a broad perspective on the types of anthropological research and discuss how the work of anthropologists is relevant to understanding the human condition.

SOC 221 - Biological Anthropology (3)
The course 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 adaptation; living and extinct primates; the hominid fossil record; and biological and cultural strategies of humans through time.

SOC 221 - Biological Anthropology (0-4)
The course 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 adaptation; living and extinct primates; the hominid fossil record; and biological and cultural strategies of humans through time.

SOC 222 - Peace and Conflict Studies (3)
This course introduces students to social science perspectives on peace and conflict by examining cooperation and conflict in human society. Cross-cultural examples and examination of our evolutionary past reveal what is really "human nature."

SOC 223 - Cross Cultural Perspectives on Human Sexuality
This course examines human sexuality in an anthropological context, highlighting the importance of integrating biological and cultural aspects of sexuality. Broad perspectives on sexual behavioral patterns across, and within, human cultures are taken. Topics include sexuality in an evolutionary perspective, the physiology of sex, human sexual practices, and gendered sexuality.

SOC 230 - American Popular Culture (3)
The course examines main stream (in contrast to high culture) cultural elements that prevail in American society, mainly in the more popular media. It includes myths, morals, music, material consumption, rituals, and icons of mass media.

SOC 232 - Law Enforcement (3)
This is an overview of the role of law enforcement 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. Introduction to Criminal Justice (SOC 190) is a prerequisite.

SOC 233 - Introduction to Corrections (3)
This course serves to introduce students to major contemporary issues in the areas of punishment philosophies, community corrections, and especially, institutional corrections. Introduction to Criminal Justice (SOC 190) is a prerequisite.

SOC 250 - Current Social Problems (3)
The course examines contemporary and emergent social problems from a sociological perspective. It further analyzes societal efforts to cope with these social problems and assessment of impediments to successful resolution of these problems. The objectives of the course are to understand how social problems are constructed, the social mechanisms of social policy, and the theories and concepts for analyzing social problems.

SOC 260 - Intro to Forensic Sciences (3)
Forensic science is the application of science to the law and involves various scientific disciplines. This course introduces the various methodologies and applications used in forensics. The objectives of the course are to introduce various disciplines and methodologies of forensic sciences, understand the roles of various disciplines in crime investigation, and demonstrate the use of forensic science in actual cases.

SOC 293 - Special Topics (1-4)
This course is designed for experimental courses or courses of special interest that are approved by the departmental faculty prior to offering. This opportunity may take the form of a visiting faculty member or another program requesting a unique course at the 200 level for a single semester.

SOC 301 - Quantitative Analysis (3)
This course provides computer analysis skills. It focuses on data management and data analyses using SPSS (Statistical Package for the Social Sciences) for Windows software. The students learn to: prepare data for processing, formulate hypotheses, discern the relationships of variables in the analysis stage, and interpret the output from SPSS. Prerequisites: SOC-200, Research Methods, or permission of instructor.

SOC 302 - Qualitative Research (3)
This course introduces the major methodologies and techniques for conducting research into the human condition in its natural context. It includes discussion of the analysis of group behavior, beliefs, rituals, ceremonies, relate to technologies, and generally order their natural world and control their societies. Prerequisite is SOC 200 Research Methods or permission of instructor.

SOC 310 - Contemporary Sociological Theory (3)
This course is an extension of classical social theory with an overview of recent sociological theories, major theorists, and theoretical formulations. It includes the key assumptions of different theories, evaluation of each theory, appreciation of the historical development of theories, and how theories shape our understanding of society.

SOC 318 - 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 - Contemporary Anthropological Theory (3)
This course introduces the major theories that inform contemporary anthropology. The course investigates a range of topics including issues of agency, subjectivity, history, social change, power, culture, and representation. The course objectives include: the appreciation of history of the anthropological study, anthropological theory, reading literacy in the discipline, and its communication. Prerequisite: SOC-120, Introduction to Anthropology, and SOC 210, Classical Social Theory.

SOC 321 - Demography: Population Characteristics and Trends (3)
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 primateology; and the methodology used to study social behavior and ecology.

SOC 327 - Environmental Anthropology (3)
This course examines current ecological problems and conservation/management efforts around the world, and combines case studies with classic anthropological theory to explore the ethical, cultural and biological ramifications of habitat use and environmental change. Topics include population growth, large-scale development, biodiversity conservation, sustainable environmental management, indigenous groups, consumption, and globalization.

SOC 330 - Social Psychology (3)
Processes of social interaction and reciprocal influence which arise in and constitute groups. Central emphases is on self image and communication.

SOC 333 - Corporate/White Collar Crime (3)
Analysis of corporate and white collar crime with an emphasis on both the social structural (macro-level) and social psychological (micro-level) factors associated with such activity. Major organizational and criminological theories will be used, discussed, critiqued, and applied in order to provide a framework within such problems can be understood.

SOC 335 - Social Movements (3)
Analysis of selected American social movements since 1930, including their precipitating factors, recruitment strategies and consequences. The role of societal power an ideology as well as that of social identification and meaning on collective action are examined.

SOC 336 - Racial and Ethnic Relations (3)
This course provides an interpretive framework for examining the many issues associated with racial and ethnic identity. We will focus primarily on Western models of race and ethnicity, but we will also explore the different ways these concepts are both imagined and perpetuated in other, non-Western societies.

SOC 338 - 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 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 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. Their 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 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 350 - Social Inequality (3)
The different forms of inequality will be examined from different theoretical perspectives. The course examines the causes and consequences of inequality in society as well as alternative approaches to dealing with the inequality. Prerequisites are: SOC-110, Introduction to Sociology, or SOC-120, Introduction to Anthropology, or SOC-190, Introduction to Criminal Justice, and Research Methods, SOC-200, and Classical Social Theory, SOC 210.

SOC 355 - Delinquency (3)
Analysis of the process by which certain acts and persons are designated delinquent; the social response to such actions and actors; subcultures 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)
This course introduces different explanations of criminal behavior, including the individual and contextual levels variables appropriate for different theories. In addition, the course relates the theories to their historical development and the role they play in public policy. The objectives are to describe the historical development of different theories and clarify the assumptions of different theories.

SOC 358 - 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.

SOC 361 - Sociology of International Relations (3)
The course is designed to analyze the sociological factors and influences that give a particular group of people identity and uniqueness; Examines the sociological skills required to facilitate understanding of different societies and identifies the changes that might be expected in future international relations.
SOC 370 - Law Enforcement (3)
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.

SOC 380 - The Juvenile Justice System (3)
This course provides students with an overview of the history and development of a system of justice for juveniles. The course focuses on behaviors that bring a youth into contact with the legal system, its context, and the stages of the processing of youths that have violated adult and juvenile laws. Prerequisites: SOC 190, Introduction to Criminal Justice. SOC 355 Juvenile Delinquency is highly recommended.

SOC 390 - Theories of Crime (3)
The course introduces different explanations of criminal behavior and relates the theories to their historical development, clarifies the assumptions of different theories and the role they play in public policy.

Prerequisites are: Classical Sociological Theory, SOC 210

SOC 392 - Researching Current Issues (3)
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.

SOC 393 - Special Topics (0-4)
This course is designed for experimental courses or courses of special interest that are approved by the departmental faculty prior to offering. This opportunity may take the form of a visiting faculty member or another program requesting a unique course at the 300 level for a single semester.

SOC 393 - Special Topics (3-4)
This course is designed for experimental courses or courses of special interest that are approved by the departmental faculty prior to offering. This opportunity may take the form of a visiting faculty member or another program requesting a unique course at the 300 level for a single semester.

SOC 394 - African-American Religious Traditions (3)
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.

SOC 395 - Human Sexuality in the Black Community (3)
In addition to providing general knowledge about human sexuality, this course assists students with gaining an insight into their sexuality and relationships. In addition to examining sexual issues at the personal and relational level, the course focuses on increasing general knowledge and understanding of human sexuality.

SOC 400 - Practicum (1-3)
Field work in criminal justice, forensic science, and sociology at corrections, probation, parole, and other governmental agencies, as well as business and private social service organizations.

SOC 401 - Evaluation Research (3)
This course covers both the theory and methods of evaluation research. It provides students with a basic understanding of the social science approaches and techniques to evaluate non-profit and government agencies. The social and political context in which agencies and social programs operate is incorporated into the analysis. Prerequisites: SOC 200, Research Methods, AND EITHER SOC 301, Quantitative Research OR SOC 302, Qualitative Research OR permission of instructor.

SOC 402 - Forensic Science Practicum I (3)
Fieldwork in forensic science at forensic labs, county morgues, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

SOC 403 - Forensic Practicum II (3)
Continuation of fieldwork in forensic science at forensic labs, county morgues, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

SOC 404 - Sociology Practicum (3)
Fieldwork in governmental agencies, as well as business and private social service organizations. Approval of instructor required. Every Semester.

SOC 405 - Feminist Social Movements (3)
This course analyses the American women's equal rights and suffrage movements of the 19th century to the present. The course makes comparisons with feminist movements in European countries. Permission of the instructor.

SOC 410 - Introduction to Urban Economic (3)
Analysis of the factors determining economic growth of urban areas. Economic considerations relevant to selected urban problems such as poverty, unemployment, housing and transportation.

SOC 420 - Urban Ecology: Neighborhoods (3)
Explores methods and theories which contribute to understanding urban neighborhoods and addresses the question, "how people do community."

SOC 426 - Censuses and Neighborhood Analysis (3)
Examination of analytic approaches to communities and neighborhoods utilizing census and socio-demographic data.

SOC 431 - Issues in Jurisprudence (3)
This course focuses on how the courts operate and fit within our democracy. Students will gain an understanding of the Constitutional guarantees including the Due Process Clause and the Equal Protection Clause and various guarantees contained in the Bill of Rights. Criminal Law and Procedure (SOC 439) is a prerequisite.

SOC 432 - Issues in Law Enforcement (3)
We study the administration of law enforcement agencies, emphasizing the process, role, organization, and management of policing organizations. Specifically, we will pay particular attention to its history, innovations, the rationale for changes, and impediments to policy and program implementation. Introduction to Criminal Justice (SOC 190) is a prerequisite.

SOC 433 - Issues in Corrections (3)
This course examines how various institutional and community sanctions (or ‘corrections’) have been used as a method in responding to crime. Correctional concepts, history, processes and contemporary issues in corrections are explored within the social and legal contexts of correctional facilities function. A prerequisite is SOC 233, Introduction to Corrections.

SOC 439 - Criminal Law and Procedure (3)
This course describes the criminal procedural 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.

SOC 440 - RACE, GENDER, CLASS, AND CRIMINAL JUSTI
This course examines how race, gender and social class influence how people are treated by the criminal justice system as perpetrators, victims and practitioners. A prerequisite is SOC 439 Criminal Law and Procedure.

SOC 446 - Criminal Investigation (3)
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.

SOC 451 - Constructing Social Problems (3)
This course provides an overview of the constructionist approach to social problems. This class examines how problems are interpretively constructed, as discussed and debated by various individuals and groups. The process of making claims about problems is the central concern of this course. SOC 110 is a prerequisite.

SOC 452 - Sociological Social Psychology (3)
An overview of sociological social psychology or symbolic interactionism. Use of classic and current readings to explore interactionist theories and research on topics, including the self, motives, alcohol, emotions, language, and social problems. SOC 110 is a prerequisite.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 453</td>
<td>Urban Ethnography (3)</td>
<td>This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation. Throughout this course, you will gain hands-on experience by carrying out your own ethnographic research project. SOC 110 Introduction to Sociology is a prerequisite.</td>
</tr>
<tr>
<td>SOC 454</td>
<td>Environmental Impact (3)</td>
<td>This course examines the social, economic and environmental dimensions of sustainability in cities around the world. Also examined are policies and opportunities to address the challenges of sustainability from both developed and developing countries.</td>
</tr>
<tr>
<td>SOC 455</td>
<td>Criminal Justice Policy (3)</td>
<td>Analyzes the various actors in the criminal justice system, their decision-making processes, and the policies they create and implement.</td>
</tr>
<tr>
<td>SOC 493</td>
<td>Special Topics (1-3)</td>
<td>Students are introduced to key issues involved in sociological research.</td>
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<tr>
<td>SOC 494</td>
<td>Sociology Capstone (3)</td>
<td>Provides the opportunity for students to synthesize the knowledge and skills they have gained from previous courses. In the process of examining conventional common sense assumptions, students are encouraged to think critically and deeply about themselves and the world in which they live.</td>
</tr>
<tr>
<td>SOC 495</td>
<td>Criminal Justice Capstone (3)</td>
<td>This course integrates knowledge of the operations of the criminal justice system with an understanding of research methodologies, findings, and theories of criminality. The course identifies the major issues confronting the criminal justice system, and presents an understanding the decision-making and policy process involved in the criminal justice system.</td>
</tr>
<tr>
<td>SOC 510</td>
<td>Proseminar (3)</td>
<td>This course critically examines the linkage of theoretical and practical issues in criminal justice. Topics include crime causation, policing, adjudication and sentencing, and corrections. Offered annually.</td>
</tr>
<tr>
<td>SOC 520</td>
<td>Urban Ecology: Neighborhoods (3)</td>
<td>The objective of this course is to introduce students to the theories, empirical research and methodologies on residential segregation and neighborhood change in American urban cities. The course begins with an overview of the major theories of neighborhood transitions, (e.g. the Chicago School, ecological models of neighborhood transitions, spatial assimilation theory, etc.) Next, theories of racial residential segregation are examined, with an emphasis on African Americans and other racial/ethnic minorities. Case studies of neighborhoods in Boston, Chicago, St. Louis, New York, Oakland, and Philadelphia are used to illustrate changes in neighborhood racial/ethnic composition and characteristics during the twentieth century. The final part of the course focuses on the consequences of residential segregation, particularly with regards to income, school, and health inequality. A major focus of the course is the research paper. Students are required to write a final research paper based on their neighborhood study. Students will work in teams to carry out the ethnographies, but each student is expected to write his or her own paper. Students are also expected to integrate data from other methodologies covered in the course as well.</td>
</tr>
<tr>
<td>SOC 530</td>
<td>Police Administration (3)</td>
<td>Students examine the components of administering a police agency, including human resource management, budget issues, political and constituent group influence, crime trends, legal issues, and community policing.</td>
</tr>
<tr>
<td>SOC 531</td>
<td>Issues in Jurisprudence (3)</td>
<td>Policy issues regarding court administration are addressed and students examine practical issues facing modern court administration. Offered annually.</td>
</tr>
<tr>
<td>SOC 532</td>
<td>Contemporary Issues in Law Enforcement (3)</td>
<td>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.</td>
</tr>
<tr>
<td>SOC 533</td>
<td>Issues in Corrections (3)</td>
<td>This course examines how various institutional and community sanctions (or &quot;corrections&quot;) have been used as a method in responding to crime. Correctional concepts, history, processes and contemporary issues in corrections will be explored and discussed within the social and legal contexts in which correctional facilities function. Further, we will examine the theory, practice, and human impact of treating criminal offenders, under correctional supervision, in both community and institutions. Thus, we will study (1) the major themes and issues present within the broad arena of corrections, (2) the conceptual debates and controversies surrounding certain correctional programs and policies, and (3) the current research on community and institutional based corrections activities and their effectiveness.</td>
</tr>
<tr>
<td>SOC 540</td>
<td>Race, Gender, Class and Criminal Justice (3)</td>
<td>This course will provide students with an understanding of how various master statuses, including race, gender and social class influence how people are treated by the criminal justice system as perpetrators, victims and practitioners. The ways in which this differential and adverse treatment of &quot;out groups&quot; by the system threatens social cohesion and conflicts with Constitutional mandates as well as ideas of justice and equality will also be explored.</td>
</tr>
<tr>
<td>SOC 547</td>
<td>Adv. Issues in CJ Policy (3)</td>
<td>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.</td>
</tr>
<tr>
<td>SOC 550</td>
<td>Social Stratification (3)</td>
<td>This course provides an interpretative framework for examining the many issues associated with social stratification and resulting inequalities. We will focus primarily on Western models of stratification, but we will also explore the different ways this concept is both imagined and perpetuated in other, non-Western societies. The emphasis will be on socioeconomic stratification, but we will also look at other forms of stratification such as gender, race, ethnicity, etc.</td>
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<tr>
<td>SOC 551</td>
<td>Constructing Social Problems (3)</td>
<td>This course provides an overview of the constructionist approach to social problems.</td>
</tr>
<tr>
<td>SOC 552</td>
<td>Sociological Social Psy (3)</td>
<td>This course provides an overview of sociological social psychology, which is often broadly referred to a symbolic inter-actionism.</td>
</tr>
<tr>
<td>SOC 553</td>
<td>Urban Ethnography (3)</td>
<td>This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation.</td>
</tr>
<tr>
<td>SOC 554</td>
<td>Environmental Impact of City (3)</td>
<td>This course examines the social, economic and environmental dimensions of sustainability in cities around the world.</td>
</tr>
<tr>
<td>SOC 561</td>
<td>Terrorist Challenge to America (3)</td>
<td>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.</td>
</tr>
<tr>
<td>SOC 562</td>
<td>Probtn, Parole, &amp; Comm Correct (3)</td>
<td>This course describes the operations of community corrections programs, addresses the obstacles and challenges to success, and discusses issues in the future. Offered annually.</td>
</tr>
<tr>
<td>SOC 584</td>
<td>Research in Criminal Justice (3)</td>
<td>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.</td>
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</tbody>
</table>
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.

SPAN (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 210 - Inter Spanish: Lang & Culture (0-6)
Continued practice in all skills. Readings in and discussion of Hispanic Culture.

SPAN 215 - Speaking in Spanish (2)
This course is designed especially for students with a basic or intermediate level of Spanish who wish to practice their speaking ability. The objective of the class is to give the student the necessary mechanisms to be able to communicate in Spanish. The pre-requisite is SPAN-115 or equivalent.

SPAN 223 - Latin American Cult & Civil (3)
A critical analysis of historical, political, religious and socioeconomic considerations that have contributed to the creation of the very complex cultural reality that is contemporary Spanish America. Taught in English.

SPAN 224 - Meeting the Other: Hisp Exp (3)
Development of cultural awareness and appreciation of the Hispanic experience as presented by its three main representatives: Spain, Latin America and the Hispanic presence in the United States. Taught in English.

SPAN 298 - Independent Study (0-3)
Prior approval required of sponsoring professor and department chairperson.

SPAN 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 415 - Advanced Oral Communication (0-4)
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: How It Happens (3)
This course reviews major theories about how second or foreign languages are learned and what factors influence the process. We will discuss what these theories mean to the teacher, the learner, and the policy maker, and what the theories tell us about psychology and linguistics. Taught in English.

SPAN 423 - Span Phonetics & Phonology (2-3)
Theoretical and practical approach to Spanish phonetics and phonology from the dual perspective of the underlying representative of sound units and their pronunciation within syllables, words, and phrases. Auditory comprehensive and sound discrimination practice, with transcription exercises and attention to correct pronunciation.

SPAN 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" (2-3)
Survey course that examines the literary expressions of the debate on Modernity and Modernization in Latin America in the period 1820-1920. Topics such as national identity, the creation of modern cities, the education of women and the role of minorities will be examined through an anthology of short stories, articles, poems, essays and comics.

SPAN 427 - Contemp Latin-Amer Poetry (3)
Survey course that analyses a representative group of Latin American poets. Main themes and formal characteristics of these authors will be discussed.

SPAN 428 - Early Latin American Novel (3)
Survey course that examines the Latin American novels written between 1890 and 1940. The class presents an overview of the major movements that informed the novels of the period such as Naturalism, Indigenism, Historicism, Futurism, and other Avant-garde trends. The issues of the construction of national identity and the formation of modern "civilized" societies will be addressed. Prerequisite: SPAN 420
The baroque sensibility. Paradoxical baroque double-vision of reality with resultant vital tension: Analysis of the counter-reformation masterpiece of Miguel de Cervantes.

SPAN 455 - Don Quixote (3)
Agustin Moreto, and Pedro Calderon. of the works of Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcon, The Spanish theatre of the sixteenth and seventeenth centuries. Analysis SPA 454 - Golden Age Drama (3)

Pre-requisites: SPAN420

Spain. The student will be exposed to mystic love, passionate love, through love by means of a selection of texts inherited from medieval literature, the role of women in society, and the construction of feminisms.

This course introduces the students to the work of Latin American women writers from the Colonial period to the 20th century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society, and the construction of feminisms.

This course examines the literary contributions of Afro-Hispanic writers from Spanish America and Equatorial Guinea in order to discuss the complexity of the African experience in the Spanish-speaking world from the colonial period to the 21st Century.

This course 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.

Doctrinaire romanticism compared and contrasted with authentic Spanish romanticism.

This course examines the development of Latin American Theater from the Colonial period to 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.

This course examines the interplay of different cultures, gender roles, ideological uses, and social changes the last three decades of the 20th Century.

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 432 - The African Experience in Spanish America (3)
This course examines the diverse strategies used by Latin American testimonial literature to introduce realities. Through the analysis of testimonies, the students will develop an understanding of the complexity of Latin American culture and society.

SPAN 436 - Women's Literature in Lat Am (3)
This course introduces the students to the work of Latin American women writers from the Colonial period to the 20th century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society, and the construction of feminisms.

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 444 - Towards the sentimental novel: the mystic, th
This course explores short narrative types and their functions during the thirteenth century up to the sixteenth century in Spain. Topics to cover are: the interplay of different cultures, gender roles, ideological uses, and differences between medieval and contemporary short narratives. All texts are provided in modern Spanish. Required: SPAN420

SPAN 445 - 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 446 - Generation of 98 (2-3)

SPAN 447 - 20th Century Spanish Thought (2-3)
Doctrinaire romanticism compared and contrasted with authentic Spanish romanticism.

This course 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.

This course examines the diverse strategies used by Latin American testimonial literature to introduce realities. Through the analysis of testimonies, the students will develop an understanding of the complexity of Latin American culture and society.

SPAN 436 - Women's Literature in Lat Am (3)
This course introduces the students to the work of Latin American women writers from the Colonial period to the 20th century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society, and the construction of feminisms.

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 503</td>
<td>Spanish Linguistics (3)</td>
<td>Synchronic and diachronic analysis of the Spanish Language. Phonological development and morpho-syntactical, lexical and semantic change. Dialects. Discussion of special topics. Offered occasionally.</td>
</tr>
<tr>
<td>SPAN 504</td>
<td>Method &amp; Tech: Teaching Span (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 507</td>
<td>Spanish Stylistics (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 508</td>
<td>Contemp Span Cult &amp; Civil (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 509</td>
<td>Contemp Span-Am Cult &amp; Civil (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 520</td>
<td>Intro to Literary Criticism (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 523</td>
<td>Contemp Latin Am Short Story (2-3)</td>
<td>Trends, themes and techniques. Emphasis on Borges and Cortazar. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 525</td>
<td>Latin American &quot;Modernismo&quot; (2-3)</td>
<td>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 &quot;education of women&quot; and the role of minorities will be examined through an anthology of short stories, articles, poems, essays and comics. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 527</td>
<td>Contemp Latin American Poetry (3)</td>
<td>Survey course that analyses a representative group of Latin American poets. Main themes and formal characteristics of these authors will be discussed. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 528</td>
<td>Early Latin American Novel (3)</td>
<td>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 &quot;civilized&quot; societies will be addressed. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 529</td>
<td>Contemp Latin American Novel (2-3)</td>
<td>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 &quot;Latin American Boom&quot;. (Offered occasionally.)</td>
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<tr>
<td>SPAN 531</td>
<td>Contemp Latin American Drama (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 532</td>
<td>Themes in Latin Amer Lit (3)</td>
<td>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.</td>
</tr>
<tr>
<td>SPAN 533</td>
<td>Latin Am Novel after 1970 (3)</td>
<td>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 &quot;Post-modern Era&quot;. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 535</td>
<td>Latin American Testimony (3)</td>
<td>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. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 536</td>
<td>Women's Literature in Lat Am (3)</td>
<td>This course introduces the students to the work of Latin American women writers from the Colonial period to the XX century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society and the construction of women's identity. (Offered occasionally.)</td>
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<tr>
<td>SPAN 537</td>
<td>Latin Am Literature &amp; Film (3)</td>
<td>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.)</td>
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<tr>
<td>SPAN 538</td>
<td>Cultural Stereotypes: Lat Amer (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 539</td>
<td>Contemp Span Women Writers (2-3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 543</td>
<td>El Cid/El Amor/La Celestina (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 552</td>
<td>Seventeenth-Century Prose (3)</td>
<td>Don Quijote: prime example of baroque sensibility and baroque style. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 553</td>
<td>Golden Age Lyric Poetry (3)</td>
<td>Seminar on the Renaissance and Baroque poets in the sixteenth and seventeenth centuries: Garcilaso de la Vega, Fray Luis de Leon, San Juan de las Cruz, Luis de Gongora. (Offered occasionally.)</td>
</tr>
<tr>
<td>SPAN 554</td>
<td>Golden Age Drama (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>SPAN 555</td>
<td>Western Sephardi Diaspora (3)</td>
<td>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)</td>
</tr>
</tbody>
</table>
THEO 221 - History of Christianity (3)
The historical expression of Christian theology in the faith and life of the church, its major figures and movements, relation to cultural developments, and significance for contemporary problems.

THEO 222 - Studies in Christian Scripture (3)
This is a general title for new courses that consider various theological, textual, and hermeneutical questions found in the New Testament.

THEO 223 - Medieval Christianity (3)
The history of medieval Christianity from the early Church origins to the dawn of the Reformation. Topics include: inculturation, missionary activity, the papacy, monasticism, saints and pilgrimage, the penitential system, worship and architecture, feudal society, the crusades, the apostolic poverty movement, friars, the medieval university, mysticism.

THEO 224 - The Church & World Since 1500 (3)
This course will examine the history of Western Christianity since the Reformation, focusing on the themes related to development of doctrine. Interactions of the church with intellectual and cultural challenges will be taken up. Future directions of Catholic Christianity, rooted in the foundation of the Second Vatican Council will be considered.

THEO 225 - American Christianity (3)
The history of American Christianity from colonial times to present, Spanish, French, English beginnings; Puritanism, the Great Awakenings; Unitarianism, Congregationalism, Methodism; the immigrant churches, Roman Catholic history; Liberalism, Neo-Orthodoxy, Fundamentalism; Black churches, contemporary movements.

THEO 226 - The Christian Sacraments (3)
The Sacraments, the Church as ultimate manifestation of Covenant of the People of God, development of sacraments in apostolic community and patristic age, modern sacramental theology.

THEO 227 - Jesus and Salvation (3)
The aim of this course is to provide an integrative understanding of Jesus Christ as he has been proclaimed throughout Christian History up to the present time and his role in salvation.

THEO 228 - Christian Beliefs (3)
This course aims at providing a comprehensive understanding of Christian faith by investigating the historical development and interrelation of its main tenets. Attention will be given to how Christian beliefs arise from, and themselves give distinct shape to, Christian practices in the Church and the world.

THEO 229 - The Church: Yesterday & Today (3)
Issues in the contemporary church will be examined in relation to their historical antecedents. Renewal and reform in the modern church will be considered in the light of the Second Vatican Council. An explicit theological method will be introduced and practiced.

THEO 230 - Christian Sacraments (3)
The Sacraments, the Church as ultimate manifestation of Covenant of the People of God, development of sacraments in apostolic community and patristic age, modern sacramental theology.

THEO 231 - God in Human Experience (3)
Explores how humans have understood the notion of God with emphasis on the Christian traditions, the God of Jesus of Nazareth.

THEO 232 - Early Church (3)
The history of early Christianity from Jesus Christ to the Council of Chalcedon in 451 A.D. The variety of early Christianity, geographical expansion, Gnosticism, emergence in the Roman world, Christian art, Trinitarian and Christological controversies.

THEO 233 - Medieval Christianity (3)
The history of medieval Christianity from the early Church origins to the dawn of the Reformation. Topics include: inculturation, missionary activity, the papacy, monasticism, saints and pilgrimage, the penitential system, worship and architecture, feudal society, the crusades, the apostolic poverty movement, friars, the medieval university, mysticism.

THEO 234 - The Church & World Since 1500 (3)
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THEO 235 - American Christianity (3)
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THEO 240 - Christian Sacraments (3)
The Sacraments, the Church as ultimate manifestation of Covenant of the People of God, development of sacraments in apostolic community and patristic age, modern sacramental theology.

THEO 241 - God in Human Experience (3)
Explores how humans have understood the notion of God with emphasis on the Christian traditions, the God of Jesus of Nazareth.
THEO 260 - Christian Moral Life (3)
An exploration of Christian character (virtues), principles of decision making, conscience formation, authoritative sources (scripture, tradition, magisterium, etc.) with analysis of issues such as war, capital punishment, physician-assisted suicide, abortion, etc.

THEO 261 - Theology and the Environment (3)
This course explores what the Christian theological tradition teaches about how humankind ought to be in relationship with the rest of creation. Focus will be on, but not limited to, Christianity and on key theological themes and perspectives while also seeking to discern possible promising foundations for responding to ecological concerns.

THEO 269 - Studies in Christian Morality (3)
General number for new courses in Christian Morality.

THEO 270 - Religious Traditions of Asia (3)
Includes various emphases in the following: a) Historical/Doctrinal, b) Scripture, and c) Arts. Survey of Hinduism, the indigenous traditions of China (Taoism and Confucianism) and Japan (Shinto), and Buddhism from its Indian origins to its expansion into East and Southeast Asia.

THEO 271 - Buddhism: Religion and Art (3)
An introduction to a major component in the cultures of south, southeast, and east Asia through both the textual and visual documentation of the Buddhist tradition. From its origins in India, we follow the path of the Buddha through central Asia and into China, Korea, and Japan; by sea and through Burma into the nations of the Indo-Chinese peninsula, with a brief detour to Indonesia during late antiquity.

THEO 272 - Hinduism: Religion and Art (3)
An overview of fundamental beliefs and values of the family of religious traditions collectively known as Hinduism, using primary textual and visual sources from a range of cultural contexts, with special attention to how the story of Hinduism offers insight into the interplay of verbal and visual expression of religious and cultural beliefs and values. Heavy emphasis on the visual arts as primary sources, always attentive to ways Hindus have "translated" words into images and vice-versa.

THEO 273 - Islam: Religion & Culture (3)
An overview of fundamental beliefs and values of the religious tradition called Islam, using primary textual and visual sources from a range of cultural contexts, with special attention to how the story of Islam offers insight into the interplay of religion and culture: wherever Islam has taken root, it has become inculturated even as it has Islamized its new host culture.

THEO 274 - Judaism (3)
This course fulfills the Cultural Diversity core requirement. The history of Judaism in biblical times; Talmud and rabbinic tradition; the diaspora and persecution of the Jews; the Enlightenment; Hasidism and Kabbalah; the Holocaust; Zionism; worship, kosher law, life stages, Jewish feast days; contemporary developments.

THEO 275 - Jerusalem: City of 3 Faiths (3)
DESCRIPTION: This course (under this name only) satisfies the criteria for the College of Arts and Sciences Cultural Diversity component of the Core. A survey analysis of the three Abrahamic faiths and their interrelationships focusing on the significance of Jerusalem for each of them historically and today.

THEO 279 - Studies: Non-Christian Religio (3)
General number for new courses in Non-Christian Religions.

THEO 293 - Special Topics (0-3)
To survey the historical, social, and political background of the Hebrew Prophets; their main themes, passages, and relevance to modern times.

THEO 293 - Special Topics (0-4)
To survey the historical, social, and political background of the Hebrew Prophets; their main themes, passages, and relevance to modern times.

THEO 311 - Old Testament: Psalms (3)
To survey the literary, historical, social and political background of the Psalms; their literary forms, main structure, theology and relevance to modern times.

THEO 312 - 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 319 - Studies in Jewish Scriptures in the Christian
Examine how the authors of the New Testament utilized the texts of the Old Testament.

THEO 320 - Life and Letters of Saint Paul the Apostle (3)
Examine the life and writings of St. Paul, Apostle to the Gentiles.

THEO 321 - Gospels of Matthew, Mark and Luke (3)
Offers a comparative study of the Synoptic Gospels.

THEO 322 - Gospels and Epistles of John (3)
This course examines the writings of John the Apostle and Evangelists.

THEO 324 - New Testament Ethics (3)
This course asks what principles or values are to be found in the New Testament and how these should bear on Christian living today.

THEO 329 - Studies in Christian Scripture (3)
General number for new courses in the New Testament

THEO 330 - Teachers in Early Christianity (3)
Examine selective writings and thought of theologians in the early centuries of Christianity.

THEO 331 - Teachers: Medieval Christianity (3)
Overview of medieval theologians and spiritual writers with specific attention to the origin and development of the diverse schools of thought in the middle ages.

THEO 332 - Mary and Her Sisters (3)
This course looks at a series of important female figures from the scriptural roots of Christianity, especially the multiple Marys of the New Testament. We will read the primary canonical and apocryphal texts describing these women and examine their depiction in art, literature and music throughout history.

THEO 333 - The Reformations of the 16th Century (3)
This is a study of the Protestant Reformation and the Catholic Reformation in the 16th century.

THEO 334 - Christians In Middle East (3)
Building the knowledge gained in at least one prior theology course, this offering studies global Christianity with a focus on Christian churches in the Middle East. The course studies the intersection of theological, historical, ethnic, cultural, linguistic, and political factors that shape expressions of the Christian faith in Greece, Turkey, the Caucasus, Syria, Iraq, Iran, Lebanon, Israel/Palestine, Jordan, and Saudi-Arabian Peninsula to Egypt and Ethiopia. It also studies how middle-eastern Christian identities affect immigrant Christian communities in the diaspora in the West.

THEO 335 - African American Religious Traditions (3)
This course can also 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.

THEO 336 - Christianity in Africa & Asia (3)
The impact of Christianity on Africa and Asia with a focus on developments during the 19th and 20th centuries.
THEO 337 - US Hispanic Theology (3)
An introduction to Latina/o theologies in the United States, this course will examine the contributions of Hispanic Americans to the field of theology while exploring specific issues, concerns, and beliefs unique to the Hispanic community. This course brings marginalized cultural perspectives into critical conversations with dominant narratives, highlighting the contributions of ethnic minorities and women, and challenging the church and university communities to embody the Gospel's inclusive vision where there is no longer Jew or Greek, male or female, rich or poor (Galatians 3:28). In forming men and women for others and in deepening spiritual values in an increasingly interdependent and diverse world, we must think in terms of the global dimensions and implications of knowledge. Critical reflection on cross-cultural issues, whether on the local or global level, is a recurrent theme throughout this course.

THEO 349 - Studies in Theology and History (3)
General number for new courses in theology and history.

THEO 350 - Love and the Human Condition (3)
A theological exploration of human existence as constituted by love, desire, sin and the yearning for salvation. Through examination of classic texts/themes from the Christian tradition, this course will focus on the complex relationship between human and divine love. Specific topics to be covered include: affectivity, knowledge, freedom, built, friendship, self-sacrifice, and human sexuality.

THEO 351 - Marriage & Christian Vocation (3)
A study of contemporary Christian theology and ethical reflections on marriage, covering sexual, gender, parenthood, divorce and family issues.

THEO 352 - Theology of Death & Suffering (3)
Judeo-Christian response to the mystery of suffering, the meaning of death, healing as a religious experience. Reference to the bible, contemporary Christian theology, and social studies.

THEO 353 - Christian Feminism (3)
This course is designed to offer a broad understanding of the issues and implications of contemporary feminist thought relative to religious traditions, especially the Christian tradition. It will critique theology and anthropology as well as offer constructive visioning of the new ways of living in relationship. The course is oriented toward personal and social transformation.

THEO 354 - Research Seminar: Sources and Methods in T
The purpose of this course is to provide undergraduate majors with the resources and skills necessary to engage in rigorous theological reflection, research, and writing in preparation for participation in the Senior Seminar THEO 491. Prerequisites: THEO 100, THEO 200 level, and Declared Major in Theology.

THEO 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 we 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 intervises and fifteen hours of service-learning.

THEO 356 - Religion and Science (3)
This course examines the history and recent development of three disciplines--cosmology, physics, and biology--to show how religion and science have related to one another in the past and relate to one another in contemporary research and reflection. A final part of the course considers some issues that involve multiple scientific disciplines (e.g., extraterrestrial intelligence, environmentalism, etc.).
THEO 369 - Studies in Morality and Society (3)
An advanced course in ethics. Topic is chosen by instructor.

THEO 372 - Jewish Life and Thought (3)
This course offers a study of the Golden Age of Spain, Jewish Mysticism, the Enlightenment, 19th century Nationalism, Zionism, the Holocaust and the rise of Modern Israel. Students will examine how these historic phenomena shaped the modern Jewish concepts of Torah, God, Israel and ritual observance. Jewish philosophers from Maimonides to Martin Buber will be studied and students will have an opportunity to attend a local synagogue to experience Sabbath worship.

THEO 379 - Studies in Non-Christian Religious Traditions
General number for new courses.

THEO 380 - Christian Prayer (3)
What happens when someone prays? How have Christianity’s saints and theologians understood conversing with God? This course examines the history of Christian prayer as well as the various ways of praying found therein.

THEO 381 - Eucharist: Liturgical Theology and Practice (3)
Explore the meaning of the Mass, its theology and history and its effect on daily life. Gain basic understanding of liturgical theology and practice by reading primary and secondary sources. Experience and reflect upon liturgical music and various styles of Catholic worship in St. Louis. Pre-requisite: THEO 100 & 200.

THEO 382 - Spirituality of Nonviolence (3)
The Spirituality of Nonviolence offers students a variety of opportunities to learn, practice and experiment with the power of creative nonviolence to transform their lives and our world. Student will recognize nonviolence as an act of faith in the God of Love and Justice.

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

THEO 389 - Studies in Theology and Religion (3)
General number for new courses in theology and religion.

THEO 402 - The Bible and Literature (3)
Study of selected books and passages from Old and New Testaments, as well as selected contemporary books, plays and philosophical essays. Comparison of nature and destiny of the human person and the world. Application of these themes to contemporary life.

THEO 410 - Biblical Interpretation (3)
An examination and survey of biblical hermeneutics, including Old and New Testaments, rabbinic Judaism, the early church, and the history of hermeneutical theory up to the present time.

THEO 411 - Biblical Apocalyptic Literature (3)

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 419 - Studies in Jewish Scriptures in the Christian
Examines themes and issues of the Jewish Scriptures as found in the New Testament.

THEO 420 - Synoptic Gospels: Adv Topics (3)
An examination of the Gospels of Matthew, Mark and Luke, with special focus on the distinctive portrait of Jesus each presents.

THEO 429 - Studies in Christian Scripture (3)
General number for new courses in Christian Scriptures.

THEO 431 - Survey: Early Church (3)
This course is a study of the figures, issues, and movements in the development of Christianity from the close of the New Testament to the beginning of the Middle Ages, or in other words, the Apostolic Fathers to Gregory the Great.

THEO 432 - Survey: Medieval Church (3)
This course exposes students to the broad sweep of figures, movements and theological themes in the historical period from late antiquity through the 15th century.

THEO 433 - Survey: Modern Church (3)
This course is designed to expose students to the broad sweep of figures, movements, and theological themes in the historical period from the Reformation to the present day.

THEO 434 - Survey: American Church (3)
This course surveys major developments in Catholic and Protestant Christianity, from the 16th century Spanish influence to the present, with special attention to theological and intellectual issues.

THEO 435 - Medieval Mystics: Love and Knowledge (3)
A review of the theology and mystical experience as found in medieval mystical texts.

THEO 436 - Catholicism Today (3)
A systematic and foundational study of the content and the relationships between human existence, God, Jesus Christ, Holy Spirit, Church, Sacraments, Spirituality, and Morality.

THEO 437 - Women in the Early Church (3)
Observing a widespread ambiguity in women's lives between subordination, exemplary status, leadership roles, and opposition on account of it, this course examines a wide range of primary texts by and about women in the early Christian churches in order to explore the relationship between faith and culture as the context for understanding women's role and status in the early church. We will also employ hermeneutical principles in the interpretation of these texts in order to assess the relevance of their application to the modern context.

THEO 449 - Studies in Theology & History (3)
General number for new courses in theology and history.

THEO 450 - Theology of God (3)
The historical and contextual study of human understanding of God and personal, pastoral implications.

THEO 451 - Theol & Cultural Anthropology (3)
An examination of interplay between theology, culture, and anthropology.

THEO 452 - Church: Mission & Culture (3)
An examination of interplay between theology, culture, and anthropology.

THEO 453 - Theology of Nature (3)
A study of nature and ecology in the history of Christian theology and spirituality, examining the biblical basis for environmental ethics; the importance of the earth in a Trinitarian, incarnational, and sacramental theology; and a comparison with the environmental sensitivity of other faith traditions.

THEO 454 - Christology (3)
This course is a biblical, historical and systematic theological study of the person and significance of Jesus of Nazareth. As an upper-level course offering, this course presupposes the students' familiarity with the study of theology as ordinarily attested by the successful completion of a 200 and 300 level theology course.
THEO 455 - Women, Evangelization, World (3)
In a theological and historical context, we will examine how Christian women in the Americas, Africa and Asia have understood and shaped evangelization, both in the present and past within their denomination and beyond. After a brief excursion into evangelization and first millennium women, we will examine selected 19th and 20th century U.S. Christian women and move to contemporary women's experience of evangelization.

THEO 456 - Theology of the Human Person (3)
This course explores the meaning of being human from a theological perspective. It examines themes of en nature and grace, sin, free will, human knowledge. As an upper-level course offering cross-listed as a graduate course, this offering presupposes familiarity with the study of theology as attested by the successful completion of a 200- and 300-level course.

THEO 459 - Studies: Faith & Reason (3)
General number for new courses in faith and reason.

THEO 460 - Bioethical Controversies (3)
An examination of biomedical issues through an understanding of the nature of ethics, methodology, and process of moral analysis and reflection.

THEO 461 - Spirit/Political Commitment (3)
A study of themes in theology as they relate to politics and the discipline of the spiritual life. This writings of Gandhi, King, Merton and others. May be taken as a Core course only by students in the School of Social Service.

THEO 463 - Ethics and Liturgy (3)
This course explores the possible connections between liturgy and ethics, worship and morality. It specifically examines the ways in which liturgy, first, is a source for ethics, second, is an object of ethical evaluation, and third, is, as some major Protestant and Catholic theologians recently argue, coterminal with ethics.

THEO 464 - American Spirituality and Landscape (3)
A study of American spiritual traditions from the perspective of their spatial contexts, landscape, and sense of place. The theological understanding and ritual practice of sacred place will be considered in Native American, Spanish/French, Catholic, Puritan, Evangelical Protestant, Shaker, and Catholic Worker traditions (among others).

THEO 465 - War and Peace in the Christian Tradition (3)
This course examines Christian perspectives, from the early church to the present, on the ethics of war and peace. It explores developments in church teachings about pacifism and nonviolence, just war, crusades, total war, outlawing of war, the responsibility to protect vulnerable populations, and responding to the threat of terrorism.

THEO 466 - Theology of Nature (3)
A study of nature and ecology in the history of Christian theology and spirituality, examining the biblical basis for environmental ethics; the importance of the earth in a Trinitarian, incarnational, and sacramental theology; and a comparison with the environmental sensitivity of other faith traditions.

THEO 467 - Social Ethics: Christian Faith in the Public Sp
The course gives students an understanding of contemporary Christian Social Ethics. Christian theological debates on war, human rights, economic justice, capital punishment, the environment, and the family will be addressed. Prerequisites are successful completion of a 100, 200, and 300 level courses.

THEO 468 - La sangre de los mártires (3)
Latin America history can be characterized as a cultural mestizaje between the Iberian, African, and Indigenous cultures resulting from Christian/Catholic evangelization. Such evangelization created a tragic history in which the poor, women, and ethnic minorities were the victims of violence that gave birth to a theology of liberation and martyrdom.

THEO 469 - Studies in Morality & Society (3)
General number for studies in morality and society.

THEO 470 - Interreligious Dialogue (3)
A study of the self-understanding of Christianity as it faces the other religions of the world. The uniqueness of Christ, the Christian notion of revelation, particularist and universalist salvation, salvation outside of the Church, and plurality of the Christian tradition concerning salvation.

THEO 479 - Studies in Non-Christian Religious Traditions

THEO 480 - Christian Iconography (3)
Examines the theological themes found in early and contemporary Christian art.

THEO 488 - Nicaragua: Theology and Culture (0-3)
A service learning course that includes a 2-month summer immersion program in Nicaragua, a semester of preparatory study of Latin American culture and theology, and post-trip reflection on the summer experience. Limited to 4-6 students. Students must apply for the Puleo Scholarship in Dept. of Theological Studies in fall; attend classes at SLU in the spring and in the fall following the summer program.

THEO 489 - Studies in Theology & Religion (3)
General number for Studies in Theology and Religion.

THEO 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 503 - 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 historical period from late antiquity up to the 15th century. Offered annually.

THEO 522 - Survey of Medieval Chrstn 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 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 545 - Theology of the Human Person (3)
This course explores the meaning of being human from a theological perspective. It examines themes of en nature and grace, sin, free will, human knowledge.

THEO 546 - Mariology (3)
Mary in salvation history and her relationships with fundamental themes of Christian faith. Offered occasionally.

THEO 547 - Church (3)
Foundation, structure, marks, mission, and offices of the Church; historical development; ecumenical questions. Offered occasionally.

THEO 550 - Sacraments (3)
Sacraments in Christian history and theology in general. Offered occasionally.

THEO 552 - Christian Today (3)
Review of Catholic and Protestant theologians on the family. Issues addressed include: gender, parenting, divorce/remarriage, sexuality, social justice, and public policy. Offered occasionally.

THEO 554 - Christian Anthropology (3)
Meaning of sin, grace, and justification in Christian tradition. Offered occasionally.

THEO 555 - Catholicism Today (3)
Offered occasionally.

THEO 559 - Special Topics: New Testament (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)
Judaic-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.
Theatre (THR)

THEO 578 - Spirituality & Art (3)
Imagination and symbol in spirituality; and survey of various ways in which faith has been artistically expressed, in relation to sacred text, sacred, space, sacred time and the individual believer. Offered occasionally.

THEO 579 - Special Topics: Spirituality (3)
Offered occasionally.

THEO 580 - Theo & Catechetical Ministry (3)
History and theology of religious education and the role of the catechist in Christian tradition; the theological understanding of religious education and the principal authoritative documents of recent times. Offered every other year.

THEO 581 - Models & Methods for Rel Educ (3)
Examination of theological and educational models in religious education and their influence on catechetical material and methods; applied to all levels; texts and resources reviewed. Offered every other year.

THEO 582 - Admin of Rel Educ Programs (3)
Strategies for developing and maintaining religious education programs in school and parish; recruitment, supervision, evaluation, in-service of teachers; goal-setting, organization, evaluation of programs; communication skills and collaboration; budgeting and record keeping; leadership styles and conflict management. Offered every other year.

THEO 583 - Element of Rel Educ Curriculum (3)
Essential elements of religious education curriculum; introducing children and adults to sacraments; focus on first sacraments and RCIA; liturgy and prayer in catechesis. Offered every other year.

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

THEO 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 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.

THEO 700 - Approaching the Arts: Theatre (3)
Objectives: 1. To examine some public impressions of the role of the arts in American society; 2. To demonstrate to students, through lecture and discussion, some of the key features of a play in performance which critics, fans, and theatre artists have sought in contemporary productions; 3. To introduce some of the students to the standard tasks and procedures brought to bear in play productions; 4. To apply all of these studies to the appreciation of plays by viewing several live productions during the semester. Satisfies the Arts and Science Core Requirement for non-majors.

THR 150 - Introduction to Theatre (3)
An introduction to the process of making theatre. Students will work on producing theatre and discuss aesthetic and practical considerations in theatre production. Satisfies the Arts and Science Core Requirement for non-majors.

THR 205 - Introduction to 3D Design (3)
This course will develop a fundamental understanding of the process of designing in 3 dimensions. Exercises will explore the methodology of conceptualization of objects, containers, and spaces. This course satisfies the Art and Science Core Requirement for non-majors.

THR 206 - Intro to Computer Aided Design (3)
This course introduces the fundamentals of computer aided design, concentrating on 2-D drafting and prototyping. AutoCad 2002 LT will be used. Drafting training or experience recommended but not required.

THR 220 - Survey of Theatre Design (3)
The Survey of Theatre Design will explore how theatre designers conceptualize the world of a play. The class is intended for the student of theatre who desires a general introduction to costume design, scenic design, lighting design, sound design and projection design. Prerequisite: THR 150.

THR 240 - Page To Stage (3)
You will explore how playwrights tell stories about the world. Students will research a figure, crisis, issue or historical event and arrange this material into plays. Objectives: understand what playwrights do; what the basic elements of a play are; experience the creative process of 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 269 - 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 351 - Musical Theatre Performance (3)
Objectives: 1. To give students an overview of the history of Musical Theatre Genre; 2. To guide students in performance exercises in Musical Theatre; 3. To instruct students in acting techniques that can be used in performance of vocal music. Activities may include in-class performances in an audition format and/or longer cuttings from Musical Plays.

THR 352 - Advanced Acting: Auditioning (3)
This course is designed to assist in the selection of audition material, increase awareness of hiring practices in the performing arts, and prepare a marketable audition repertoire.

THR 353 - Scenic Art (3)
This course will familiarize the student with essential 2-dimensional scenic art techniques. By the end of the course the student will understand how to break down a scenic art problem to its component parts and develop a process through which a full scale work can be successfully realized.

THR 355 - Theatre Practicum (0-3)
Special Notes: <i>Theatre Majors/Minors Only</i> Faculty guided experience in University Theatre Productions. This course is repeatable. Pass/Fail only.

THR 356 - Advanced Acting (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 357 - Advanced Scenic Art (3)
A continuation of the 2-dimensional skills and processes acquired in Scenic Art with more complex 2-dimensional projects, and an introduction to 3-dimensional scenic production and finishing.

THR 360 - Prof. Theatre: Career Prep (3)
An overview of the American Professional Theatre, its professional organizations and operational paradigms. Portfolio and resume preparation.

THR 361 - Theatre Management (3)
Theatre Management is a course designed to introduce theatre students to the practice, realm and study of Theatre Management. Topics include: strategic planning, marketing/public relations, arts law, financial management, development (fund raising), operations/facility management and personnel.

THR 362 - Stage Management (3)
An introduction to the role and function of the stage manager in the theatre production process.

THR 370 - Directing I: Theories & Method (3)
This course intends to provide the beginning directing student the fundamentals of the art. Upon completion students will have a firm grasp on the duties of a director. Students will also have a basic knowledge of staging for different theatres. Prerequisite: THR 350.

THR 450 - Costume Design (3)
Objectives: 1. To help students see collaborative options for uniting the Costume Designer and the Director, and some standard research processes. 2. To give students an overview of the history of Costume Design and some of the basic elements of design; 3. To guide students through the process of Costume Design from conceptualization to design presentation. Activities will include individual costume design projects.

THR 451 - Theatre History I (3)
Objectives: To demonstrate to students, through lecture and discussion, how characteristics of theatre production and playwriting have been influenced by the philosophy, politics, and technology associated with different eras and diverse cultural environments. Topics include the primitive origins of theatre, indigenous theatre of India, China, and Japan, the theatre of ancient Greece and Rome, early Christian Liturgical presentations, the drama and scenography of the Italian Renaissance, the Italian Commedia, the theatre of 16th and 17th century Spain, the theatre in Elizabethan England, the theatre of 16th and 17th century France, and the Restoration era in England. Activities include a formal research paper.
THR 452 - Theatre History II (3)
Similar in format to THR-A451. Topics include romanticism and democracy, German dramaturgy of the 18th and 19th centuries, American Colonial Theatre, the Industrial Revolution and the emergence of experimental drama in Scandinavia and Russia, the Independent Theatre Movement of early 20th century Europe and America, European theatre between the wars, changes in values after the second world war and the growth of a counter-culture, post-modernism and multi-cultural aesthetics in the theatre. Activities include a formal research paper.

THR 453 - Scenic Design (3)
Scenic Design is the process of converting text to a 3-dimensional environment. This class explores the essential elements in the scenic design process necessary to produce a finished scenic environment.

THR 454 - Lighting Design (3)
This course introduces the essential concepts and practical consideration of lighting design for live events.

THR 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 (3-6)
Faculty approved assignment with a Professional Theatre Company or Video Production Studio.

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 dramatics, 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.

THR 470 - Directing II (3)
Upon completion, students will begin to develop their own approach to directing for the stage. As they begin to find their own process they will focus on composition, pacing, and text analysis. Students will be able to critically evaluate their work and progress in the field. Prereq: THR 370 Directing I

Women's 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 323 - Gender & Society (3)
Examination of the impact of large-scale forces on how gender roles are structured and enacted in our society. Particular attention to be paid to the different experiences of men and women in the labor force, politics and the family.

WSTD 330 - Intercultural Communication (3)
Introduces the role of culture in the process of human interaction and encourages in-depth analysis of the unique challenges posed by intercultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups.

WSTD 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.

WSTD 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.

WSTD 344 - Marriage & 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.

WSTD 365 - Women's Lives (3)
This course examines women's lives in the nineteenth- and early twentieth-century United States. Looking at a wide range of different kinds of texts, including novels, photographs, essays, speeches, letters, short stories, autobiographies, and slave narratives, we will examine how women from diverse social positions produced, promoted, and challenged representations of womanhood.

WSTD 372 - Ren & Mod Political Theories (3)
Examines the works of Machiavelli, Hobbes, Locke, Rousseau, Wollstonecraft, Taylor, and Mill, among others, focusing on different notions of justice, law, freedom, and community. Particular attention is paid to the public and private contexts and gendered political roles associated with modern political thought.

WSTD 373 - African Diaspora Writing (3)
An introduction to the fiction and poetry of Black African and African American writers.

WSTD 375 - Women in Literature (3)
Reading and analysis of works authored by and about women; studied from a feminist perspective.
WSTD 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.

WSTD 390 - Feminist Theory-Gender Justice (3)
Feminist Theory: Gender Justice examines the various ways of understanding gender by looking at a variety of theories and philosophical perspectives within feminist thought, especially as it is formed by political philosophy including liberal, radical, Marxist and postmodern feminism. Sub-field in political science is Political Thought.

WSTD 420 - Psychology of Women (3)
The study of girls' and women's development, including gender roles, gender role stereotyping, the biology of being female, psychological theories about gender, violence against women, women in families, in relationships, and in the workplace. The course addresses women's diversity by race, ethnicity, culture, age, nationality, sexual orientation, and economic condition.

WSTD 430 - Gender & Communication (3)
Explores the ways in which communication in families, schools, media, and society creates and perpetuates gender roles. 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 Writers in France (3)
20th-Century Women's fiction in French, examined in light of French and Quebecois feminist theory. De Beauvoir, Duras, Sarraute, Brossard, Maillet, Cixous, Irigaray, Redonnet, etc. Taught in French.

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 women writer's role in the emerging marketplace of mass culture; changing perceptions of gender and sexuality and women writers' responses to the rise of industrial capitalism and political reform.

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 Maria Victoria Atencia.

WSTD 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.

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 569 - Adv Nrs Prac: Gynecologic Issu (3)
Course will focus on gynecologic health-care issues for advanced nursing practice. Health promotion, disease prevention, and management of common disorders seen in gynecologic and primary-care settings will be examined. By using nursing research and practice standards, students will analyze strategies in the physiologica, psychological, sociological, and spiritual 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)
Particular issues and developments in literatures in English of the nineteenth century.

WSTD 822 - Employment Discrimination (3)
This course will provide an in-depth study of current problems with employment discrimination, including theories of discrimination, order and allocation of the burden of proof and other related issues; emphasis on the use of Title VII of the Civil Rights Act of 1964 and amendments, and on the Equal Pay Act of 1963. Grade will be based on a final exam.
Accounting (ACCT)

ACCT 220 - Financial Accounting (3)
An introduction to financial reporting of results of operations, cash flow and financial position of corporate entities through general purpose financial statements. Emphasis is placed on the real-world environment of business and the use of financial accounting information for management decision-making. Prerequisite: Sophomore standing.

ACCT 222 - Managerial Accounting (3)
An introduction to the design and use of accounting information within an organization. Emphasis is placed on cost and revenue analysis for planning and control of organizational units and activities. Prerequisite: ACCT-220.

ACCT 311 - Financial Reporting I (3)
This course is the first in a three-course sequence which provides an overview of accounting and external financial reporting. Significant emphasis is given to the analysis and communication of accounting information. As the individual topics are discussed, students will be expected to identify and explain the significance of related accounting concepts and conventions. Particular attention is given to a study of the body of generally accepted accounting principles concerned with the recognition and matching of revenues and expenses to determine accounting net income and the related issues of asset measurement. Prerequisite: ACCT-220 with a grade of C or better.

ACCT 316 - Intl Acc for Global Organizatn (3)
Understanding and analyzing financially international organizations. Focus on international financial reporting, harmonization and International Accounting Standards (IAS). International Business concentration elective. Pre-requisites: Grades of C or better in ACCT 220 and in ACCT 222.

ACCT 320 - Corporate Financial Reporting (3)
The objective of this course is to provide business students with an understanding of the more complex financial reporting issues of SEC registrant corporations. Financial reporting requirements significantly influence management strategy and investment decisions. Thus, managers and investors need to be informed users of financial statements as a prerequisite to making informed decisions. Prerequisite: ACCT-222 with a grade of C or better. Offered occasionally.

ACCT 322 - Cost Management (3)
The study of modern techniques for active management of operating costs to achieve organizational efficiency and effectiveness. Specific topics include: C-V-P analysis, J.I.T., identification of cost drivers, life cycle costing and strategic cost management issues. Prerequisite: ACCT-222 with a grade of C or better.

ACCT 411 - Financial Reporting II (3)
The study of the generally accepted accounting principles and original authoritative pronouncements concerning measurement and reporting of an entity's liabilities, equity, and cash flow. Particular emphasis is placed on developing the student's analytical and critical thinking skills. Prerequisite: ACCT-311 with a grade of C or better. FIN-301 highly recommended.

ACCT 412 - Financial Reporting III (3)
A study of advanced accounting topics including; accounting for business combinations (mergers and acquisitions), preparation of consolidated financial statements and specific issues related to intercompany investments; accounting for selected international events (e.g. foreign currency transactions, translation of financial statements of foreign affiliates, the use of forward exchange contracts, etc.); significant coverage of accounting for for-profit entities; and other selected topics of current interest. Discussion of ethical implications will be included in many of these topics. Prerequisite: ACCT-411 with a grade of C or better.

ACCT 415 - Contemporary Acct Issues (3)
An examination of selected major and emerging issues in the discipline. Both theoretical and practice dimensions are examined through the use of cases and other materials.

ACCT 425 - Acct Information Systems (3)
Study of the theoretical and practical aspects of designing and utilizing financial information systems. Particular attention is directed to internal financial controls and auditing EDP systems. Prerequisites: ITM-200 and ACCT-311 with a grade of C or better. This course requires extensive use of computer software for assignments and in-class exercises. A personal laptop with Windows Operating System (OS) and wireless capability is highly recommended. Contact the instructor if you use Mac OS or don't have a laptop.

ACCT 430 - Federal Income Tax I (3)
This course introduces the student to federal income taxation. It is designed to provide the student with a framework to understand the structure of the Federal Income Tax system, to integrate income tax planning into business decisions, and to evaluate future changes to the income tax system (such changes are ongoing and inevitable). This course is also intended to provide a base for the student's future study of advanced tax topics. Prerequisite: ACCT-220 and ACCT-311 with grades of C or better.

ACCT 432 - Federal Income Tax II (3)
Understanding the complexities of the Internal Revenue Code in defining, organizing and computing tax liabilities of corporations; economic ramifications of alternative approaches to corporate taxation. Prerequisite: ACCT-430 with a grade of C or better or permission of instructor.

ACCT 440 - Auditing (3)
Theory and application of standards and procedures used by independent certified public accountants in verifying business data in order to render an opinion and report on financial statements of the entity being examined. The duties, responsibilities and ethics of the auditor (CPA), generally accepted accounting principles and auditing standards are discussed. Prerequisites: ACCT-411 and ACCT-425 with grades of C or better (ACCT-425 may be taken concurrently with ACCT-440).

ACCT 480 - Accounting Internship (0-3)
This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ACCT-311, permission of the department chair and junior or senior standing.

ACCT 498 - Special Study (1-3)
Permission of the department chair.

ACCT 501 - Accounting for Managers (3)
This course will be delivered in two modules. At completion of the first module, students are expected to have a thorough understanding of the information contained in a set of financial statements and how to interpret and use this information. The second module introduces students to the fundamentals of management accounting.

ACCT 600 - Managerial Acct Concepts (3)
Nature and use of accounting in managerial planning and control; cost analysis in developing budgets and standards; administrative control reports; interpretation of financial statements; cost-volume-profit relationships.

ACCT 603 - Contemp Financial Rep (3)
This course applies professional research methods to the identification and application of financial reporting standards to cases involving actual business situations. The objective of the course is to develop students' critical thinking, verbal and written communications and group interaction skills. Pre-requisites: ACCT 501 and ACCT 411.

ACCT 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 638 - Wealth Preservation (3)
Methods utilized by estate owner in planning family security and benefits from the estate. Examines impact of Subtitle B of the Internal Revenue Code and sections of the code relating to transfer of property for charitable purposes. Minimizing current and future taxes and preserving estate values is a primary consideration. Pre-requisites: ACCT 430 and ACCT 631.

ACCT 639 - International Taxation (3)
Covers interaction of the U.S. tax system with foreign tax systems. Comparative analysis of alternative tax systems is also covered. Special emphasis is given to topics in foreign tax credit planning and Subpart F. Pre-requisite: ACCT 634.

ACCT 640 - IT Audit (3)
Students will gain understanding of the concepts of information assurance and the organizational risks associated with the information technology environment. The objectives of the course are to provide understanding of computer auditing concepts and practices to facilitate: (1) the assessment of risk related to an organization's business processes and financial information (2) evaluate the effectiveness and functioning of controls, and (3) prepare a meaningful management letter. The course objectives are addressed through: -review of technology and systems facing IT Auditors, -development of an analytical approach that may be applied to understand and audit internal controls and information systems in any computerized business environment, -application of this approach to various types of tasks that are (or could be) performed by an IT auditor. Pre-requisites: ACCT 440. Co-requisites: ITM 410 or ITM 610.

ACCT 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 probabilities and random variables in business decision models, probability distribution, statistical inference as a decision-making tool, sampling of business data, simple linear regression and correlation, time series analysis and use of index numbers in economic data. Prerequisite: MATH-120.

DSCI 305 - Intro Mgt. Sci./Operation Mgt (3)
The objectives of this course are to: 1) acquaint the student with the overall operations research/management science process; 2) expose the student to several most widely utilized operations research/management science and production planning models, along with the solution techniques; 3) familiarize the student with the use of computers in facilitating managerial decisions. Prerequisites: MATH-132 and DSCI-207.

DSCI 360 - Intro to Gbl Supply Chain Mgm (3)
The goal of this course is to make students aware of how goods and services are being produced and distributed in integrated environments around the globe within and between enterprises. Global supply chain management systems will be studied with the intent to reduce and/or eliminate duplicative processes and to ultimately improve enterprise performance. Topics will include the impact of supply chain management on the financial statements, global outsourcing and security issues in supply chain integration. Prerequisite: Junior standing.
DSCI 370 - Global Logistics Management (3)
This course acquaints students with the theory and practice of determining the most efficient and effective methods for moving, storing and delivering goods and services globally. A special emphasis is placed on the roles of third-party logistics within supply chain contexts. Prerequisite: DSCI 305

DSCI 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.

DSCI 645 - Comp Integ Global Sup Chains (3)
The objectives of this course are: (1) To acquaint the student with characteristics of the flow of information and material along supply chains, (2) To expose the student to methods of integrating information technologies along supply chains, (3) To familiarize the student with the technologies used in coordinating intra- and inter-organizational activities, (4) To acquaint the student with the role of second generation WEB in the integration of global supply chains, and (5) To introduce the student to software used for intra- and inter-organizational coordination. Pre-requisite: DSCI 605.

DSCI 646 - Global Logistics & Oper Mgt (3)
The objectives of this course are: (1) To acquaint the student with the use of logistics management theory and techniques for analyzing and controlling global manufacturing and operations management systems; (2) to expose the student to several of the most widely utilized models for supply chain management in the manufacturing and service sectors (financial, health care, public sectors, etc.), along with case studies; and (3) to familiarize the student with the use of computer software in facilitating logistics decisions. Pre-requisite: DSCI 605.

DSCI 648 - Strat. Sourcing & Proc. in SCM (3)
This course acquaints students with the use of purchasing and strategic sourcing concepts and techniques to optimize supply chain operations. Total cost of ownership will be the main guideline in making procurement and sourcing decisions.

DSCI 650 - Math Statistics for Bus (3)
Study of advanced statistical methods including multivariate statistics and linear models. Calculus-based study of probability and statistics emphasizing theoretical foundations of inferential models. Topics include probability theory, discrete and continuous random variables, probability functions, univariate and multivariate probability distributions, stochastic process sampling distributions, estimation and hypothesis testing. Pre-requisite: DSCI 500.

DSCI 652 - Transport & Warehousing Mgt (3)
This course focuses on making strategic decisions regarding the selection of transportation modes and optimizing the size/location of warehousing and distribution centers. Students will learn how to utilize software to minimize transportation and warehousing costs. Site visits to transportation facilities will augment lectures.

DSCI 655 - Spec Topics Supply Chain Mgt (3)
Students will learn about contemporary and emerging topics in logistics and supply chain management (SCM). Although specific topics may vary from term to term, but may include risk management, lean/six sigma in SCM, reverse/sustainable SCM, supply chain security and healthcare SCM.

DSCI 680 - Bus App Multi Stat Methods (3)
Systematic treatment of multivariate methods and their application to business decision-making. Topics: general multiple regression, model selection, the multi-normal probability distribution, analysis of variance and covariance, experimental design, multivariate statistical inference, discriminant analysis, canonical correlation and principal components. Applications in marketing, management, industrial relations and economics. Pre-requisite: DSCI 605.

Economics (ECON)

ECON 190 - Principles of Economics (3)
Analysis of how individuals, firms, and nations make choices given limited resources; determinants of decision making in market economies; the political economy of income, employment, and inflation in the aggregate; the role of government and the Federal Reserve. Prerequisite: MATH-120 highly recommended.

ECON 312 - Intermediate Macroeconomics (3)
Measurement of aggregate economic activity-national income accounting; equilibrium levels for national income, employment, prices and interest rates in aggregate models; policy instruments and goals, fiscal and monetary policies; empirical and analytical treatment of economic growth; inflation and unemployment. Prerequisite: ECON-190.

ECON 314 - Intermediate Microeconomics (3)
The maximization behavior of households (consumers) as constrained by income and prices; business firm behavior in price and output decisions and in factor markets; comparisons of the operation of markets under competitive and imperfectly competitive conditions; and welfare implications of marketplace performance. Prerequisites: ECON-190; MATH-132 or higher level Calculus course.

ECON 379 - Economies of Latin America (3)
Explores two major themes from the perspective of Latin America: the integration of national economies into the global economy, and the role of the state in addressing market failure. Includes both theoretical and policy-oriented analyses. Prerequisite: ECON-190.

ECON 408 - Industrl Orgzn-Public Policy (3)
Economic theory, case studies and law are utilized to explore the causes of monopoly power, its effect on rivals and social consequences. Role and effect of anti-trust policy in curbing abuses of monopoly power are also explored. Prerequisite: ECON-314.

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. Prerequisites: ECON-312 and ECON-314 or permission of department chair.

ECON 420 - Money and Banking (3)
Impact of the U. S. Treasury, the Federal Reserve System, commercial banks and other financial institutions on economic variables such as employment, prices and the balance of payments. Prerequisite: ECON-312.
ECON 501 - Economics for Managers (3)
Focuses on the economic decisions made by managers of firms, and the structures of various market environments within which these decisions are made. Addresses market demand, supply and price movements, production and cost functions, and business competitive strategy in output and input markets.

ECON 501 - Economics for Managers (3)
Focuses on the economic decisions made by managers of firms, and the structures of various market environments within which these decisions are made. Addresses market demand, supply and price movements, production and cost functions, and business competitive strategy in output and input markets.

ECON 540 - International Trade (3)
Study of the determinants and pattern of trade between nations and regions; efficiency, welfare, and distributive effects of trade; protectionism, and the instruments of trade policy. Prerequisites: ECON-312 and ECON-314 or permission of department chair.

ECON 431 - Exchange Rates 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; 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. Prerequisite: ECON-312.

ECON 440 - Labor Economics (3)
Labor markets, determinants of labor supply, labor demand and wages (both as cost and income); institutions affecting labor, including trade unionism and labor law; work-leisure trade-off; the work ethic as it affects work hours and productivity. Prerequisite: ECON-314.

ECON 445 - Economics of Intl Migration (3)
Students will apply the theoretical tools of microeconomics to the analysis of labor markets; apply statistical and econometric techniques in empirical work on wage determination; study papers at the cutting edge of economic research with an eye toward how economists define questions, marshal evidence, and present results; and grapple with issues of policy design. Prerequisite: ECON-314.

ECON 456 - Economic Development (3)
Analyzes elements of economic growth in economies that are both internationally open and relatively poor; accumulation of human and physical capital, technological change, market structure, and international linkages. Prerequisite:ECON-314.

ECON 460 - Public Finance (3)
Public finance economics examines 2 key functions of government: taxation and expenditures. These government functions are evaluated based on efficiency and equity criterion. Topics including externalities, public goods, Social Security, Medicare and the personal income tax are examined. Prerequisite: ECON-314.

ECON 477 - Introduction to Econometrics (3)
Theory of economic statistics, development of statistical models applied to economic data; probability theory, statistical criteria, hypothesis testing, correlation analysis; identification, multi-colinearity and serial correlation. Prerequisites: DSCI-207, ECON-312, and ECON-314.

ECON 480 - Economics Internship (0-3)
This course can be used as elective credit but not as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ECON-190, concurrent enrollment in ECON-312 or ECON-314; permission of the department chair and Junior or Senior standing.

ECON 493 - Special Topics (3)
Prerequisite: Varies with topic of course.

ECON 495 - Senior Residency (0)
Prerequisites: ECON-312 and ECON-314 or permission of department chair.

ECON 498 - Special Study (1-3)
Prerequisites: ECON-312, ECON-314, and permission of the department chair.

ECON 501 - Economics for Managers (3)
Focuses on the economic decisions made by managers of firms, and the structures of various market environments within which these decisions are made. Addresses market demand, supply and price movements, production and cost functions, and business competitive strategy in output and input markets.
FIN 301 - Principles of Finance (3)
Introduction to financial decision-making in the firm, with focus on choices and decision criteria for sources and use of funds. Emphasis on financial analysis and investment decisions: ratios, relevance of accounting statement data, use of debt and equity, investment theory and practice, and firm's market capitalization. A grade of B- or higher required in FIN-301 prior to enrolling in all other FIN courses. Prerequisites: ACCT-220, DSCH-2078, ECON-190 and Co-requisite: ACCT-222.

FIN 314 - Insurance (3)
Survey of the nature of risk, insurance contracts, property and casualty coverages, life and health insurance, insurance carriers and markets, governmental regulations; functions of underwriting, sales, rate-making and financial operation of carriers; risk exposure, loss prevention, combating of risks, and insurance administration. Co-requisites: FIN-333 and FIN-363.

FIN 316 - Real Estate (3)
Study of real estate concepts, practices, institutions; specific attention given to legal aspects, appraisal, market analysis, mortgage financing, realty investment, property development and marketing, government influences and programs, housing and urban problems. Co-requisites: FIN-333 and FIN-363.

FIN 323 - Financial Management (3)
Study of principles of corporate finance and application of those principles to a variety of financial management problems; applications include capital budgeting, working capital management, capital acquisition and other aspects of financial management. Co-requisites: FIN-333 and FIN-363, or permission of the department chair.

FIN 333 - Fixed Income Securities & Mark (3)
The course examines the characteristics of various fixed income instruments, the factors that influence their value and the markets they trade in. Securities studied include, but are not limited to, municipal, treasury, corporate, convertible, and mortgage-backed bonds. The role of financial institutions in the fixed income markets is also covered. Prerequisite: FIN-301 with a grade of B- or higher.

FIN 353 - International Financial Mgt (3)
Study of international finance with emphasis in international management for the firm, international financial institutions and markets, international finance systems and foreign investments and securities. Corequisites: FIN-333 and FIN-363; or permission of the department chair.

FIN 365 - Derivative Securities & Market (3)
The course examines the various types of derivative securities that exist, their uses in investment and risk management, the market in which they are traded, and the arbitrage models used to estimate their market values. Prerequisites: FIN-333 and FIN-363, or permission of department chair; strong math skills highly recommended.

FIN 423 - Financial Management (3)
Study of principles of corporate finance and application of those principles to a variety of financial management problems. Applications include capital budgeting, working capital management, capital acquisition and other aspects of financial management. Prerequisite: FIN-333 and FIN-363; or permission of the department chair.

FIN 425 - International Financial Mgt (3)
Study of international finance with emphasis in international management for the firm, international financial institutions and markets, international finance systems and foreign investments and securities. Corequisites: FIN-333 and FIN-363; or permission of the department chair.

FIN 433 - Financial Analysis/Modeling (3)
Develop a solid understanding of financial analysis using electronic spreadsheets, and the ability to integrate an electronic spreadsheet into the identification, analysis, and solution stages of a financial problem. This course will focus on the electronic spreadsheet skills needed to aid in the solution of financial problems, as well as practical financial applications using Microsoft Excel. Prerequisites: FIN-333, FIN-363, and FIN-423.

FIN 453 - Advanced Financial Mgt (3)
In-depth study of finance topics applicable to the firm and attention to financial decision-making affecting the firm's investment, financing, market strategies, and dividend policies; areas of emphasis will be financial objectives of the firm, shareholder value, capital budgeting, risk and uncertainty, cost-of-capital, optimum capital structures and fund flows. Prerequisites: FIN-333, FIN-363, and FIN-423.

FIN 465 - Derivative Securities & Market (3)
The course examines the various types of derivative securities that exist, their uses in investment and risk management, the market in which they are traded, and the arbitrage models used to estimate their market values. Prerequisites: FIN-301 with a grade of B- or higher, FIN-333, and FIN-363; or permission of the department chair; strong math skills highly recommended.

FIN 463 - Applied Portfolio Mgt (3)
The course will focus on the electronic spreadsheet skills needed to aid in the solution of financial problems, as well as practical financial applications using Microsoft Excel. Prerequisites: FIN-333 and FIN-363, or permission of the department chair.

FIN 473 - Commercial Banking (3)
Study of both the banking system and bank management, with particular emphasis on the latter; encompasses management of bank assistance, bank lending, and investment practices and policies, trust services, bank equity and profitability, and international banking. Co-requisites: FIN-333 and FIN-363.

FIN 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 guidance of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: FIN-333, FIN-363, permission of the department chair, and junior or senior standing.

FIN 498 - Special Study (1-3)
Permission of the Department Chair.
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 financial 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 underwriting process and alternate sources of capital; use of financial planning models and methods of short-term financing; motivation for mergers, acquisitions and bankruptcy reorganization. Recent studies from the finance literature provide overview of empirical evidence relating to the issues examined.

FIN 636 - Private Equity and Venture Cap (3)
The Private Equity/Venture Capital (PE/VC) course explores the forms and methods of equity investment in new and growing businesses. Private equity represents conventional investments, typically in established and growing businesses across a wide range of industries. Venture capital involves high-risk, high-potential-return investments, typically in technology based firms. Topics include the equity investment process, investment vehicles including conventional equity investment and venture capital, the creation of private placement memos, the evaluation of equity investment opportunities, and the structuring of investment groups and deal structure and negotiation.

FIN 638 - Derivative Sec & Mkts (3)
This course shows how financial managers can use capital markets technology to create value. It explores how derivatives can be used to manage financial risks and position firms to exploit strategic opportunities, reduce financing costs, and structure incentives. Students learn the mechanics of options, forwards, futures, and swaps, and then study uses of these instruments through a series of case studies. Pre-requisite: FIN 616.

International Business (IB)
IB 200 - Intro to International Bus (3-4)
A broadly based introduction to the field of international business. Consists of an inter-disciplinary survey of the fundamentals of (1) international trade; (2) environmental factors; (3) international institutions and agencies; and (4) company organization, managerial functions and operations around the world. Prerequisite: ECON-190 or equivalent.

IB 200 - Intro to International Bus (3)
A broadly based introduction to the field of international business. Consists of an inter-disciplinary survey of the fundamentals of (1) international trade; (2) environmental factors; (3) international institutions and agencies; and (4) company organization, managerial functions and operations around the world. Prerequisite: ECON-190 or equivalent.

IB 302 - Latin American Business (3)
The focus of the course is on the cultural, historical, economic, social, political, and business environments in Latin America and on the activities of multinational corporations therein. Prerequisite: IB-200.

IB 304 - Asian Business (3)
Focusing on a group of selected Asian economies, this course has three objectives: (1) to acquaint the students with the region's basic business environments; (2) to examine the styles and practices of Asian management; (3) to provide insight to the implications of Asian business environment and management practice on strategic planning by non-Asian firms. Students will attain a practical knowledge of the complexity of the business environments of the region and be able to incorporate the analytical skills and strategic thinking into the reality of the Asian markets. Prerequisite: IB-200.

IB 310 - Geopolitics of World Business (3)
This course is designed to prepare students to understand how geography and politics intersect with and influence international business and multinational firms. Upon successful completion of the course, students should possess an awareness of important geopolitical facts and should be able to demonstrate the analytical and strategic thinking skills that reflect an understanding of how these facts interact with and affect international business competition. In particular, the course will examine how geographic location, natural resource endowments, historical relationships, and national and institutional political factors influence global companies. Prerequisite: IB-200.
IB 312 - Intern'l Business Strategies (3)
This course is designed to develop a broad understanding of strategic challenges in the international business environment. The major objective of the course is to engender a global mindset and a better understanding of the problems and challenges that organizations face in the international context. The challenge is to make sense of the shifting dynamics and multifaceted phenomena that confronts global business. The course weaves together conceptual and practical considerations to create a balanced and exciting learning experience. It is designed to enhance your capacity to function more effectively in the international business environment. Prerequisite: IB-200.

IB 314 - International E-Business (3)
International e-business is now emerging as an important way of conducting global business. However, there is a dearth of trained professionals at Multinational Companies who can manage and coordinate international e-business strategy. This course will help you understand international online market entry, issues regarding web site localization and cultural customization. Specifically, the course provides applied knowledge to successfully use the web to tap global online markets. Prerequisite: IB-200, ITM 200.

IB 480 - International Bus. Internship (0-6)
This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: IB-200, permission of the department chair and Junior or Senior standing.

IB 493 - Special Topics (3)
Topics of course will vary. Prerequisite: IB-200.

IB 496 - Study Abroad Session (3)
Locations will vary; only one may be used to fulfill IB concentration requirements. This two-week course provides business students a first-hand, practical exposure to business competition in another country or region. The course combines case study, traditional classroom lecture, guest lectures from academia and commerce, and field trips. Cultural excursions and presentations are integrated into the course instruction providing the students with a comprehensive view of business activity abroad. Pre-trip coursework and a final project are required. Prerequisite: IB-200.

IB 498 - Special Study (1-3)
Permission of the department chair.

IB 501 - 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, IMF, 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 520 - 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 - Asia-Pacific Bus Ctry Cases (2)
This course provides an applied study of business and economic environments of East Asia using country cases as examples. Countries of focus include Japan, China, Korea, Taiwan and Indonesia.

IB 555 - European Bus Ctry Cases (2)
This course provides an applied study of business and economic environments of Western Europe using country cases as examples. Countries of focus include members of the European Economic Community.
IB 561 - Latin 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 Western Europe. Topics include politico-historical case studies, the rise and future of the European Community and European international relations.

IB 566 - Pol & Cult Envir Lat Amer (2)
This course provides a survey of the political and social development of twentieth century Latin America. The focus is on the heterogeneity of the political experience. Countries of study include Argentina, Brazil, Chile, Colombia, Mexico and Venezuela.

IB 567 - Pol/Cult Envir Asia-Pacific (2)
This course focuses on the political and social development of post World War II East Asia. Countries of study include Japan, China, Korea, Taiwan and Indonesia.

IB 568 - Managing Cultural Diff (2)
Discussing different cultures, this course ties the extent to which culture affects perceptions, decisions and behavior with how to approach management of cultural differences to achieve organizational effectiveness. Major topics include approaches to managing a culturally diverse workforce or team, ethics versus custom, culture and gender and non-Western style work days and weeks. Additionally, the course addresses expatriates, culture shock, repatriation and preparing for overseas travel and assignments.

IB 569 - Int'l Organizations (2)
The course completes a survey of the history, organization and contemporary mission of international political and economic bodies. Organizations covered include the IMF and the World Bank, GATT, OECD, UN, European Community, OAS, ASEAN and others.

IB 596 - Study Abroad (3)
The objective of this course is to allow students to apply the key concepts of global environments to a regional economy. The course combines case discussions with guest lectures by local business executives and scholars, and company visits. Students are expected to have a practical knowledge of the complexity of the business environments of the region.

IB 600 - Global Business Environ (3)
This course seeks to examine international business issues faced by corporations operating across several countries and different external environments. The focus is, therefore, on the regional and global business environment of international firms, integrating trading, investing, cultural and business practices.

IB 642 - Global Environment Strategy (3)
This course focuses on strategic planning, implementation, and evaluation of management decision making within an international organization. Strategy is multidisciplinary by design and as such will draw on the student's experience and understanding of the functions of business and the forces that impact the business success. It combines a range of viewpoints and analytical techniques. The course will address the challenges involved in understanding the shifting dynamics and multifaceted phenomena that confronts global business.

IB 644 - Global Business Negotiations (3)
This course is designed to familiarize and help students seek practical insights and skills in conducting international business negotiations (IBN). Students will be exposed to the negotiation process and will have opportunities to apply knowledge by participating in simulations. The course will cover various IBN contexts including national differences; characteristics and process; formulation and development of systematic approaches to planning and conducting IBN; and integration of contextual and environmental aspects of IBN through discussions and applications.

IB 680 - Theory in International Bus (3)
A doctoral seminar course in which the participating students review and analyze some of the leading economic, strategic and behavioral theories of the determinants of foreign direct investment and the multinational enterprise that has emerged over the past forty years. Special emphasis is given to the interface between the competitive advantages of the firms and comparative advantages of countries in shaping different kinds and forms of foreign production in various sectors and nations.

IB 682 - Sem in Global & Regional Bus (3)
A doctoral seminar regarding the history and role of specific geographic regions in the global economy, current theory related to international business, multinational companies, and government policies that affect international business.

Information Technology Mgmt (ITM)

ITM 200 - Intro to Information Technology Management (3-
This course introduces students to the development, implementation and use of information systems in organizations. It is intended to prepare students for living and working in an information-rich, networked world and to introduce students to the profession of ITM. A variety of computer software is utilized to fulfill the objectives. Major topics include: e-commerce and the Internet; the creation, storage and usage of data, information and knowledge; systems development; the application of information systems in organizations and functional areas; and the use of computer resources for problem-solving.

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ITM 250 - Spreadsheet & Database Product (3)-
The purpose of this course is to help students build skills and knowledge related to the use of electronic spreadsheet software. The focus is on the use of these tools to improve decision making and efficiency in organizations. Students will learn how to properly apply techniques such as scenario analysis, goal seeking analysis, logical functions and lookup tables. In addition, students will learn how to build simple databases, and retrieve data from more complex databases. Students will also learn how to extract data from databases to enable analysis in a spreadsheet. Prerequisite: ITM-200. A personal laptop with Windows Operating System (OS) and wireless capability is highly recommended. Contact the instructor if you use MAC OS or do not have a laptop.
ITM 310 - Program Development Techniques (3)
This course is aimed at providing the student with an understanding of how to approach programming for business from a structured and object-oriented viewpoint. This is accomplished through use of a programming language such as Java. Further, it serves as a foundation course for more advanced topics that follow including object-oriented systems. Prerequisite: ITM 200 (formerly MIS 200)

ITM 320 - Object-Oriented Programming (3)
Object-oriented programming focuses on on the organization of software as a collection of discrete objects that incorporate both data structures and the operations performed on those structures. This course teaches the basics of object-oriented programming as it applies to business, including class, inheritance, and encapsulation, through the use of a language such as Java. Prerequisite: ITM 310 (formerly MIS 310)

ITM 330 - Database Mgt Systems (3)
This course introduces students to the principles of relational database design and implementation and to the practical realities of database administration including the need for security, recover and resource sharing. Students learn and practice the fundamentals of the Structured Query Language (SQL), entity-relationship diagrams, dependencies and normalization, multi-user systems and XML. Projects require the student to design and develop a database application by utilizing design tools and major DBMS package such as Oracle. Prerequisite: ITM 200 (formerly MIS 200)

ITM 345 - Web Site Design & Development (3)
This course will teach students how to design web sites with creative interfaces, graphic images, functional site organization and logical navigation with a concentration on the design of web pages. It will also present the basics and concepts of developing a web site. The basics include a working knowledge of HTML and Internet protocols. Students will learn to use a website editor such as Dreamweaver MX. Web site design concepts introduced include effective use of color, images, animation, and layout. Students will learn to create a basic homepage and publish it on a web server along with advanced navigation and presentation techniques in the development of a design portfolio. Upon course completion, students will be prepared to design, implement, and manage a basic web site. Prerequisite: ITM 200 (formerly MIS 200)

ITM 350 - Information Security Mgmt (3)
This course will examine the field of information security to prepare students for their future roles as business decision makers. It will present both the managerial and technical aspects of the discipline and address knowledge areas of the CISSP (Certified Information Systems Security Professional) certification throughout. Information security will be addressed within a real world context and include many examples of issues faced in today's businesses. Prerequisite: ITM 200 (formerly MIS 200)

ITM 360 - Global Information Management (3)
This course addresses issues in global information management. It will focus on central issues facing IT managers and general managers working with IT on a multinational basis. The context of issues regarding regions/nations, firms, and individuals will be addressed in terms of policies, technical infrastructure, application and business processes, and IT operations. Students will work with cases to apply these concepts in context. Students will also interact with students from other countries for developing knowledge regarding global information technology issues using groupware technology. Prerequisites: ITM 200 (formerly MIS 200) and IB-200.

ITM 370 - Business Analytics & Modeling (3)
Students in this course will learn how to apply information technology tools to analyze data for the purposes of business decision making. Students will learn a methodology for analyzing and modeling business decisions, as well as sourcing, collecting and analyzing data. Data quality and ethical use issues will also be discussed. Prerequisite: ITM-200 & 250 and DSCI 207.

ITM 380 - Project Management (3)
Students in this course will learn that projects are the vehicles to introduce change into complex organizational systems and that managing that process requires business, technical and people skills. A growing number of industries are increasingly using project management as a way to manage organizational goals. Projects may involve disciplines such as information systems, accounting, operations management, marketing and international business. The general course objective focuses on developing problem analysis/solution development skills related to project definition planning, scheduling, organizing, managing, and closing projects (a.k.a., the project management life cycle). Topics covered align with selected knowledge areas prescribed by the Project Management Institute to set the foundation for students that might like to pursue further study and certification in this field. Prerequisites: ITM-200 and junior standing.

ITM 410 - Systems Analysis & Design (3)
This course provides a general understanding of the systems development life cycle as well as other techniques including prototyping. Students will develop the analytical skills required to thoroughly understand a problem and formulate the optimal solution. Projects will require the student to use process modeling techniques to assist in the analysis and design process. Prerequisite: ITM 200 (formerly MIS 200); Corequisite: ITM 330

ITM 435 - Data Comm & Network (3)
This course looks at the types of information used in the business environment and the implications in terms of communications along with the trend toward digital integration of historically stand alone analog and digital technologies. It examines the process of converting voice, data, image, and video information into integrated electromagnetic signals for transmission via various media. Coverage includes communication techniques, transmission efficiency methods, wide area networks (WANs), local area networks (LANs), high-speed trends in networking, and communications architectures and subsequent internetworking issues. Prerequisite: ITM 200 (formerly MIS 200)

ITM 450 - Web-Based App & Archit (3)
Capstone ITM course to be taken in the final year of study. This course reviews current and emerging multi-tier development platforms. Students integrate knowledge gained from prior coursework, performing application development on platforms typified by J2EE, .NET or open source technologies (PHP, Apache, etc). Coursework concentrates on web-based, object-oriented architectures, and explores in detail the relationship between the database, business logic and user interface tiers. Prerequisite: ITM 320, ITM 330 (formerly MIS); Corequisites: ITM 410, ITM 435

ITM 480 - ITM Internship (0-3)
This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: ITM 200 (formerly MIS 200) and permission of the department chair, and junior or senior standing.

ITM 498 - Special Study (1-3)
Permission of Dept. Chair

ITM 600 - Managing Info Technology (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.

ITM 605 - Project Management (3)
This course provides an overview of the roles, responsibilities, and management methods of the project manager from project concept to closeout and the structure of project management within an organization. Content may include project selection, quality, scope, time, cost, human resources, communications, risk, procurement and integration management. Topics selected are based on the educational requirements for the Certified Associate in Project Management curriculum (CAPM) as prescribed by the Project Management Institute and complement the information technology management curriculum. This course uses techniques such as simulation, team projects, case studies and interactive discussions to facilitate application of the concepts.
ITM 610 - Systems Analysis & Design (3)
Systems analysis and design provides a general understanding of the systems development life cycle as well as other techniques including prototyping. Students will develop the analytical skills required to thoroughly understand a problem and formulate the optimal solution. Data modeling techniques such as data flow diagrams (DFDs) and IDEF will be used. Projects will require the student to use a product such as Oracle’s Designer 2000 to assist in the analysis and design process. Prerequisite: ITM 600 (formerly MIS 600)

ITM 625 - E-Commerce App Development (3)
This course covers the basic approach to the principles of design and implementation for electronic commerce systems. Also covered are issues in project management, underlying technologies that enable electronic commerce at the firm and market levels, and issues of security. The intent of the course is to aid individuals preparing for positions that include membership on and management of electronic commerce development teams. Prerequisite: ITM 600 (formerly MIS 600)

ITM 630 - Database Management Systems (3)
Course provides an overall understanding of database techniques, beginning with a study of the characteristics of relational database management systems and continuing with structured query language (SQL), entity-relationship diagrams, dependencies and normalization, and multi-user systems. Evolving approaches to database management, such as object-oriented database, will also be examined. Projects will require the student to develop a database design from the analysis stages to the final implementation by utilizing various design tools and a DBMS package such as Oracle. Prerequisite: ITM 600 (formerly MIS 600)

ITM 635 - Telecommunications (3)
This course looks at the types of information used in the business environment and the implications in terms of communications along with the trend toward digital integration of historically stand alone analog and digital technologies. It examines the process of converting voice, data, image, and video information into integrated electromagnetic signals for transmission via various media. Coverage includes communications techniques, transmission efficiency methods, wide area networks (WANs), local area networks (LANs), high-speed trends in networking, and communications architectures and subsequent internetworking issues. Prerequisite: ITM 600 (Formerly MIS 600)

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 601 - Emerging Bus Issues I (1)

MBA 602 - Emerging Bus Issues II (1)

MBA 603 - Emerging Bus Issues III (1)

MBA 604 - Ethics & Values-Based Dec Mak (1)
Designed around the ethical imperative that recognizes that organizational decision-making must, at critical junctures, be disciplined by values. Student exercises in values-based decision-making, consisting of the when, where, and how of the issues at hand, lead to an understanding of the relationship between professional ethics and personal values. Identification of existing norms that influence ethical judgments are considered in the context of adequacy, applicability and appropriateness.

MBA 605 - 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 607 - Career Management (1)
Emphasizes career success through the seven steps of career management: self-assessment, career exploration, goal setting, designing strategies, implementing strategies, evaluating and negotiating, and working. Addresses the impact of organizational culture on career success and derailment along with the importance of lifelong networking and negotiating skills.

MBA 610 - Integ Consulting Module (3)
Emphasizes cross-functional learning and team-based, experiential learning. Designed around the elements of a strategic plan, and specific issues identified by a “real world” client-company. A team teaching format, involving a “live case” approach in which senior-level managers from a company will present an existing strategic problem to be addressed by student teams.

MBA 615 - Global Business Ethics (3)
The course will consist of two elements. The first is based on a study of the conceptual and theoretical foundations of business ethics. Readings will be drawn from moral philosophy, business history, global culture, economics, religion and other disciplines. The second component, and effort to simulate ethical decision-making, is centered on case study and discussion. An important organizing theme for course study revolves around the tension between the standardization of global business practices and the diversity of cultural, religious, and national mores that exist.

MBA 620 - Prof Effectiveness Series I (1)
This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.
MBA 621 - Information Technology (1)
This course focuses on the management of information technology in organizations. Foundational concepts regarding information technologies will be covered. These foundational concepts include: (1) enterprise software; (2) information technology supported business process design; (3) managing information systems in the service management context and as a value creating asset; (4) data management, database management systems and data warehousing; (5) business intelligence and decision making models; (6) e-commerce and (7) emerging technologies.

MBA 622 - Operations Management (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 624 - Managerial Econ & Applied Stat (2)
The course will focus on developing the tools of economic reasoning and statistical analysis necessary to make sound managerial decisions. Towards that goal, economic and statistical analysis as they pertain to markets, firms, and competition among firms will be developed. The use of applied empirical models for economic and statistical analysis and managerial decisions will be explored.

MBA 625 - Essentials of Mktg Strategy (2)
This course is an introduction to the fundamentals of contemporary marketing management, with a particular focus on the strategic foundations of marketing. The overall goal of the course is for students to understand the role of marketing and brand development in driving sales and profitability for firms. Product differentiation, segmentation, positioning, target audience development and their inter-relationships will be emphasized. Additionally, students will gain competency in developing effective brand architectures.

MBA 626 - Legal and Ethical Environment (2)
This course examines the legal and ethical issues that business managers confront. The course provides an overview of the relationship of the business organization to the legal system, including various modes of dispute resolution. In addition, the course addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with, state and federal laws and regulation. Case studies are employed in the course to challenge students to consider how legal and ethical judgments are implemented in practical and effective ways.

MBA 627 - Leadership and Strategic Mgmt (2)
Businesses have undergone enormous changes in recent years, requiring leaders and teams to learn rapidly and adapt quickly, focusing on horizontal and vertical leadership, team building and performance, and team leadership. This course introduces students to strategic management and leadership concepts, models and theories developed to optimize organizational effectiveness in challenging work environments. The course presents opportunities for students to explore issues central to an enterprise's long- and short-term competitive position.

MBA 628 - Integrated Decision Making (2)
The primary goal of this course is to coalesce previous course material in such a way that students will view business as an integrated whole rather than a set of isolated decisions. Another important goal of the course is to help students develop the analytical thinking skills necessary to make effective decisions in complex, uncertain environments. The format of the course is a series of team-taught weekly cases and simulations. Students will be asked to prepare and present the results of their analysis on a weekly basis.

MBA 629 - Accounting and Financial Mgmt (4)
This course introduces the fundamentals of finance, financial accounting and management accounting. The use of accounting information in decision-making is one major theme in this course. Issues involving cash flows make up a particularly significant focus area of this course. Another objective of the course is to develop an understanding of the financial environment in which managers and individuals operate. A section of the course is designed to provide a systematic understanding of the role of management accounting systems and strategic cost management. Throughout the course, the development of an ethical perspective is stressed.

MBA 630 - Applied Statistics (1)
Data analysis is an everyday reality of the business world. This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the widely used statistical methods to aid in problem formulation, data analysis and managerial decision-making. At the end of this course, students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty. This course also serves as a prerequisite for other analytical coursework in the MBA curriculum.

MBA 631 - Legal Aspects of Business (1)
Overview of the U.S. legal system and specific areas of law such as contracts, torts (including product liability), agency, selection of business entity, corporate governance, and intellectual property.

MBA 632 - Financial Accounting (1)
Financial Accounting presents accounting as an information system that produces summary financial statements, primarily for users external to a business or other enterprise. Students study the forms of business organization and the common transactions entered into by businesses. The emphasis is on understanding and applying basic accounting principles and other concepts that guide the reporting of the effect of transactions and other economic events on the financial condition and operating results of a business. How to analyze and interpret historical financial statements, as well, as the limitations of using these in making forward-looking business decisions is included. The primary course emphasis will be the basic accounting cycle and the four major financial statements: income statement, balance sheet, retained earnings and cash flow. We will also learn about financial statement analysis.

MBA 633 - Managerial Economics (1)
This course will introduce you to the core ideas and economic tools that are used for analysis of markets and of firms that produce and sell goods and services in these markets. Using simple economic models designed to simulate markets, this course will explore tools and analytical techniques that can be used to study real markets. The first section of the course will focus on competitive markets and the short and long run decision made by firms that operate within competitive markets. The latter part of the course will focus on strategic interaction between firms in markets in which firms exercise some degree of monopoly power.

MBA 634 - Nexus I (2)
This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters, and a business etiquette lunch. Managerial Communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.
MGT 218 - Legal Environment Bus (3)
Introduction to the U.S. legal system and to specific areas of the law such as torts, contracts, the law of agency and of business organizations. The course also covers American public law affecting businesses, including securities regulations, antitrust law, consumer protection, employment and environment law. Global and ethical issues are considered throughout.

MGT 300 - Mgt Theory & Practice (3)
Studies management using both classical as well as modern theories of organization; the functions of management, external and/or environmental aspects bearing on managerial responsibility; development of practical management policy as guides to managerial decision-making, and human aspects of management including motivation, workplace equity, and demographic diversity. Prerequisite: Sophomore standing.

MGT 310 - Mgt of Human Resources (3)
Overview of contemporary HR problems and practices as related to the management of individual firms; major topics include: employee selection, training and development, personnel appraisal, organizational morale and discipline, compensation administration, employee benefits and services, organizational communication. Prerequisite: MGT-300.

MGT 312 - Organization Behavior (3)
A study of interpersonal relations between individuals and groups in an organizational setting. The social environment of the work situation, along with the need of understanding and working with this environment, is emphasized. Problems arising from such relations are analyzed and evaluated. Prerequisite: MGT-300.

MGT 320 - Managing Ideas in Entrep Firms (3)
This course is intended as a general introduction to the models and applications of entrepreneurship, innovation and creativity. The course will introduce the three major forms of entrepreneurship - independent (as in self-employment), corporate entrepreneurship and social venturing. In addition, the course will educate students about the three key elements of modern entrepreneurship: the recognition and creation of opportunities, the development of strategies to realize those opportunities, and the packaging of those opportunities for maximum impact in intended markets. Prerequisite: MGT-300. Equivalent to MGT 319.

MGT 321 - Manag Resources in Entrep Firm (3)
Managing Resources in Entrepreneurial Firms (MREF) is intended as the fundamental preparation for entrepreneurship majors in the analysis and management of key resources used to create and sustain firms-financial, human, operational, and legal. Topics will include the life-cycle of the entrepreneurial firm, entrepreneurial leadership, and the human resource function in the small or engaging firm, the analysis of financial and accounting information for daily cash management and the evaluation of business performance, sources of funds for emerging and small businesses, strategies for managing assets, operations, and intellectual property, as well as strategies for growing and harvesting firms. Prerequisites: MGT-320.

MGT 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. Prerequisites: Completion of the business core and senior standing.

MGT 405 - Fundamentals of Leadership (3)
The purpose of this course is to provide students an opportunity to apply theories of leadership to everyday practice, to understand the history of the study of leadership, to explore the relationship between personal awareness and reflection on growth in their leadership development, and to provide feedback from others on perceptions of student's leadership effectiveness. Prerequisite: MGT-300.

MGT 408 - Org Failure, Chg & Transformat (3)
This course should create an awareness of the reasons why organizations experience crises and what might be done to identify problems, to avoid potential failure and to transform the organization to enable it to succeed in the future. The symptoms and, more particularly, the causes of failure will be examined in depth, as well as the techniques that may be used to identify the onset of difficulties as early as possible. Successful turnaround strategies will more likely be achieved if problems are recognized early. Prerequisite: MGT-300.

MGT 411 - 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. Prerequisite: MGT-310.

MGT 413 - Compensation (3)
Addresses the purpose of compensation administration for the attraction of competent employees, retention of these employees, provision of incentives for effective employment and the rewarding of employees according to merit and accomplishment. The course presents the principles and concepts essential to establishing and maintaining adequate and equitable compensation for employees. Prerequisite: MGT-310.

MGT 414 - Training & Development (3)
Objectives include knowledge of human resource development including its history and future with examples of training and education, which foster human resource development. Responsibilities of human resource development managers, including budgeting and strategic planning, are highlighted. Trends in human resource development in other countries will be compared. Prerequisite: MGT-310.

MGT 415 - Current Problems in Mgt (3)
In-depth analysis and exposure to current problems and challenges facing today's manager. Subject matter will vary from semester to semester. Prerequisite: MGT-300.

MGT 418 - Employ Law: Concepts/App (3)
A detailed analysis of the application of law in the employment relationship. Overall, issues will be grouped into three functional areas: recruitment and selection, management, and termination. Specific topic areas will include: the employment relationship in union and non-union settings, discrimination in employment, and health and safety issues. Prerequisites: MGT-218 and MGT-310.

MGT 421 - Business Plan Development (3)
Involves new business planning and analysis applied to developing and presenting financial and operational plans for new businesses. Topics include competitive analysis, strategic and managerial analyses, securing start-up financing, and professional presentation methods. The class also provides interaction with entrepreneurs and local entrepreneurship professionals. A one-hour lab required with the course focuses on entrepreneurial financial analyses and computer applications in new business development and operation. Prerequisites: MGT-320 and MGT-321.

MGT 422 - Intro to Family Business (3)
Explores family business topics such as growth and expansion, professionalization, succession and family dynamics, conflicts, and relationships relative to the business. Also provides an overview of families who own businesses and profiles of those businesses relative to the stages of business activity. Prerequisite: MGT-320.

MGT 428 - Legal Environ Bus II (3)
Advanced course for students (1) desiring to expand their knowledge of the legal and ethical environment of business and of issues in business law or (2) preparing to take the CPA examination. Topics covered include negotiable instruments, secured transactions, debtor-creditor relationships, property law, trusts and wills, business associations and other special topics such as accountants' liability and international legal problems. Prerequisite: MGT-218.
MGT 438 - Cyberlaw (3)
This course will focus on the legal and ethical environment relevant to the Internet and E-Commerce. Recent developments, court decisions, federal and state statutes, administrative rulings and the legal literature will be explained and analyzed. Pre-requisite: MGT 218.

MGT 480 - Management Internship (0-3)
This course can be used as elective credit or as concentration credit. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: MGT-300, permission of the department chair and Junior or Senior standing.

MGT 498 - Special Study (1-3)
Permission of the department chair.

MGT 600 - Management (3)
Course is an attempt to teach a set of skills grounded in behavioral science theory and research that are essential for a successful career in management. It will integrate the management principles of planning, organizing, leading and controlling with the skills necessary to accomplish these principles with people.

MGT 602 - Legal Environ of Bus (1)
Directed at complex decision-making, requiring recognition and integration of legal considerations in managing the socially responsible organization. Provides an overview of the relationship of the business organization to the legal system, including various modes of dispute resolution. Addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with, state and federal laws and regulation.

MGT 605 - Strategic Management (3)
MGT 605

MGT 606 - Strategy & Practice (3)
Emphasizes strategic evaluation and the synergies required for effective managerial decision-making through the formulation, implementation, and assessment of cross-functional decisions that enable the achievement of organizational objectives. Utilizes cross-functional and team-based, experiential learning, and is designed around the elements of a strategic plan and specific issues identified by a "real world" client organization. Discussion and analysis of the strategic concept culminate with the presentation of an existing strategic problem to be addressed by student teams.

MGT 610 - Mgt of Human Resources (3)
Current topics and problems of human resources and personnel practices. Objectives consist of investigation and discussion of selected topics in recruiting, utilization, conservation, and development of human resources within the context of the individual firm and the labor market.

MGT 613 - Organization Theory and Design (3)
The study of organizations is integrated units and subunits that must effectively define and interact with key stakeholder groups in their internal and external environments. Topics will include organizational effectiveness, environmental scanning and management, design and structure, organizational change, communication systems, conflict and politics, stakeholder management, and organizational culture. Pre-requisite: MGT 600.

MGT 614 - Executive Decision Making (3)
Oriented toward giving the student insight into the decision-making process in management. The nature of managerial decision-making, the environment for decision-making and the philosophy and selected techniques for decision-making offered modern managers by the management sciences will be considered.

MGT 615 - Current Issues in Mgt (3)
Comprehensive in-depth analysis of current management problems and issues. Focus of the course will be contemporary topics facing the executive in today's organization and society. Issues will vary, but may include such topics as corporate social responsibility and governance, ethical challenges, corporate culture and organizational politics, and selected workplace issues.

MGT 620 - New Venture Initiation (3)
The problems of starting a new service or manufacturing business. Entrepreneurship, characteristics of new ventures, raising capital and preparing business proposals.

MGT 621 - Adv Bus Plan - New Ventures (3)
Provides in-depth involvement in the development and presentation of a professional business plan. Topics include competitive analysis, strategic and managerial analysis, securing start-up financing, and professional presentation methods. Selected guest lecturers will include entrepreneurs and entrepreneurship experts from the region.

MGT 622 - Family Business (3)
Focuses on the unique challenges facing family business: succession planning, managing change and development, managing role demands and conflicts at the family/firm interface. Students learn fundamental issues facing family firms through readings, lectures by experts, and presentations by members of local family businesses. Pre-requisites: MGT 600 and MGT 620 or MGT 623.

MGT 623 - Corporate Entrepreneurship (3)
This course focuses on the corporate venturing process, which leverages the processes of internal entrepreneurship, working with universities and licensing new technology to promote the continued growth and learning of the organization. Topics include the strategic analysis of growth and innovation opportunities of the firm, reviewing the forms of corporate venturing (new markets, new product, commercialization, M&A, restructuring, etc.), and developing the skills of structuring and managing business innovations in complex existing systems in a manner which is exploratory, integrative, fast-paced, and resource-conscious. Pre-requisite: MGT 600.

MGT 624 - Special Topics in Entrep (3)
Designed to bring emerging and varying entrepreneurial business issues and practices before graduate business students so that they may begin to better recognize, create, and capitalize on evolving business opportunities. Guest speakers and readings are supplemented with cases and projects involving "real and live" entrepreneurial topics for examination of various issues in innovative business planning, corporate ventures, business growth, venture capital, emerging technologies; and other areas of entrepreneurial concern. Course study is intended to emphasize crossfunctional analysis of rapidly changing business environments to enable identification of entrepreneurial opportunities and the creation and successful management of innovative operations. 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 (0-3)
The course introduces students to the development, implementation and use of information systems in organizations. It is intended to prepare students for living and working in an information-rich, networked world and to introduce students to the profession of MIS. A variety of computer software is utilized to fulfill the objectives. Major topics include: e-commerce, and the internet; the creation, storage and usage of data, information and knowledge; systems development; the application of information systems in organizations and functional areas; and the use of computer resources for problem solving.
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. Prerequisite: MIS-200.

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. Prerequisite: MIS-310.

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 resource sharing. Students learn and practice the fundamentals of the Structured Query Language (SQL), entity-relationship diagrams, dependencies and normalization, multi-user systems and XML. Projects require the student to design and develop a database application by utilizing design tools and a major DBMS package such as Oracle. Prerequisite: MIS-200.

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 website editor such as Dreamweaver MX. Web site design concepts introduced include effective use of color, images, animation and layout. Students will learn to create a basic homepage and publish it on a web server along with advanced navigation and presentation techniques in the development of a design portfolio. Upon course completion, students will be prepared to design, implement and manage a basic web site. Prerequisite: MIS-200.

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. Prerequisite: MIS-200.

MIS 360 - Global Information Mgt (3)
This course addresses issues in global information management. The central issue 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 grouware technology. Prerequisite: MIS-200.

MIS 410 - Systems Analysis & Design (3)
This course provides a general understanding of the systems development life cycle as well as other techniques including prototyping. Students will develop the analytical skills required to thoroughly understand a problem and formulate the optimal solution. Projects will require the student to use process modeling techniques to assist in the analysis and design process. Prerequisite: MIS-200. Co-requisite: MIS-330.

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. Prerequisite: MIS-200.

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. Prerequisites: MIS-320 and MIS-330; Co-requisites: MIS-410 and MIS-435.

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. Prerequisites: MIS-200, permission of the department chair and junior or senior standing.

MIS 498 - Special Study (1-3)
Permission of the department chair.

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 mange 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 overall understanding of database techniques, beginning with a study of the characteristics of relational database management systems and continuing with structured query language (SQL), entity-relationship diagrams, dependencies and normalization, and multi-user systems. Evolving approaches to database management, such as object-oriented database, will also be examined. Projects will require the student to develop a database design from the analysis stages to the final implementation by utilizing various design tools and a DBMS package such as Oracle.
Marketing (MKT)

MKT 300 - Intro to Marketing Mgt. (3)
Introduction to the concept of marketing and its application to domestic and foreign markets, and to consumer, producer, institutional, and service markets; analysis of marketing mix, including product, price, promotion/advertising, and distribution policies; and an overview of career opportunities in the marketing field. Prerequisites: ECON-190 and Junior standing.

MKT 330 - Mkt Channels & Distribution (3)
Institutional structures and distribution processes viewed as a subsystem of marketing strategy; channel structure, promotion, pricing, product assortment considerations, and physical logistics to achieve channel policies; and social, governmental, economic and competitive aspects affecting channels. Prerequisite: MKT-300.

MKT 340 - Integrated Mktg Communications (3)
Advertising efforts, public relations efforts, and coordinating and integrating promotional strategy efforts; situation analysis; determination of objectives and budgets; media strategies; sales promotion and public relations. Prerequisite: MKT-300.

MKT 360 - Marketing Research (3)
Problem-solving in marketing through assimilation and interpretation of information; secondary sources and techniques of surveying and experimentation examined; and statistical tools applied to research design and interpretation. Prerequisites: DSCI-207 and MKT-300.

MKT 360 - Retail Management (3)
Retailing operations within the marketing systems; the management, organization and control of retail establishments; and retail buying practices, pricing, control of inventories, personnel publicity, advertising, and store location. Prerequisite: MKT-300.

MKT 400 - Buyer Behavior (3)
Concepts and theories explaining the cognitive, behavioral, and experiential aspects of individual and group purchasing of goods and services; analysis of a broad range of purchase and consumption situations; development of appropriate target market strategies. Prerequisite: MKT-300.

MKT 440 - Personal Selling (3)
The course content revolves around the personal selling process. Role playing and sales presentations are used to improve oral communication skills, enhance self-confidence, and hone selling skills. Persuasive writing skills are also practiced. Prerequisite: MKT-300.

MKT 445 - Sales Management (3)
Environment of sales management; forecasting sales; budgeting; structuring a sales force; selecting, training, compensating salespeople; motivating and evaluating salespeople; and the personal selling process. Prerequisite: MKT-300.

MKT 455 - International Marketing (3-4)
Environmental systems approach, examining socio-cultural aspects and the economic and political infrastructure of foreign markets; analysis of multiple modes of market entry, market segmentation, and marketing strategy development, appropriate to various sizes and types of companies in the U.S. and abroad. Prerequisite: MKT-300.

MKT 460 - Brand Management (3)
This course will focus on understanding, building, measuring, and managing the essence of brand power: brand equity. Starting with an overview of brands and branding decisions, we will highlight the content and context of brand management, before proceeding to strategies for building brand equity, measuring brand equity using financial/marketing/customer measures, and managing brand equity over time and across geographical boundaries. Prerequisite: MKT-300; MKT 360 and MKT 465 Highly Recommended

MKT 465 - Marketing 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. Participants will have the opportunity to develop new skills through experiential learning under the direction of a skilled practitioner. The arrangements for the working relationship must be established prior to the assignment. Prerequisites: MKT-300, permission of the department chair and junior or senior standing.

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

MKT 498 - Special Study (0-3)
Permission of the department chair.

MKT 600 - Marketing Management (3)
An induction to the fundamentals of marketing management. Marketing problem solving and decision making to formulate programs. Emphasis on marketing management process includes: situation assessment, strategy formulation, planning and implementation.

MKT 610 - Sales Management (3)
An examination of the strategic principles that guide the hiring, development, and evaluation of a sales force. Includes the analysis of sales operations, time and territory management, and quantitative techniques for forecasting sales and evaluating sales productivity. Utilizes case studies, lecture, and quantitative analysis. 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 markets.
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.

MKT 684 - Seminar in Consumer Behavior (3)
Doctoral seminar focusing on the substantive and methodological issues concerning psychological and socio-cultural aspects of consumer research. Selected topics include information processing, attitude formation, perception, decision making, persuasion, motivation, emotion and effect, consumption signs and symbols, post-modern perspectives on consumer research.
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&D 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 therapist. 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 570 - Adv. Growth & Development (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.)

CFT 574 - 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 577 - 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 585 - Clinical Supervision: Beg (0)
One-to-one beginning Master's level supervision of work with clients. Must be concurrently enrolled in CFT-540. (Offered every semester.)

CFT 586 - Clinical Supervision: Intermed (0)
One-to-one intermediate Master's level supervision of work with clients. Must be concurrently enrolled in CFT-541. (Offered every semester.)

CFT 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor required.

CFT 600 - Counseling&Vocational Behavior (3)
Prerequisite: CFT-520. Advanced readings in counseling for career development and career decision making. (Offered occasionally.)

CFT 650 - 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 651 - Individual Development&Therapy (3)
Developmental ego psychology, self psychology, object relations and attachment theories as applied in therapy. (Offered occasionally.)

CFT 652 - Process Consultation Practices (3)
Kinds of consultative relationships, stages of consultation, identification of client status, contextual implications of the consultation process. (Offered occasionally.)

CFT 653 - Ethical & Legal Issues in CFT (3)
An intensive and case-focused investigation of standards of professional practice in counseling and family therapy; ethical and legal issues in individual, group and marriage/family therapy. Offered every Fall semester.

CFT 654 - Internship in Counseling: Adv (3)
Offered every semester.

CFT 655 - Diagnosis & Appraisal in CFT (3)
Traditional, clinical diagnostic classifications and related assessment methods and instruments. Offered every other Summer semester.

CFT 656 - Integrating Systems Therapies (3)
The 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 660 - Counseling&Vocational Behavior (3)
Prerequisite: CFT-520. Advanced readings in counseling for career development and career decision making. (Offered occasionally.)

CFT 662 - PRC: Ind Counseling (Beg) (3)
Beginning supervised doctoral experience in individual therapy. By permission of Instructor only. (Offered occasionally.)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFT 663</td>
<td>PRC: Ind Counseling (Int) (3)</td>
<td>Intermediate supervised doctoral experience in individual therapy. By permission of Instructor only. (Offered occasionally.)</td>
</tr>
<tr>
<td>CFT 664</td>
<td>PRC: Ind Counseling (Adv) (3)</td>
<td>Advanced supervised doctoral experience in individual therapy. By permission of Instructor only. (Offered occasionally.)</td>
</tr>
<tr>
<td>CFT 665</td>
<td>Adv Couple and Family Therapy (3)</td>
<td>Prerequisite: CFT-671. Special issues in the treatment of marital and family systems. (Offered every other Fall semester.)</td>
</tr>
<tr>
<td>CFT 666</td>
<td>Introduction to Couple &amp; Family Studies (3)</td>
<td>Theory and research on the family life cycle, family transitions, couple relationships, and healthy family development. Offered every Summer.</td>
</tr>
<tr>
<td>CFT 667</td>
<td>Group Counseling (Adv) (3)</td>
<td>Prerequisite: CFT-532. Advanced seminar on the current literature and practices of counseling in group setting. (Offered occasionally.)</td>
</tr>
<tr>
<td>CFT 669</td>
<td>PRC: Supervision of Grp Work (3)</td>
<td>The theory and practice of clinical supervision in family therapy. Offered every Fall semester.</td>
</tr>
<tr>
<td>CFT 670</td>
<td>Couple Interaction &amp; Therapy (3)</td>
<td>Theories and techniques of couple therapy, couples' decision-making, sexuality and conflict resolution. Specific techniques for enhancing relationships are included. Offered every Spring semester.</td>
</tr>
<tr>
<td>CFT 671</td>
<td>Family Systems Theory &amp; Therapy (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>CFT 672</td>
<td>PRC: Beg Couple/Family Therapy (3)</td>
<td>Beginning supervised practical experience in couple and family therapy. By permission of Instructor only. Offered every Fall semester.</td>
</tr>
<tr>
<td>CFT 673</td>
<td>PRC: Int Couple/Family Therapy (3)</td>
<td>Intermediate supervised practical experience in couple and family therapy. By permission of Instructor only. Offered every Spring semester.</td>
</tr>
<tr>
<td>CFT 674</td>
<td>PRC: Adv Couple/Family Therapy (3)</td>
<td>Advanced supervised practical experience in couple and family therapy. By permission of Instructor only. Offered every Summer semester.</td>
</tr>
<tr>
<td>CFT 675</td>
<td>PRC: Spv of Cnsrsls/Fam Ther (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>CFT 676</td>
<td>Family Issues in Therapy (3)</td>
<td>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.)</td>
</tr>
<tr>
<td>CFT 677</td>
<td>Social Ecology (3)</td>
<td>Interactions of culture and gender within family, legal, political, health care, education and therapy systems. Offered every other summer.</td>
</tr>
<tr>
<td>CFT 682</td>
<td>The Self in Theory &amp; Therapy (3)</td>
<td>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.</td>
</tr>
<tr>
<td>CFT 684</td>
<td>Teaching in Counseling (3)</td>
<td>Doctoral experience assisting in the teaching of a beginning counselor education course. Permission of instructor only. (Offered occasionally.)</td>
</tr>
<tr>
<td>CFT 685</td>
<td>Clinical Supervision (Beg) (0)</td>
<td>One-to-one beginning supervision of work with clients. Must be currently enrolled in CFT-662 or CFT-672. (Offered every semester.)</td>
</tr>
<tr>
<td>CFT 686</td>
<td>Clinical Supervision (Int) (0)</td>
<td>One-to-one intermediate supervision of work with clients. Must be currently enrolled in CFT-663 or CFT-673. (Offered every semester.)</td>
</tr>
<tr>
<td>CFT 687</td>
<td>Clinical Supervision (Adv) (0)</td>
<td>One-to-one advanced supervision of work with clients. Must be currently enrolled in CFT-664 or CFT-674. (Offered every semester.)</td>
</tr>
<tr>
<td>CFT 689</td>
<td>Research Topics in CFT (3)</td>
<td>Study of qualitative and quantitative methods and design applicable to research in counseling and family therapy. (Offered every Fall semester.)</td>
</tr>
<tr>
<td>CFT 690</td>
<td>Graduate Reading Course (1-3)</td>
<td>Prior permission of guiding professor.</td>
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**Education-Administration (EDA)**

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<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>EDA 301</td>
<td>School Law for Teachers (1)</td>
<td>A study of cases, statutes, regulations, and practices dealing with teacher and student rights and responsibilities, academic freedom and classroom management. Every semester.</td>
</tr>
<tr>
<td>EDA 510</td>
<td>Foundations of Educational Adm (2-3)</td>
<td>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)</td>
</tr>
<tr>
<td>EDA 515</td>
<td>Spec Dimensionsof Ed Admin (3)</td>
<td>Roles of the principal and the institution will be explored with special emphasis given to unique aspects of schools. (Offered occasionally)</td>
</tr>
<tr>
<td>EDA 520</td>
<td>School-Community Relations (2-3)</td>
<td>A study of the nature, scope, principles and practices of public relations including organization and administration. (Offered Spring semester)</td>
</tr>
<tr>
<td>EDA 525</td>
<td>History of Higher Education (3)</td>
<td>Historical trends and theoretical foundations that gave rise to modern American colleges and universities. (Offered every Fall semester.)</td>
</tr>
<tr>
<td>EDA 530</td>
<td>School Law (2-3)</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>EDA 540</td>
<td>Law and Higher Education (3)</td>
<td>Exploration and analysis of selected problems involving legal restrictions and/or protections for colleges and universities. (Offered every Spring semester.)</td>
</tr>
<tr>
<td>EDA 550</td>
<td>Sem: Legal Issues in Higher Ed (2-3)</td>
<td>In-depth analysis of selected topics involving the law of higher education. (Offered occasionally.)</td>
</tr>
<tr>
<td>EDA 560</td>
<td>Student Personnel Admin (3)</td>
<td>Survey of patterns, problems and trends in student personnel. (Offered every Fall semester.)</td>
</tr>
<tr>
<td>EDA 563</td>
<td>The Principalship (3)</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 semester.)</td>
</tr>
<tr>
<td>EDA 564</td>
<td>The Student in Higher Ed (3)</td>
<td>Exploration and analysis of attitudes and characteristics of the college student population in context of the institutional climate. (Offered occasionally.)</td>
</tr>
<tr>
<td>EDA 570</td>
<td>Internship: Higher Ed Admin (3)</td>
<td>Supervised experience in appropriate administrative offices. Permission of Instructor required. (Offered every Fall and Spring semester.)</td>
</tr>
<tr>
<td>EDA 571</td>
<td>Int: Student Personnel Admin (3)</td>
<td>Supervised experience in appropriate student personnel administrative offices. Permission of Instructor required. (Offered every Fall and Spring semester.)</td>
</tr>
</tbody>
</table>
EDA 572 - Intern: College Teaching (3)
Supervised experience in teaching a college course. Permission of instructor required. (Offered every Fall and Spring semester.)

EDA 575 - Current Issues in Higher Ed (3)
Survey of recent significant developments, trends, and analysis of differing points of view concerning policies and practices of American colleges and universities. (Offered every Fall semester.)

EDA 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor.

EDA 600 - Org and Admin of High Ed (3)
Designed to improve the student's ability to conceptualize the total field of administration through studies of administrative theory, behavior, processes, organization, and current research. (Offered every Fall semester.)

EDA 602 - Case Studies: Org and Admin (3)
Exploration and analysis of selected problems in organization and administration of American colleges and universities. (Offered occasionally.)

EDA 610 - Theory of Administration (2-3)
An introduction to the theory, research, and practice of educational administration designed for advanced degree student. Topics will include bureaucracy, authority, motivation, job satisfaction, organizational climate, leadership, and communication. Offered every Fall semester.

EDA 611 - Sem: School Dist Admin (2-3)
Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state and local relations in education; reality in school administration. Offered every Fall semester.

EDA 614 - Politics of Education (2-3)
An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school society. Offered every Spring semester.

EDA 620 - Ethics of Ed Leadership (3)
Course centers on identifying, analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. (Offered annually.)

EDA 625 - Sem: School Admin-Relationship (2)
A study of the interrelationships existing between public and non-public schools and the implications of such relationships for school administration. (Offered occasionally.)

EDA 630 - Advanced School Law (2-3)
Prerequisite: EDAI-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)

EDA 639 - Sem: Current Prob in Ed Admin (2-3)
Designed for advanced degree students who will select a problem in educational administration for intensive study under the direction of the professor. (Offered occasionally.)

EDA 640 - Sem. Human Resources Admin (2-3)
An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation, and supervision. (Offered every spring semester.)

EDA 641 - Professional Negotiations (2-3)
An introduction to the collective bargaining process in education and throughout the public sector. Topics will include public/private sector differences, the history and development of unions, public sector management, and the legal environment. (Offered every Spring semester.)

EDA 647 - Plan & Maintain School Fac (2-3)
Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees; bonding, staffing and equipping buildings. (Offered annually.)

EDA 648 - Adv Sch Finance and Facilities (3)
Prerequisites: EDAI-647 and EDAI-650 or their equivalents. An advanced course in the principles of school finance and school facility management. Emphasis will be placed on budget development, the design and construction of physical facilities, bond issues, lease-purchase agreements, and cost control. 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 occasionally.)

EDA 660 - Higher Ed Curriculum (2-3)
A study of the design and implementation of media programs in schools and school systems. Attention to facilities design and the selection of materials and personnel. (Offered occasionally.)

EDA 665 - Technology in Ed Admin (2-3)
Course is designed to provide the school administrator with an understanding of the role of technology in a school district. Emphasis will be placed on the planning, design, selection, and use of technology by instructional and administrative personnel. (Offered occasionally.)

EDA 669 - School Business (2-3)
Role of the business manager; fiscal planning models; needs assessment; budget planning and administration; accounting; auditing; personnel functions of the business office; property management. (Offered every Fall semester.)

EDA 697 - Research Topics in Ed Admin (1-3)
Study of research methods and design applicable to research in Educational Administration. (Offered every Spring semester.)

EDA 698 - Graduate Reading Course (1-3)
Prior permission of guiding professor required.

Education - Foundations (EDF)

EDF 201 - Foundations of Early Childhood Education (3)
A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (pre-K 6).

EDF 202 - Foundations of Elementary Education (3)
A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (1 6).

EDF 203 - Foundations of Middle School Education (3)
A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (5 9).
EDF 204 - Foundations of Secondary Education (3)
A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (9 - 12).

EDF 304 - School as a Social System (2)
A systematic analysis of how social issues have impacted on schools forcing continual change, especially the urban school. Each part of the educational system will be analyzed: the organization, its environments, inputs/output and feedback. Field experiences are required and every effort is made to coordinate clinical experiences with the pre-teaching course. Every semester.

EDF 398 - Independent Study (1-3)
Independent Study.

EDF 423 - Psychology or Teach/Learn (3)
A study of the principles of psychology as they relate to education: an examination of a teaching model; an investigation of theory and practice in decision making for teaching in areas such as socialization, learning, motivation, intelligence, individual differences, etc. Every semester.

EDF 424 - Growth Development and Learning (3)
This course encompasses stages of growth, development, and learning throughout the human lifespan and the principles of psychology that relate to these stages. The student will study lifespan issues related to physical, cognitive, language, emotional, and behavioral aspects of the learner, examining basic research and theories most applicable to human growth.

EDF 470 - Human Growth & Development (3)
The course provides a broad survey of human development. It includes an examination of the major developmental topics within the periods of infancy, childhood, adolescence, and adulthood: it follows a chronological course of physical, cognitive, social and personality development throughout the various age periods; and it interrelates these major areas of development to the whole person. Every semester.

EDF 471 - Development of the Young Child (3)
An examination of the basic theories, principles and research relating to growth and development from a physical, intellectual, social and emotional perspective. Covers development from prenatal period through age five. Review of characteristics of major conditions (including developmental disabilities and giftedness) impacting on development. Field experience with infant/toddlers.

EDF 480 - Institute Ed. Psychology (1-3)
The course is periodically offered on various topics and issues in areas of educational psychology. As needed.

EDF 498 - Independent Study (1-3)
Independent Study

EDF 500 - Theory of Education (2)
An exploration of the nature of education as an academic discipline. (Offered annually.)

EDF 520 - The Learning Process (2-3)
Study of the relationship of learning theory to classroom practice. (Offered occasionally.)

EDF 521 - Ind Differences in Abilities (2)
Origin and extent of individual differences with their implication in improvement of instruction. (Offered occasionally.)

EDF 523 - Motivation in Learning (2)
Application of theories of motivation to classroom practice. (Offered occasionally.)

EDF 527 - Personality Devop & Adjustment (3)
Practices which appear to be detrimental to the individual's social and emotional growth. Characteristics of mental health and factors that facilitate growth and development. Personality development and its influence on the behavior of student and teacher, or counselor. (Offered occasionally.)

EDF 530 - Adv Educational Psychology (3)
Prerequisites: EDF-423, PSY-101, or equivalent course. An in-depth investigation of the principles of psychology as they relate to education. Learning theory and learning process, growth and development, mental hygiene, group process, and measurement and evaluation theory and analysis will be examined, along with related research. (Offered every other semester.)

EDF 560 - Foundations of Urban Educ (3)
A survey of the social and cultural factors involved in the educational opportunities provided in large urban areas. Special attention to the issues and problems that arise. (Offered occasionally.)

EDF 561 - Foundations of Catholic Educ (2-3)
Church documents will be used to review the philosophical, historical and educational perspectives of the Catholic position in schools. (Offered occasionally.)

EDF 570 - Adv. Growth & Development (3)
EDF470, Psy 101, or equivalent course. A balanced and systematic multidisciplinary look at all stages of human growth and development throughout the life span. In family and school contexts the perspective includes contributions from education, biology, developmental psychology, sociology, and cultural anthropology. Research, including its many discoveries and controversies, is examined at all stages. In addition, critical topics into which research is increasingly gaining insight are explored. (Offered annually.)

EDF 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor.

EDF 605 - Multicult. Issues/Pub Service (3)
Examination of the theory and practice of multiculturalism in public-service settings. Discussion of educational, social, legal, and ethical issues in multiculturalism. The impact of cultural membership on personal and professional functioning. Develops cultural competence in professionals who work with culturally diverse populations. (Offered twice each year.)

EDF 610 - Studies in Edu Philosoph (3)
Introduction to some of the major educational thinkers in the English speaking world during the twentieth century. Readings will include works of Dewey, Whitehead, Adler and Bloom. (Offered annually.)

EDF 611 - SEM: Philosophy of Education (3)
An investigation of the educational significance of philosophic systems and basic philosophic concepts. (Offered occasionally.)

EDF 620 - Reading Educational Classics (3)
A study of selected writings now considered classics in the field of education. (Offered occasionally.)

EDF 630 - Studies: Catholic Education (3)
An intensive study of selected problems and issues related to Catholic educational programs. (Offered occasionally.)

EDF 631 - SEM: Catholic Education (3)
An investigation of selected educational topics related to Catholic educational programs. Permission of Instructor only.

EDF 640 - History Euro Ed Thru 16th Cent (3)
Lectures and discussions about the educational ideas and events of Europe through the Sixteenth Century as related to the times in which they occurred. (Offered occasionally.)

EDF 641 - History Euro Ed Sinc 16th Cent (3)
Lectures and discussions about the educational ideas and events of Europe since the Sixteenth Century as related to the times in which they occurred. (Offered occasionally.)

EDF 642 - SEM: History of European Educ (3)
An investigation of selected European educational developments as related to the history of the period. Permission of Instructor only. (Offered every other year.)
### Education-Higher (EDH)

#### EDH 102 - The First-Year Seminar -Madrid (0-1)
Welcome to Saint Louis University and Madrid. A practical approach to the transitions that first-term students make at the Madrid campus. The course offers useful suggestions and mechanisms to respond to the pressures of meeting new people, living in a new culture (both that of the university and that of Spain), and making touch and maybe not so obvious choices. The four meetings connect students to University resources and introduce them to what to expect and not expect during their first few weeks on campus and in the most exciting city in Europe.

#### EDH 525 - History of Am Higher Education (2-3)
Historical trends and theoretical foundations that gave rise to modern American colleges and universities. Offered every Fall semester.

#### EDH 540 - Law and Higher Education (3)
Exploration and analysis of selected problems involving legal restrictions and/or protections for colleges and universities.

#### EDH 560 - Student Personnel Administrati (2-3)
Survey of patterns, problems and trends in student personnel.

#### EDH 564 - Student in Higher Education (2-3)
Exploration and analysis of attitudes and characteristics of the college student population in context of the institutional climate.

#### EDH 570 - Internship: Higher Ed Admin (3)
Supervised experience in appropriate administrative offices. Permission of Instructor required. Offered every Fall and Spring Semester.

#### EDH 571 - Intern: Student Personnel Adm (3)
Supervised experience in appropriate student personnel administrative offices. Permission of instructor required.

### Education-Instruction & Teacher Ed (EDI)

#### EDI 202 - Pre-Teaching Lab, Secondary (2)
An examination of the educational process through structured field assignments and observations with a special emphasis on secondary education. Students explore techniques and principles of working with adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of elementary education. Includes Field Experience. Every semester.

#### EDI 203 - Pre-Teaching Lab, Special Ed (2)
An examination of the educational process through structured field assignments and observations with a special emphasis on special education. Students explore principles and techniques of working with students in special classes by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of elementary/special education. Includes Field Experience. Every semester.

#### EDI 204 - Pre-Teaching Lab, Early Childhd (2)
An examination of the educational process through structured field assignments and observations with a special emphasis on pre-school education. Students explore principles and techniques of working with pre-adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of early childhood education and to provide a background for student teaching. Includes field experience. Every semester.

#### EDI 205 - Pre Teaching Lab, Middle (2)
An examination of the educational process through structured field assignments and observations with a special emphasis on middle school education and junior high. Students explore principles and techniques of working with pre-adolescents in an educational setting by assuming various responsibilities and duties in the classroom. The course is designed to provide an overview of middle school education. Include field experience. Every semester.
EDI 290 - Intcul Sem/Prac w/Intl std (1-3)
Prerequisite: Upper level sophomore status. Theoretical and practical introduction to intercultural awareness. Discussion of reading and issues in weekly seminars. Consideration of cultural conditioning values, and assumptions of participants and of international students in student-led conversation groups and extracurricular activities. Meets new core curricular activotyes.Meets new core curricular requirement in cultural diversity. Prerequisite: 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 & Movement (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 EDI-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's language and thinking skills, written communication and grammar, listening and speaking skills, spelling and handwriting. Emphasis is on the process of developing effective communication skills and integrating content areas. Includes Practicum experience. Fall semester.

EDI 310 - Sec. Meth/Prac 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/Prac Teach Sci (3)
Methods and materials for teaching science to students in secondary schools. Includes practicum experience. Fall semester.

EDI 312 - Sec Meth/Prac 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/Prac Teach SS (3)
Methods and materials for teaching social studies to secondary students. Includes practicum experience. Fall semester.

EDI 315 - Sec Meth/Prac Teach Forg. Lan (3)
Techniques of teaching a foreign language to secondary school students. Analysis of learning and teaching approaches. Includes practicum experience. Fall semester.

EDI 317 - Sec Meth Teach Art (3)
Course focuses on methods of teaching arts at the secondary level: general techniques and approaches methods and learning materials, analysis of learning and teaching problems. Includes practicum experience. Fall semester.

EDI 320 - Reading/Writing Content Field (3)
Teaching reading and writing int he content fields in Middle and Secondary schools. Developmental reading for average and above average students as well as remedial techniques for poor readers will be explored. Improving reading rate, motivation, critical reading, reading in special content areas, writing across the curriculum. Includes practicum. Fall semester.

EDI 321 - Elem Meth Teach Children Lit (2)
A survey of award winning children's literature past and present. Creative methods of teaching and motivating children to read good literature. May include practicum experience. Spring semester.

EDI 324 - Early Childhood Mathematics (3)
Methods and materials for the young child learning in mathematics. The major emphasis is on the use of manipulative and multisensory materials. NCTM Standards are explored. Include practicum experience. Spring semester.

EDI 327 - Lang Arts/Lit Young Child (3)
Survey and analysis of the techniques of presenting literature to young children. Emphasis on selection of literature appropriate for integration into the curriculum. Emphasis on various responses to literature through all language modalities. Includes field work.

EDI 351 - Middle Method/Prac Lang Arts (3)
Methods and materials for teaching language arts to students in grades 5-9. Includes practicum. Fall semester.

EDI 352 - Middle Meth/Prac Math (3)
Methods and materials for teaching mathematics to students in grades 5-9. Emphasis on the NCTM standards. Includes practicum. Fall semester.

EDI 353 - Middle Meth/Prac Science (3)
Methods and materials for teaching science to students in grades 5-9. Emphasis on NSTA standards. Includes practicum. Fall semester.

EDI 354 - Middle Meth/Prac Soc. Std (3)
Methods and material for teaching social studies to students in grades 5-9. Includes practicum. Fall semester.

EDI 368 - Obs & Student Teach/Middle Sch (10)
Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 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 390 - Obs and Student Teaching (1-3)
Restricted to students requiring additional certification areas. Offered occasionally.

EDI 394 - Professional Ethics (3)
This course begins with an examination of the concept of professional ethics and its relationship to general ethics. It studies the notions of morality and justice as well as the relationship between morality, values, and religion. Particular emphasis will be placed on the dynamic nature of moral and professional ethical developments, their similarities and the differences between ethics in a variety of service-oriented professions, and the impact of one’s values on the ethical treatment of individuals. Ethical issues in education, governments, clinical settings, healthcare, law and business will be investigated through a case study approach and an individual code of professional ethics will be generated.

EDI 397 - Portfolio Development III (0)
This course covers the principles and practices of portfolio development as they pertain to students prior to student teaching, and is specifically designed to address components of students’ Program Portfolio. Course products at this level include selection of 8 artifacts and composition of 8 medicaid statements representing 8 of the ten standards addressed by the portfolio. A student must receive a grade of “S” prior to student teaching. Prerequisite EDII-297.

EDI 398 - Independent Study (0-3)
Independent Study. Every semester.

EDI 399 - Technology Applic for Prof. (3)
This course will focus on the development of technology skills to enhance professional growth and productivity including communicating, collaborating, conducting research and solving problems.

EDI 412 - Methods of Technology Integration (2-3)
This course emphasizes the authentic use of technology by students in the PK - 12 learning environment. Topics include technology concepts and operations, designing learning environments, teaching and learning with technology, assessment and evaluation, professional practice and social, ethical, legal and human issues. This course meets the computer requirements for teacher certification.

EDI 425 - School Curr. & Inst Pre K-6 (3)
Emphasis on curriculum content and development of skills for integration of curriculum areas. Alternative instructional techniques for diverse learners will be included. Practicum in elementary setting required. Fall semester

EDI 426 - Middle Sch. Curr. & Instr. (3)
This course focuses on instructional strategies, technology and curriculum relevant to the middle schools. Practicum in a middle school setting is required. Fall semester.

EDI 427 - Secondary Sch Curr. & Inst (3)
This course focuses on instructional strategies, technology and curriculum relevant to the secondary schools. Practicum in a secondary school setting is required. Fall semester.

EDI 429 - Methods in Remedial Math (3)
Materials and methods suitable for teaching children experiencing difficulty in learning mathematics. Includes practicum experience. Fall semester.

EDI 430 - Methods in Remd. Read (3)
Basic principles of reading applied to remedial reading instruction with an emphasis on classroom adaptation: diagnosis and correction of classroom reading problems. Includes an introduction to techniques of remedial reading used by teachers. A one hour practicum is included. Spring semester.

EDI 433 - Methods in Advanced Read (3)
The psycholgy of reading: recent trends and developments in reading research. Reading in the content areas. Incorporation of whole language novel units. One hour practicum included. Comprehension, evaluation and critical reading. Fall semester.

EDI 444 - Assesment in E.C. (3-4)
Emphasis on use of developmental screening and diagnostic measures and translation of the results into appropriate practice. Focus on informed and formal measures and the incorporation of observation into the assessment process for children with and without disabilities. Includes family involvement, ethical considerations and development of individual plans. Incorporates field experience.

EDI 445 - Perceptual Motor Development (2)
Students examine the range of variations in perceptual motor abilities among children, develop diagnostic and assessment skills: design instructional materials which can be used in working with children who have motor skill differences. Every third semester.

EDI 448 - Integrated EC Curriculum I (3)
Basic methods for curriculum development for young children (Birth - Grade 3) with emphasis on developmentally appropriate practice. Includes learning strategies, selection of materials, development of daily programs, and organization of environment. Focus on integration of language/literacy, mathematics, art, music, drama and movement. Includes field work. Prerequisite 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. Incorporates application of research. Includes field work. Prerequisite EDII-448.

EDI 451 - Counselling 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 relationships 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. Spring 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 - Organisation/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 481 - Obs & Student Teach EC (10)
Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 482 - Obs & Student Teach Elem Sch (10)
Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 483 - Obs & Student Teach/Middle Sch (10)
Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 484 - Obs & Student Teach Sec (10)
Involves ten weeks of full time student teaching under the direction of an experienced teacher and a University supervisor. Student initially observes, then gradually assumes responsibility for all classroom activities. Every semester.

EDI 488 - Senior Inquiry (0-3)
Senior inquiry. Offered every semester.

EDI 492 - Pro Dev EC,Elem,SpEd, ECSE (3)
This course is designed to focus on issues related to student teaching and professional development. The seminar will include opportunities for problem solving and for developing a professional portfolio. Focus is also on meeting requirements as a beginning teacher. This course is to be taken concurrently with student teaching.

EDI 494 - Prof Dev Sem Middle,Sec,SpEd (3)
This course focuses on the inclusion of all students in the general early childhood and elementary classrooms. Emphasis will be on the development of interventions, strategies, differentiation of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students and students with disabilities. Includes field work. Prerequisite EDII431.

EDI 495 - Senior Residency (0)
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 EDII297 & EDII397.

EDI 524 - Sem: Innov in Elem Math Meth (3)
A seminar in mathematics education including the following topics: New techniques of teaching elementary 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 Teacher (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 and 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).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>EDI 595</td>
<td>Special Study for Exams (0)</td>
<td>Special Study for exams.</td>
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<tr>
<td>EDI 598</td>
<td>Graduate Reading Course (1-3)</td>
<td>Prior permission of guiding professor required.</td>
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<tr>
<td>EDI 604</td>
<td>Seminar Childre's Lit (3)</td>
<td>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).</td>
</tr>
<tr>
<td>EDI 623</td>
<td>Seminar in Instruction (3)</td>
<td>An exploration of a particular area as designated in the current semester schedule of classes. (offered occasionally).</td>
</tr>
<tr>
<td>EDI 625</td>
<td>Practicum C&amp;I (1-3)</td>
<td>Open only to doctoral students. A series of planned and supervised field experiences in instructional leadership. (Prior permission of guiding professor).</td>
</tr>
<tr>
<td>EDI 631</td>
<td>The Supv Process in Elem Sc (3)</td>
<td>An overview of the research and current practices/models of school supervision and instructional management at the elementary school level. (offered occasionally).</td>
</tr>
<tr>
<td>EDI 632</td>
<td>Supv Process Sec Sc (3)</td>
<td>An overview of the research and current practices/models of school supervision and instructional management at the secondary school level. (offered annually).</td>
</tr>
<tr>
<td>EDI 641</td>
<td>Elem School Curriculum (3)</td>
<td>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).</td>
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<tr>
<td>EDI 642</td>
<td>Secondary School Curriculum (3)</td>
<td>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).</td>
</tr>
<tr>
<td>EDI 643</td>
<td>Middle School C&amp;l (3)</td>
<td>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).</td>
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<tr>
<td>EDI 644</td>
<td>Curriculum Dev in Parochial Sc (3)</td>
<td>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).</td>
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<tr>
<td>EDI 645</td>
<td>Curriculum Development (3)</td>
<td>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).</td>
</tr>
<tr>
<td>EDI 646</td>
<td>Curriculum Theory (3)</td>
<td>A seminar exploring existing approaches to curriculum theory, its historical development and current issues. (offered annually).</td>
</tr>
<tr>
<td>EDI 648</td>
<td>Seminar in Curriculum (2-3)</td>
<td>An exploration of a particular area of curriculum as designated in the current semester Schedule of classes. Offered occasionally.</td>
</tr>
<tr>
<td>EDI 695</td>
<td>Special Study for Exams (0)</td>
<td>Special Study for exams.</td>
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<tr>
<td>EDI 696</td>
<td>Project Guidance (0-4)</td>
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<tr>
<td>EDI 697</td>
<td>Research Topics (1-3)</td>
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<tr>
<td>EDI 698</td>
<td>Graduate Reading Course (1-3)</td>
<td>Prior permission of guiding professor required.</td>
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<tr>
<td>EDI 699</td>
<td>Dissertation Research (0-12)</td>
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</table>

**Educational Leadership (EDL)**

- **EDI 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.

- **EDI 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)

- **EDI 515 - Special Dimensions of Ed Admin (1-3)**  
  Roles of the principal and the institution will be explored with special emphasis given to the unique aspects of parochial schools. (Offered occasionally).

- **EDI 520 - School-Community Relations (2-3)**  
  A study of the nature, scope, principles, and practices of public relations including organization and administration.

- **EDI 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.

- **EDI 545 - Managing the Building Level Curriculum (3)**  
  This course is designed to strengthen students' knowledge and skills as instructional leaders by identifying and researching current and emerging curricular issues. Students will learn to coordinate and synthesize curriculum development utilizing appropriate instruction designs, manage delivery and resources as they relate to curriculum, and utilize assessment results. Students will conduct and report results of a building level audit of curriculum supports and implementation.

- **EDI 563 - The Principalship (3)**  
  An overview of elementary, middle, and senior high school administration with an emphasis on the philosophy, organization, curricula and developmental needs of students and staff. Course will focus on solution of critical problems, change, innovation and interpersonal communication. (Offered every Fall).

- **EDI 573 - Prof Staff Dev and Evaluation (2-3)**  
  This course considers the importance and difficulty of motivating educators to seek life long personal improvement as reflective professional practitioners. Strategies of adult motivation and techniques of adult behavioral change are studied. Current systems of staff evaluation are analyzed and specific evaluation techniques and methods are practiced.

- **EDI 581 - Intern: Ed Admin - Elementary (2-6)**  
  Students work in elementary schools under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester).

- **EDI 583 - Internship: Building Principle (0-6)**  
  Students work under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester)
EDL 584 - Intern: Ed Admin-Superintendent (2-6)
Candidates for the doctorate and specialist degrees in school administration are required to intern with a practicing school administrator for one semester. Advance permission required. Work includes all administrative areas encompassed in the responsibility of the school superintendent. (Offered every semester)

EDL 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor.

EDL 600 - Prof Writing in Ed Leadership (3)
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.

EDL 605 - Disability in Higher Education and Society (3)
This theory-to-practice course provides graduate students with a multi-dimensional understanding of disability, particularly as it intersects with higher education and student development. Focus will be on the social construct of disability and creating an inclusive educational environment.

EDL 610 - Theory of Administration (3)
An introduction to the theory, research, and practice of educational administration designed for advanced degree student. Topics will include bureaucracy, authority, motivation, job satisfaction, organizational climate, leadership, and communication. (Offered every Fall semester)

EDL 611 - School District Administration (3)
Organization and operation of city and suburban public school systems; school-community relations and school politics; basic principles, concepts issues; federal, state, and local relations in education; reality in school administration. (Offered every Fall semester)

EDL 614 - The Politics of Education (2-3)
An overview of the politics of education with attention to local-state-federal relationships, teacher-administrator-school board relationships, policy development and analysis in schools, rural/suburban/urban school systems and problems, and the place of the school in society.

EDL 620 - Ethics of Ed Leadership (3)
Course centers on identifying, analyzing, and developing effective methods of confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. (Offered annually.)

EDL 630 - Advance School Law (2-3)
Prerequisite: EDAI-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)

EDL 640 - Sem: Human Resources Admin (2-3)
An introduction to the basic principles and practices of public school human resource administration. Topics will include motivation, leadership, recruitment, selection, induction, orientation, staff development, salary administration, collective bargaining, evaluation, and supervision. (Offered every spring semester.)

EDL 645 - Managing the District Level Curriculum (3)
The course examines the concepts of curriculum leadership and applies these concepts to the process of curriculum management and improvement. It is designed to strengthen students knowledge and skills as district instructional leaders by investigating current and emerging curricular issues. Students will audit a districts curriculum as it relates to written curriculum, implementation, practices, policies, personnel, finance, and facilities. This systematic review will provide a district wide curriculum understanding. The course requires active, thoughtful, and analytical thinking on the part of the student in order to synthesize and integrate the material into a working knowledge base.

EDL 647 - School Facilities (2-3)
Problems concerning predictions of enrollment; projection of educational programs; educational specifications of buildings; site location, size acquisition; architectural and construction contracts; lay and professional staff committees; bonding, staffing and equipping buildings. (Offered annually.)

EDL 650 - School Finance (2-3)
Principles of taxation, developing school finance formulas, and role of federal, state, and local governments in financing education. (Offered every Fall semester.)

EDL 660 - Higher Ed Curriculum (3)
Survey of practices and problems in the development of curricula in American colleges and universities. (Offered occasionally.)

EDL 669 - School Business Administration (2-3)
Role of the business manager; fiscal planning models; needs assessment; budget planning and administration; accounting; auditing; personnel functions of the business office; property management. (Offered every Fall semester.)

EDL 670 - College Teaching (3)
Critical analysis of practices, expectations, strategies, and responsibilities of the college teacher based on an analysis of the teaching-learning situation. (Offered every Spring semester.)

EDL 677 - Sem: Academic Administration (1-3)
In-depth study of several selected problems in the area of academic administration of colleges and universities. (Offered occasionally.)

EDL 698 - Graduate Reading Course (1-3)
Prior permission of major professor required.

Educ-Measurement Eval & Res (EDR)
EDR 396 - Quant. & Qualt. Meth in Res (3)
This course will begin with an introduction to the philosophical base, a survey of different modes of inquiry. Using this philosophical base, a survey of different modes of inquiry both quantitative and qualitative will be studied using several examples from the disciplines within the College. Emphasis in the course will be placed on the students actively reading and critiquing research from a variety of disciplines as well as in developing a proposal for research study while working in interdisciplinary teams.

EDR 496 - Action Research for Educ (1)
This course introduces students to action research techniques and their application to schools. Students come to the course with a basic understanding of research methods. The course then builds on this basic understanding to focus on approaches to action research to use in schools. Students will be required to conduct an action research project. Their involvement in the action research studies and the course readings will provide the background for class discussions.

EDR 540 - Qual Research in Education (3)
Students will learn the qualitative research paradigm, data collection and analysis techniques and report writing. Offered every fall and spring semester.

EDR 550 - Evaluation of Ed. Programs (3)
Prerequisite: EDR540 or the equivalent. Course introduces students to program evaluation techniques and their application to schools. Builds on a basic understanding of research and evaluation processes to focus on alternative approaches to program evaluation and practical guidelines. Students will be required to conduct mini-evaluations; their involvement in these evaluations and the course reading will provide the background for seminar discussions. offered every fall semester.

EDR 595 - Special Study for Exams (0)
Special Study for Exams

EDR 598 - Graduate Reading Course (1-3)
Prior permission of guiding professor required.

EDR 599 - Thesis Research (0-6)
Research
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 EDSI-425.

EDSP 431 - Ed & Psych of the Exp Ind (3)
Survey of the historical development of Special Education: introduction to current issues. Psychological, medical, and sociological aspects related to development of the exceptional individual in classroom learning environments. Alternative instructional strategies, special education resources, family programs, multi-cultural issues introduced. Every semester.

EDSP 432 - Princ & Methodology in MH (2)
An introduction to educational and psychological characteristics (cognitive, emotional and social) of students with mental handicaps and the implications which these characteristics have for practice. Problems of definition, screening, diagnosis, classification systems, classroom management and multi-cultural issues. Every semester.

EDSP 433 - Princ & Methodology in LD (2)
An introduction to dimensions of learning disabilities: identification, characteristics, development, habilitation. Historical and current thinking relevant to the various concepts and practices in the identification and treatment of learning disabilities is discussed. Teaching technique, instructional material modifications, classroom management. Introduction to multi-cultural issues. Every third semester.

EDSP 434 - Princp & Methodology in BD (2)
Introduction to the field of behavior disorders. Emphasis on identification, assessment, characteristics and intervention. Overview of theoretical approaches to behavior disorders. Introduction to multi-cultural issues. Every third semester.

EDSP 435 - Sup Pract in MH: Pract. Teach (6-10)
Involves full time student teaching in a classroom for students with mental handicaps under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-432 and admissions to Teacher Certification Program.

EDSP 436 - Supv Pract in LD (6-10)
Practice Teaching. Involves full-time student teaching in a classroom for students with learning disabilities under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-433 and admission to teacher certification program.

EDSP 437 - Supv Pract in BD (6-10)
Practice teaching. Involves full time student teaching in a classroom for students with behavior disorders under the direction of an experienced teacher and a University supervisor. Enrollment limited to seniors who have completed methods courses. As needed. Prerequisite EDSI-453 and admission to teacher certification program.

EDSP 438 - Student Teaching in Early Childhood Inclusive
Involves full time student teaching in a class for young children with special needs under the direction of an experienced teacher and a University supervisor. Enrollment as needed. Prerequisite EDSI-453 and admission to teacher education program.

EDSP 439 - Institute in Sp. Ed. (1-3)
Offered periodically on various topics and issues in the areas of mentally handicapping conditions, learning disabilities, and behavior disorders. On demand.

EDSP 440 - Speech & Lang Dev Exp Ch (2-4)
A study of language and speech acquisition development, structure and function in non-disabled and exceptional children, preschool through adolescence. Spring semester.
EDSP 441 - Diag & Prescp Procedures (1-3)
Introduction to principles and practices in evaluation procedures in education and special education (preschool through adolescence). Introduction to securing case histories and test administration and interpretation in basic developmental and skill areas. Offered according to certification area. Fall semester.

EDSP 443 - Princip & Methodology in MH (4)
Course includes both introductory principles related to the educational and psychological characteristics (cognitive, emotional and social) of students with mental handicaps and the implications that these characteristics have for practice. Course also involves information useful for selecting and developing intervention programs, discussion of problems of definition, screening, diagnosis, classification systems, classroom management and multicultural issues and the study of instructional approaches emphasizing specific methods and material including cognitive, social/adaptive, perceptual/motor, mathematical and language development. Overview of research in the field is also addressed. Every third semester. Prerequisite EDSI-432.

EDSP 444 - Adv Princ & Methodology LD (2)
Study of instructional approaches for educating students with learning disabilities, emphasizing specific methods and materials for teaching academics, elementary through secondary levels. Methodology for development of perceptual, cognitive and social skills: development of written and mathematical language skills, introduction to basic research in the field. Review of multi-cultural issues. Every third semester. Prerequisite EDSI-433.

EDSP 445 - Adv Princ & methodology BD (2)
This course focuses on the intervention strategies appropriate for students with behavior disorders. Classroom organization, teaching techniques, informal assessment, instructional modification, multi-cultural issues and design of individual programs is emphasized. Overview of research in the field. Every third semester. Prerequisite EDSI-434.

EDSP 446 - Adv Diag & Presp Proc (2)
Advanced study of principles, practices and diagnostic procedures in early childhood special education. Methods of securing case histories, observation techniques, test administration, interpretation of assessment results, linking assessment to instruction and working with parents. Fall semester. Prerequisite EDSI-441.

EDSP 447 - Teach Meth for Inc Class EC/EL (3)
Course focuses on the inclusion of all students in the general early childhood and elementary classrooms. Emphasis will be on the development of intervention strategies, differentiations of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students with disabilities. Includes field work. Prerequisite EDSI-431.

EDSP 448 - Teach Meth Incl Clall Mid&Sec (3)
Course focuses on the inclusion of all students in the general middle and secondary classrooms. Emphasis will be on the development of intervention strategies, differentiation of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students and students with disabilities. Includes field work. Prerequisite 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 - Curcul. Method & Matl ECPsEd (3)
An investigation of designs for early childhood special education environments. Focus on intervention approaches including parental involvement. Survey of existing programs and an introduction to basic research in the field. Every third semester. Pre requisite EDSI-448.

EDSP 454 - Supervised Practicum in Early Childhood Spe
Individual, small group and/or classroom teaching experience under the supervision of a master teacher and a University supervisor. Seminar included. Prerequisite EDSP 452.

EDSP 456 - Special Ed. Process (2)
Focus on the process involved in special education assessments, diagnosis, placement and intervention. Analysis of federal, state and local requirements. Emphasis on development of IEP/IFSP's. Strategies for parent involvement are included. Prerequisite EDSI431.

EDSP 460 - Medical Implications in SpEd (3)
Prerequisite: Completion of Advanced Special Education Methods Course. Course designed to provide theoretical and practical information about physical and health related problems related to the exceptional child. Emphasis on developmental, medical and genetic characteristics related to the field of special education. Every third semester.

EDSP 462 - Intro to Mild/Mod Dis Sec Meth (3)
This course is an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of secondary age individuals with mild-moderate disabilities and the implications that these characteristics have for practice. Problems of definitions, screening, diagnosis, classification systems, transition, futures planning, classroom management, and multicultural issues are addressed. Information useful for selecting and developing intervention programs for secondary age students with mild disabilities are addressed. Included is an overview of research in the field with emphasis on the study of instructional approaches emphasizing specific methods and materials.

EDSP 464 - Seminar in ECPsEd (3)
A seminar to examine issues related to early childhood special education. Topics include theoretical perspectives, family issues, infant programming, environmental and personal strategies for self management, transdisciplinary practices, collaborative consultation and current trends. Prerequisite EDSI453.

EDSP 465 - Education of the Gifted (3)
Study of the dimensions of gifted-identification, characteristics, development and societal role. Emphasis will be placed on the problems of curriculum, teaching, administration, and guidance. Literature in areas of creativity, critical thinking and motivation will be reviewed as it applies to the development of gifted children. As needed.

EDSP 470 - Career Dev for Excep Child (2)
Exploration of the concepts, need and organization of career development for the exceptional individual. Investigation of service-delivery models. Fall semester.

EDSP 472 - OB/ST Mild/Moderate (10)
Full day, full-time teaching experience. Candidates will demonstrate the knowledge and skills acquired in the core, methods, and specialization course of the mild-moderate disabilities program. Candidates will experience an elementary and a middle/school/high school placement that includes students identified with other health impairments. Candidates placed with or under the supervision of a certified master teacher.

EDSP 488 - Senior Inquiry in Special Ed (3)
Offered every semester.

EDSP 494 - Professional Development Seminar (Mid, Sec)
This course is designed to focus on issues related to student teaching and professional development. The seminar will include opportunities for problem solving and for developing a professional portfolio as well as opportunities to discuss, apply, and develop strategies for handling classroom management / behavior issues that arise during student teaching. The course is to be taken concurrently with student teaching.

EDSP 498 - Independent Study (1-3)
Independent Study

EDSP 526 - Practicum in Special Ed. (1-3)
Graduate students synthesize the educational experiences obtained at the university through an extended, in-depth field experience under daily supervision. Offered annually.
EDSP 530 - Teaching the Gifted (3)
A review of the research, literature, materials, methods, and philosophies underlying education of gifted children and youth. Offered occasionally.

EDSP 531 - Adv Std in Psych/Educ Ex Child (3)
Course focuses on the field of disability studies. Content includes psychological, medical, and sociological aspects of disabilities as related to cognitive, affective and psychomotor development of the exceptional individual. Alternative instructional strategies/teaching methods are included. Special education resources and family issues are introduced. Research to practice is emphasized. Offered every semester.

EDSP 545 - ADV Counseling in SpEd (3)
Approach to guidance for the exceptional individual in school and in the community. Exploration of various theories, methods, and practices which maximize the potential of the exceptional person. Offered occasionally.

EDSP 553 - Fundamentals in Neurology (3)
An examination of neurological structures and theoretical explanations fundamental to behavior. Offered annually.

EDSP 554 - Individual Intelligence Testin (3)

EDSP 555 - Adv Assess Proc in SpEd (3)
Advanced concepts and methods in individual and group assessments. Focus on analysis and integration of test data, setting instructional objectives. Sections offered according to certification area. Offered occasionally.

EDSP 560 - Seminar: Special Educaiton (3)
Prerequisite: Completion of Advanced Special Education Methods Course. Introduction to graduate study in special education. The philosophy of science, research methodology and professional issues relating to the body of knowledge and practice in special education are discussed. Required of all special education graduate students. Offered annually.

EDSP 561 - Seminar: Metal Retardation (3)
Prerequisite EDSI443 or equivalent. A 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: ECSpEd (3)
Prerequisite: EDSI452. A graduate seminar to examine issues related to early childhood special education. Topics include theoretical perspectives, legislative issues, family involvement and infant programming. Study includes research and how it relates to practice in ECSE. Offered occasionally.

EDSP 594 - Special Education Internship (3)
Prerequisite: Advanced graduate standing and consent of instructor. Integration of academic studies with administrative practice, clinical diagnosis procedures, community programs, consultant services, educational programming, research, social trends or other experiences specific to career goals. Emphasizes the relationship between scientific inquiry and professional practice. Offered occasionally.

EDSP 595 - Special Study for Exams (0)
Special Study for exams.
PPS 411 - Urban Employment and Training Policy (3)
Manpower utilization in an urban area, Government and industry approaches to improving labor force utilization, employment training and development. Offered occasionally.

PPS 415 - Introduction to Public Finance and Budgeting (3)

PPS 420 - Urban Ecology: Communities and Neighborhoods
Explores methods and theories which contribute to understanding urban neighborhoods and communities and addresses the question how people do community. Offered occasionally.

PPS 421 - Conflict Management Strategies (3)
The literature on conflict and conflict theory: issues which have led to conflict, conflict roles, conflict reduction and resolution. Explores collaborative alternatives. Offered Occasionally.

PPS 425 - Urban Classics (3)
In-depth consideration of major authors and publications about various aspects of urban life, which literature has also contributed to the growth of urban affairs as a discipline. Offered alternate Fall semester.

PPS 426 - The Census and Neighborhood Analysis (3)
Examination of analytic approaches to communities and neighborhoods utilizing census and other socio-demographic data. Offered Spring semester.

PPS 432 - Administrative Law (3)
Course introduces students to the legal behavior of administrative agencies in the American political system. Covered are administrative law doctrines, principles, and case law. Specific focus is on such topics as rule-making, adjudication, administrative discretion, judicial review, tort liability, and administrative searches and seizures. Offered occasionally.

PPS 435 - Intro to GIS (3)
Focus on Geographic Information Systems analysis of the politics and legal issues involved in selected functional categories of urban public policy. Offered Fall semester.

PPS 460 - Law, Courts & Urban Change (3)
Analysis of law courts and the legal process as instruments of urban social, economic and physical change. Offered occasionally.

PPS 462 - Probation, Parole and Community Corrections
An examination of the policies designed to limit the reliance on the institutionalization of offenders. Offered occasionally.

PPS 465 - Urban Criminal Justice Policy (3)
Various actors in the criminal justice system and analysis of their decision-making processes. Offered occasionally.

PPS 490 - Field Service (3-6)
By permission of chair only.

PPS 500 - The Metropolis (3)
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.

PPS 501 - Research Methods (3)
Graduate introduction to the process and methods of research with emphasis on evaluation designs and techniques. Examples drawn from urban affairs, urban planning and real estate development, and public administration. Offered every semester.

PPS 503 - Issues in American Public Admin (3)
Examines role of public administration in U.S. Historic evolution of public administration. Current issues in field: privatization, quotas, affirmative action, whistle-blowing, etc. Offered every Fall semester.

PPS 505 - Special Topics:Urban/Adm Theor (3)
Theories of public responsibility, management in the public sector, and other selected conceptual/theoretical frameworks for analyzing urban/metroplitan issues can be explored. Offered occasionally.

PPS 506 - Qualitative Res & Eval Methods (3)
Descriptive research methods including participant observation, oral history, and photography and their application to program evaluation and policy analysis. Offered every Spring semester.

PPS 508 - Legal Research (2-3)
An introduction to the tools for conducting legal research and finding legislative intent. Offered occasionally.

PPS 510 - Urban Economic Development (3)
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.

PPS 512 - Intro to Public Sector budget (3)
Public budgeting at all levels of government; economic and political aspects of budgeting. Features in-class budget simulation. Offered every Fall semester.

PPS 515 - Economics of the Public Sector (3)
Introduction to economics of the public sector. Specific issues regarding welfare economics, expenditure programs, and taxation. Offered every Spring semester.

PPS 518 - Public Personnel Administratio (3)
Focus is on such topics as development of public service employment the rise of public employee unions, recruitment, training, performance appraisals, productivity, motivation, pay and benefits, and the legal aspects of public personnel administration. Sample issues: comparable worth, affirmative action, health care, discriminatory employment practices, and sexual harassment. Offered occasionally.

PPS 520 - Crime, Justice and Public Pol. (3)
Socio-political parameters of crime and society's policy response to it. Offered every other year.

PPS 525 - Infrastructure Plan. & Process (3)
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.

PPS 530 - Planning the Metropolis (3)
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.

PPS 531 - Land Use Planning & Anal. (3)
Skills, issues, and policies involved with site analysis and design in both new development and redevelopment contexts. Offered every Spring semester.

PPS 535 - Intro to GIS (3)
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.

PPS 536 - Science, Tech, & Public Policy (3)
Focus is on the impact of science and technology (particularly information technology) on public organizations, public policy, and society. The course is designed for those who work with or want to understand the dynamics such technology introduces into organizations. Offered every Spring semester.
PPS 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 & Behavior (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 Management (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 - Planning & Development in STL (3)
This course examines the major demographic, economic and social trends that have characterized St. Louis. It will be relevant to those with an interest in city planning and community development, but also urban history, economic development, housing and related topics. Students will study plans and projects, some of which were implemented and some not. The intent is to examine the ingredients of successful plans, programs and projects; appreciation for the consequences (both intended and unintended) of development decisions; and a better understanding of the city and the region.

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 indepth 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 586 - GIS Capstone (3)
A laboratory experience toward providing an instrument to consolidate and to enable the demonstration of the mastery of professional GIS competencies. Offered each semester.

PPS 589 - Field Service (1-6)
Field experience by the student as community organizer, research assistant or administrative intern with a voluntary association, community organization or public or private agency. A paper evaluating the field experience is required. Offered every semester.

PPS 591 - Journal Club (0)
Readings and/or presentations in recent research specialty area. Offered every semester.

PPS 600 - Scope and Methods of Pol Anal (3)
Introduction to the theories, models, concepts and methods of policy analysis. Topics include alternate conceptualizations of what constitutes policy, epistemology, process analysis, modeling, problem structuring, and evaluation. Offered every Fall semester.

PPS 605 - Policy Ethics/Soc. Respons (3)
A case study approach to ethical decision making in public management. Offered every Spring semester.

PPS 608 - Industrial Orgs/Anti-Trust Pol (3)
Microeconomics theory of utility and demand; theory of production, cost and supply; price determination for factors and products under varying market structures; efficiency in allocation of resources; welfare issues. Offered occasionally.

PPS 609 - Industrial Orgs & 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.

PPS 630 - Power/Coalith&Dec-Making (3)
Intensive consideration of power, coalition and decision theory and models for purposes of describing and analyzing behavior and policy outcomes in communities and formal organizations. Offered occasionally.

PPS 635 - Judicial Policy Making (3)
The role of the judiciary in the policy making process is examined and compared with the roles of legislators and policy implementors. Offered occasionally.

PPS 636 - Econ of Govt-State&Local Secto (3)
Role of governments in the modern economy. Alternative expenditure policies and financing techniques, taxation, borrowing, sale of governmental services, intergovernmental aid. Metropolitan area finances; role of expenditures and financing in resolving urban problems. Offered occasionally.

PPS 639 - Contemporary Iss in Soc. Psyc. (3)
Advanced seminar in newly developing areas of social psychology. Offered occasionally.

PPS 649 - Topics:Organization Chng&Dev (3)
Advanced seminar in newly developing areas of organizational psychology. Offered annually.

PPS 650 - Intro to the Nonprofit Sector (3)
The course examines the American nonprofit sector and administration of nonprofit organizations. It analyzes the nonprofit sector from the perspective of civil society and political economy. Furthermore, the course examines nonprofit organization management from the perspective of voluntarism and citizen participation. Offered annually.

PPS 663 - Consultation Skills (3)
Theories, types and goals of consultation as well as relevant research associated with each type of consultation. Primary focus on training in systems consultation and its evaluation. Offered every summer.

PPS 670 - Sem: Law & Society (3)
Examination of the complexities and concerns inherent in sociological and legal understanding of the relationship between law and society. Offered occasionally.

PPS 678 - Corrections Policy (3)
In the context of public policy planning and analysis, community-based corrections are examined. Emphasis on methods to evaluate various correctional innovations. Offered occasionally.

PPS 681 - Policy Implementation Theory (3)
Focuses of the interaction among program and policy decision, program delivery, and program evaluation. Emphasis on conceptualizations and procedures for political feasibility analysis and for program output and impact assessment. Offered occasionally.

PPS 689 - Research Topics (3)
Research seminar with varying topics offered on an occasional basis.

PPS 701 - Social Justice (3)
Helps students understand the meaning of social justice, community building, human liberation and environmental parity within the context of social work practice. Based on social work's historical mission of intervention in high-risk communities while advocating for social reform, this course is aimed at teaching students the history, theory and practice realities of community building locally and globally.

PPS 702 - Social Policy (3)
An examination of social policy within the context of its historical development and its current functions within contemporary society. Focus on the substance of policy choices, the values and beliefs that underlie these choices, the political process through which the choices are made, and the potential roles of social workers in that process.

PPS 708 - Social Policy & the Family (3)
Problems and issues confronting American families and existing and proposed policy initiatives to address the matters. Focus on the values, the political forces, and the knowledge base behind policy intervention. Major emphasis on policy analysis as a systematic means of approaching this topic.

PPS 710 - Policy Leadership Comm Dev (3)
This course will explore conceptual, analytical, and strategic parameters of effective policy leadership for community work. It seek to provide for the community social worker both perspective and guidance for facilitating changes in community policy forums, decision-making structures, and policy implementation arenas. An operational goal of the course is to increase the community policy development skill repertoire of the MSW professional to inform and enhance effective community practice.

PPS 717 - Foundations of Peacemaking (3)
This course focuses on essential knowledge and skills necessary to engage in the peacemaking process. Students explore and analyze their own understandings of the concepts of peace and conflict. Catholic Social Teaching regarding peace and peacemaking is examined as a framework for approaching peacemaking. Emphasis is placed on the development and application of practical peacemaking strategies in responding to conflict at the interpersonal, community, and global level.

PPS 721 - Comm Develop, Planning and Org (3)
This course is designed to equip students with a broad range of interactional, analytical and political skills needed to assist communities and organizations, and to serve as change agent to promote social and economic justice. The technical and practical elements of planning, organizing and development work will be explored with an emphasis on the values of democratic, participatory models that empower individuals and groups. Content also includes assessment of major social problems and how the assessment influences the choice of intervention strategies.

PPS 737 - Organizational Theory & Lead (3)
This seminar focuses on the critical analysis of who should participate in making various organizational and community decisions, and the forms this participation should take. Of particular concern are the potentials and problems of participatory forms of organization and the conditions necessary for their success.

PPS 768 - Health & Mental Health Policy (3)
Health care system of the United states from medical, sociological, political and economic perspectives; policy issues and alternatives.

PPS 775 - Social Work Research (3)
Development of empirical and evaluative research skills in data gathering, analysis, and presentation of findings. Learning experiences include both theory and practice.

PPS 785 - Planning, Programming & Budget (3)
Conceptual, methodological and strategic principles and skills in selected areas of human services management. All students will be expected to do an applied research project related to their area of concentration. It is recommended that this course be taken concurrently with concentration practicum in order to facilitate the research project.

PPS 788 - Intro Non-Profit Org (3)
This course examines the American nonprofit sector and administration of nonprofit organizations. It analyzes the nonprofit sector from the perspectives of civil society and political economy. Furthermore, the course examines nonprofit organization management from the perspective of voluntarism and citizen participation.
PPS 828 - Intro to Fund Raising (3)
This course focuses on the cycle, stages and progression of fund development for formal, nonprofit organizations and grassroots associations. It introduces the concept of advancement, development, relationships and cultivation for nonprofit organizations. It emphasizes the importance of developing relationships within and matched to the stages and activities of institutional advancement and development.
Aerospace Engineering (AENG)

AENG 200 - Intro to Aeronautics & Astron (3)
The nature of aerodynamic forces; incompressible and compressible fluid flow; lift and drag; introduction to performance, stability and control; propulsion; structures; rocket performance and orbits. The design process. Prerequisite: MATH142 and PHYS161.

AENG 201 - Engineering Shop Practice (1)
This course conditions the students in the shop environment and the use of common hand and machine tools found in a typical fabrication shop. The students will be prepared for the design-build class projects. Emphasis is placed on using the right processes and right tools for the job. Safety in a fabrication shop is introduced and practiced.

AENG 275 - Co-op with Industry (0)
Prerequisite: Sophomore standing. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester.

AENG 297 - Co-op in Aerospace Eng. (0)
Aerospace Engineering (AE) - Lower Division Course An optional supervised work experience with an agency, firm or organization which employs engineers. The student receives a Pass or No Pass grade.

AENG 302 - Structure and Design (4)
Material properties; Statically indeterminate structures; weld and rivet analysis; working stresses, torsion of non circular sections. Torsion of thin-walled structures, unsymmetrical bending. Spring Semester. Prerequisite: ESCI200 or ESCI210 and ESCI310 ESCI311.

AENG 310 - Gas Dynamics (3)
One-dimensional gas dynamics; normal and oblique shock waves; Prandtl-Meyer flows; Rayleigh and Fanno-line flow; method of characteristics. Prerequisite: ESCI220 and ESCI322 Corequisite: MATH370 Spring semester.

AENG 311 - Aerodynamics (3)
Circulation and vorticity; irrotational flows and potential flow theory; Kutta-Joukowski theorem, subsonic thin airfoil and finite wing theory; subsonic compressible flow; supersonic thin airfoil theory; slender body theory, Newtonian impact theory. Spring semester. Prerequisite: ESCI322 and MATH370.

AENG 320 - Performance (3)
Airframe performance characteristics, level flight, rate-of-climb, range and endurance, take-off and landing, turn performance, energy state approximation, propeller theory and analysis, constraint analysis, carpet plots and design methodology. Prerequisite: AENG200.

AENG 322 - Astrodynamics (3)
Space environment; two-body problem and introduction to orbit mechanics; rigid body dynamics; satellite dynamics, rocket performance; re-entry dynamics. Prerequisites: AENG200 and ESCI211. Spring semester.

AENG 330 - Aerospace Structures I (3)
Basic theory of elasticity with application to two dimensional problems in bending and torsion of solid and thin-walled sections; unsymmetrical bending; flight vehicle loads; properties of materials. Prerequisite: ESCI310. Spring semester.

AENG 355 - Heat Transfer (3)
Heat Transfer by convection, conduction and radiation and combinations of these modes. Prerequisites: ESCI220, ESCI322, CSA125.

AENG 365 - Computer Aided Engineering (3)
The course outlines the principles of Computer Aided Engineering. The computer applications to structural design, kinematic synthesis and design optimization are explored.
AENG 430 - Aerospace Structures II (3)
Joints and fittings; bending, shear, and torsion of open and closed, thin-walled beams followed by applications to aircraft structures; energy methods; introduction to finite element analysis, elementary aeroelasticity. The course includes a design laboratory wherein students complete a variety of design projects. Prerequisite: AENG330.

AENG 432 - Aeroelasticity (3)

AENG 433 - Composite Structures & Design (3)
Fiber and resin systems. Composite material properties and characterization; laminates. laminates, macro and micro-mechanics. Analysis and design of lamina and laminate. Prerequisite: AENG430 and MATH370.

AENG 441 - Orbital Mechanics (3)
Orbital dynamics of space vehicles with emphasis on engineering design and application to specific mission analysis. Orbit determination and maneuvers; interplanetary transfer and trajectory optimization; proximity operations; perturbation effects. Prerequisite: AENG440.

AENG 442 - Intro to Space Dynamics (3)
Motion in moving reference frames; Euler¿s equations; attitude dynamics; motion of a rigid spacecraft; attitude control systems and maneuvers; spacecraft and attitude feedback control; attitude stabilization; attitude determination. Prerequisite: AENG440 and ESCI430.

AENG 450 - Flight Vehicle Analys & Dsgn I (0-3)
Application of aerospace engineering to the design methodology of a flight vehicle. Fall Semester. Prerequisite: AENG320.

AENG 451 - Flight Vehicle Analy & Dsgn II (0-3)
Application of aerospace engineering to the detail design of a flight vehicle, model design, fabrication testing, evaluation and analysis. Spring Semester. Prerequisite: AENG420 and AENG450.

AENG 452 - Hypersonic Propulsion & Design (3)
Application of aerodynamic, propulsion, and thermodynamics to the design of an integrated airframe propulsion system from a first principles approach. Identification of converged design space in which a possible solution can exist is inherent in approach. Prerequisite: AENG410.

AENG 453 - Intro to Comp. Fluid Dynamics (3)
This course is designed to establish the fundamentals of computational fluid dynamic schemes and methods to solve the PDEs. The students will learn how various schemes are applied to proposed to model equations, and analyze the resulting solutions. Prerequisites: ESCI322, CSCI125

AENG 475 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisites: ESCI322, CSCI125

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. Prerequisites: AENG376 or Senior standing. Offered every semester.

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 struc. 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, eigensolution 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.)
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)
A 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 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 (1-2)
A 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)
A 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 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 202 - The Air Force Way (1-2)
A 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)
A 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.
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 2019 - Airframe Analysis (3)
This course includes the basic theory, construction, and design principles of aircraft components and systems, maintenance, inspection and servicing.

AET 220 - Airframe Analysis Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET219. Prerequisite: Concurrent enrollment with AET219

AET 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 AET221. Prerequisite: Concurrent enrollment with AET221

AET 275 - Co-op with Industry (0)
Sophomore standing is required for students to register for this zero credit hour course. 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 301 - Advanced Aircraft Systems Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in AET301. Prerequisite: Concurrent enrollment in AET301.

AET 375 - Co-Op with Industry (0)
Junior standing is required for students to register for this zero credit hour course. 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 third experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing.

AET 401 - Dsgn & Rpair of Aircraft Struc (3)
This course presents analysis techniques for the evaluation and disposition of aircraft structural discrepancies. The emphasis of the course is on the design of effective repairs and returning damaged structure to service. Prerequisite: ET311, ET331, ET341

AET 475 - Co-Op with Industry (0)
Senior standing is required for students to register for this zero credit hour course. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Senior standing.
AET 490 - Senior Project I (2)
The first course of a two-course sequence intended to demonstrate the student's mastery of prior coursework and serve as a culminating experience for the student. This group project provides identification of a project of interest to the group members and the associated research required to determine the feasibility of the project. A formal report and presentation to the department faculty and students highlights the semester activities. Prerequisite: Senior standing and permission from department.

AET 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 provides the student with the opportunity to plan, design, execute, evaluate, and implement a project in its entirety based on the proposed design/research objectives as stated in the first course of the sequence. A formal report and presentation to the department faculty and students highlights the semester activities. Prerequisite: AET490.

AET 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.

Pre-Requisites: Senior Status

Aircraft Maint. Engineering (AME)

AME 102 - Basic Electricity (3)
Basic principles of electricity; power in electrical circuits; energy sources; circuit diagrams; applications to aviation electrical and avionics systems.

AME 103 - Nondestructive Inspection (2)
Classroom and laboratory studies directed toward understanding the methods for determining durability and service life to aircraft. Methods include ultrasonics, magnetic particle, liquid penetrants and eddy current testing.

AME 104 - Federal Aviation Regulations (2)
Selected Federal Aviation Regulations covered; controls exercised by Federal Aviation Administration (FAA) over the production, operation and maintenance of aircraft; mechanics of compliance with regulations.

AME 105 - Engineering/Computer Graphics (3)
This course prepares the student to read blueprints and to prepare manual and computer generated drawings of structures and machine parts. The use of spreadsheets for basic laboratory data processing and presentation is also covered. An introduction to word processing is provided with the focus on producing laboratory reports which incorporate spreadsheets, graphs and computer generated drawings. Additionally, this course provides an introduction to Computer Numerically Controlled (CNC) fundamentals.

AME 115 - Powerplant, Piston (3)
Basic theory, construction and design principles of aircraft reciprocating engines; required facilities; equipment and procedures to overhaul and evaluate performance after reconditioning.

AME 201 - Concepts of Aerodynamics (3)
Aircraft types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of control, aircraft stability, effects of flight loads on aircraft structure.

AME 207 - Metallic Structures (4)
Application of drawing techniques, tools, materials and principles of operation to construction and maintenance of aircraft metallic structures.

AME 208 - Machine Tools (3)
Principles of construction, operation, use and care of machine tools; includes use of lathes, shapers, milling machines, drill presses, and grinders; use of hand tools, precision measuring tools, coolants, lubricants, abrasives; projects involve working from engineering drawings to layout, turn, drill, knurl, thread, taper cut, shape and finish, using general production procedures.

AME 209 - Aircraft Electrical Systems (4)
Transition from principles of electricity and magnetism to design theory, operation, maintenance and overhaul of aircraft electrical systems and units; power generation (AC and DC), voltage control, power control, circuit breakers, starter systems, lighting systems, trouble shooting and testing.

AME 210 - Basic Airframe Systems (4)
Theory, analysis, maintenance factors and procedures of mechanical systems of control for rotor and fixed wing aircraft; structural alignment and rigging; weight and balance analysis and procedures; cabin atmosphere system analysis, theory and maintenance.

AME 214 - Powerplant Accessories (4)
Theory, principles of operation, maintenance and inspection of reciprocating engine fuel metering systems, general fuel systems, external lubrication systems, induction systems, supercharging systems, cooling systems and exhaust systems; turbojet aircraft general fuel systems; practice in use of tools and assembly procedures.

AME 218 - Airframe Analysis (3)
Basic theory, construction and design principles of powerplant components, systems, maintenance, inspection and servicing. For non-aviation maintenance majors.

AME 219 - Powerplant Analysis (3)
Basic theory, construction and design principles of reciprocating and gas turbine aircraft; components, systems, maintenance, inspection and servicing. For non-aviation maintenance majors.

AME 228 - Composites/Wood (2)
Structural assembly and repair principles; use of tools, machinery, and FAA procedures in airframe construction, inspection, and repair for composite and wood structures.

AME 229 - Fabric/Dope/Welding (2)
FAA procedures in airframe construction, inspection, application and testing of fabric covering techniques of various methods of welding to aircraft fabrication and repair.

AME 275 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AME 293 - Helicopter Maintenance (3)
Basic fundamentals of helicopter maintenance. Theory of operation and systems description and operation.

AME 301 - Advanced Propulsion (3)
A second level course in gas turbine powerplants emphasizing specific operating techniques, malfunction detection and identification, and automatic diagnostic and condition monitoring systems.

AME 311 - Instruments and Avionics (4)
Basic principles of instrumentation; application to aircraft instrument systems; applications of basic electronic principles to aircraft control and navigation systems including radio and radar aids; shop testing; calibration and adjustment of aircraft instruments and avionics equipment.

AME 313 - Advanced Airframe Systems (4)
Theory, analysis, maintenance factors and procedures of fluid power systems; mechanics of fluids related to aircraft hydraulic and pneumatic systems; fluid lines, fittings and components of landing gear and control systems; fire protection system analysis, theory, and maintenance; ice and rain protection system theory, analysis, and maintenance.

AME 316 - Gas Turbine Powerplants (4)
Fundamentals of theory and construction, both in principle and practice, of aircraft gas turbine engines; turbojet and turboshaft engines controls, maintenance, inspection and servicing.
AME 317 - Propeller and Trouble Analysis (3)
Theory, design, construction, operation and repair of aircraft propellers and components installed on reciprocating engines, procedures and equipment applied to diagnose, analyze and correct operational problems in reciprocating engines.

AME 375 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course.

AME 376 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AME 401 - Flight Line Maintenance (4)
Study and application of maintenance techniques to aircraft in service. Emphasis is placed on scope and performance of required inspections and daily maintenance of live aircraft. Tools and procedures used to determine airworthiness are implemented.

AME 403 - Capstone in Aerospace Tech. (1)
General review of all subject matter covered in Airframe and Powerplant courses.

AME 475 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course.

AME 476 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course.

AME 498 - Special Topics in AME (1-6)
Credit to be arranged.

Aviation Management (AMGT)
AMGT 275 - Co-op with Industry (0)
Prerequisite: Sophomore standing. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course.

AMGT 360 - Airport Management (3)
This course is designed to acquaint the student with the basic concept of airport planning and management. A comprehensive survey of a typical community with an eye toward present and future business potential is made. This includes a study of the socioeconomic characteristics, and the political and governmental influences, followed by various stages and types of airport construction.

AMGT 375 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: AMGT275

AMGT 376 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department. Prerequisite: Junior standing.

AMGT 405 - Aviation Law (3)
Basic principles of law which impinge on the use of the air; history of air law; principles and rules governing use of air space by aircraft; multilateral conventions pertaining to the use of air space among nations; aviation security procedures; product liability. Prerequisite: MGT300.

AMGT 440 - Econ of Air Transportation (3)
A detailed study of present and future air carrier operations including organization, operating costs and revenues, aircraft utilization and scheduled operations, equipment analysis, aircraft performance in relation to efficient and economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation. Prerequisite: ECON190. Pre or Corequisite AMGT405

AMGT 450 - Seminar in Air Carrier Mgt. (3)
This course is the capstone experience for the Aviation Management degree and is taken along with an internship with an air carrier. This seminar will provide an opportunity for students to study and present information on important and current air carrier management issues. Topics may include, but not be limited to: History of Air Carriers, Government Regulations, Safety, Leadership Issues, Marketing and Finance. Prerequisite: AMGT440.

AMGT 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 experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department. Prerequisite: AMGT376 or senior standing.

AMGT 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.

AMGT 497 - Practicum (3)
Designed to encourage breadth of study and understanding of the field of management, emphasizing the practical application of theory. Practicums in aviation-related industries will be used to the maximum extent possible. Prerequisite: Senior standing and permission of practicum coordinator.

AMGT 498 - Research Problems (1-3)
No formal class session but weekly appointment with course advisor is required. This course requires the practical use of the methods of organizing theoretical and experimental research, formulation of problems, project planning, research proposal preparation, and submission of a final research report. Prerequisite: Senior standing and permission of the Department Chair.

Aviation Science - General (ASCI)
ASCI 100 - Aviation Orientation (2)
This is a broad-based course designed to familiarize the student with the field of aviation. Students will be introduced to aviation from the historical and regulatory perspective. Various aviation career fields will be reviewed along with an overview of each aviation degree programs offered at Parks College.

ASCI 101 - Professional Orientation (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 102 - Intro to Air Traffic Control (2)
This course provides instruction in basic air traffic control procedures and phraseology used by personnel providing air traffic control services. Students will become familiar with FAA handbooks and regulations that pertain to the operational responsibilities of an air traffic controller. Students will receive hands-on training on air traffic control radar simulators. Prerequisite: FSCI 125

ASCI 130 - Aviation Weather (3)
This course will provide the fundamentals of meteorological theory with a specific application to aviation and flight. Appropriate weather services that are available to the pilot will be covered.
ASCI 150 - Aviation Human Factor & Safety (3)
This course will introduce the student to the concept of aviation human factors and safety. Particular emphasis will be placed on strategies for improving aviation safety, and judgment and decision-making strategies.
Corequisite: PP150

ASCI 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 220 - Concepts in Aerodynamics (3)
Airplane types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of aircraft stability and control, effects of flight loads on aircraft structure.

ASCI 240 - Advanced Aircraft Systems (3)
Study of systems in a turbine powered aircraft in use in commercial aviation. Course will examine the mechanics of the aircraft systems as well as how to properly and effectively operate them in both normal and emergency procedures in accordance with the aircraft flight manual.

ASCI 275 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing

ASCI 298 - Special Topics in Aviation Science (Credit to be determined by department offering course).
Prerequisites: Approval of the Department Chair.

ASCI 299 - Thesis (3)
Demonstrate mastery of basic principles of Aviation Science; ability to apply principles in the investigation and solution of problems in Aviation Science.

ASCI 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. Prerequisite: AETP220, AETP219, PP250.

ASCI 320 - Fundamentals of ATC (3)
A study of the history and function of the ATC system. Theory of ATC taught in the classroom will be reinforced by 10 hours of "hands-on" instruction on the ATC radar simulators. Prerequisite: PP220.

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 applications 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. Prerequisite: ASCI300.

ASCI 360 - Humanitarian Action (3)
This course introduces the student to the field of humanitarian aviation and related issues. The course examines the Jesuit character of the university mission, the logic and history of humanitarian work, practical aspects of aviation located within the broader context of humanitarian aid, international flight operations, aviation safety and humanitarian aviation, the similarities between faith-based aid agencies, governmental and non-governmental organizations, the student's personal belief systems and motivations for humanitarian work. As service is an integral component of humanitarian work, students will engage in community service in the local area, reflect upon their experience, and draw from it to inform their study of humanitarian aviation.

ASCI 365 - Applied Statistics (3)
In this course, the students will apply fundamental statistical analysis techniques to interpret data from their professional career interests. Discussion topics will include data collection, set-up of statistical analysis software, statistical sampling, parametric and non-parametric data analysis, report writing, and interpretation of previously published or established reports. Prerequisite: MATH141

ASCI 375 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: ASCI275

ASCI 376 - Internship with Industry (0-3)
Seniors in the Department of Aviation Science are afforded the opportunity of working in a commercial airline or a corporate flight department environment for a semester. Students compete for limited spaces. Prerequisite: Senior standing and permission of the Department Chair.

ASCI 405 - Human Factors (3)
This course will introduce the student to the concepts of human factors as applied to Flight, System Safety, and Quality Management. Particular emphasis will be placed on improving safety, judgment, and decision-making strategies. The student will make direct applications to the work environment. Prerequisite: PSY101.

ASCI 410 - Air Carrier Operations (3)
This course includes the study of the operations of a representative air carrier in commercial aviation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Prerequisite: ASCI350.

ASCI 420 - Crew Resource Management (3)
This course includes an expansion of Crew Resource Management principles emphasizing human factors theory. Leadership styles along with other elements of a multicrew environment are the foundation subject areas. A practical application of the principles involved may be offered in a small group setting. Prerequisite: ASCI150, ASCI350, PSY101

ASCI 430 - Flight Guidance Systems (3)
This course will examine the principles, procedures, and regulations regarding the use of integrated flight and navigation systems for use in domestic, international, and oceanic flight. Prerequisite: ASCI350, Corequisite: ASCI410

ASCI 435 - Team Resource Management (3)
This course will prepare students to build high-performance teams in critical sectors such as flight, maintenance, safety, and quality. Concepts of team building and technology management under normal as well as emergency conditions will be discussed. Case studies will be used to analyze team performance in a variety of high-consequence sectors. Prerequisite: PP260, Corequisite: FSCI425
ASC 450 - Flight Crew Techniques and Procedures (0-3)
The student will integrate the operation of advanced aircraft systems, air carrier flight crew techniques, and crew resource management principles through a Line Oriented Flight Training simulator experience. Prerequisite: ASCI410, ASCI420, ASCI430 and PP351.

ASC 475 - Co-op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisite: ASCI375.

ASC 476 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Prerequisite: ASCI376 or Senior standing.

ASC 478 - Internship with Industry (3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time but with three credit hours of academic credit. Prerequisite: Senior standing.

ASC 490 - Senior Seminar (2)
A work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Prerequisite: ASCI375.

ASC 501 - Current Issue in Aviation Sfty (3)
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.

ASC 502 - Aviation Safety Data Analysis (3)
Practical application and research of aviation and aerospace safety databases.

ASC 503 - Aviation Security Management (3)
The challenges of managing an aviation security program are addressed from the following perspectives: means, motives, and opportunities. Discussion topics include technical as well as behavioral science based approaches to detecting threats; the role of global political climate in influencing terrorism; and federal and international regulations as counter-terrorism measures.

ASC 504 - Human Factors in Avtn Safety (3)
This course will include elements of human factors theory applied to various aviation environments. Human factors theory will be reviewed and then applied to flight operations and maintenance issues. Emphasis will be placed on the management of safety programs toward a reduction of accidents caused by human error.

ASC 508 - Management of Avtn Safety Prog (3)
Synergistic application of five perspectives is discussed: organizational psychology, behavioral psychology, engineering, accounting, and underwriting. Discussion topics include the following: organizational risk management, hazard identification and management, failure modes and effects analysis, fault-tree analysis, values-based safety program development, and cost analysis of safety programs.

ASC 510 - Avtn Safety Career & Per. Dev. (3)
Aviation safety career and personal development in private and public aviation organizations.

ASC 512 - Aviation Safety Quality Issues (3)
A study of the practice and research involved in implementing aviation and aerospace quality issues.

ASC 513 - Aviation Safety Ethics (3)
A study of ethical behavior and decision making involved in implementing an aviation safety philosophy.
AVN 275 - Co-op with Industry (0)
Sophomore standing is required for students to register for this zero credit hour course. A full-time supervised work experience with an agency, firm or organization that employs persons in the field of avionics. This course is used for the first experiential learning session.

AVN 293 - Electronic Devices I (3)
The course covers diode theory and circuits, bipolar transistors, field-effect transistors (FET), JFETs, MOSFETs, circuits and applications. Fall semester.

AVN 294 - Electronic Devices I Lab (1)
Laboratory experiments to emphasize material covered in lectures of AVN-293. Fall semester.

AVN 295 - Electronic Devices II (3)
The course covers bipolar transistors, field-effect transistors (FET), JFETs and MOSFETs amplifiers, operational amplifiers, circuits parameters, and wave shaping circuits. Spring semester.

AVN 296 - Electronic Devices II Lab (1)
Laboratory experiments to emphasize material covered in lectures of AVN-295. Spring semester.

AVN 297 - Internship With Industry (0-3)
Opportunities to gain experience as offered by interested companies. On demand.

AVN 299 - Co-op Education with Industry (0)
Alternating periods of work and study with participating companies. On demand.

AVN 301 - Electronics (3)
Diodes; bipolar junction transistors; silicon controlled rectifiers; electronic circuits; multistage and large-signal amplifiers; operational amplifiers; digital logic, digital circuits. Spring semester.

AVN 302 - Electronics Lab (1)
Laboratory experiments to emphasize materials covered in lectures of AVN-301. Spring semesters.

AVN 305 - Digital Circuits/State Machine (3)
Number systems, logic gates, Boolean algebra, multivibrators, counters and registers, multiplexers and memories, and state machine design. Fall semester.

AVN 306 - Digital Circ/State Mach. Lab (1)
Laboratory experiments to emphasize material covered in lectures of AVN-P305. Fall semester.

AVN 307 - Microprocessors/controlers (3)
Number systems, microprocessor basics, computer arithmetic, programming, microprocessor architecture, timing, microcomputer interfacing and applications. Spring semester.

AVN 308 - Microprocessors/Controlers Lab (1)
Laboratory experiments to emphasize material covered in lectures of AVN-307. Spring semester.

AVN 351 - Electronic Communications (3)
Principles of electronic communications, noise considerations, frequency synthesis modulation and demodulation. Fall semester.

AVN 352 - Electronic Comm. Lab (1)
Laboratory experiments to emphasize material covered in AVN-351. Fall semester.

AVN 353 - Adv Dig Comm Systems (3)
Principles and applications of digital transmission, data communications, microwave systems and satellite communications. The goals are to understand the principles of digital, data, microwave and satellite communication systems and to apply the principles to current applications in Avionics and Engineering Technology. Prerequisite: Communication Electronics EET351.

AVN 356 - Elec Nav & Surveillance Sys Lab (1)
Laboratory experiments emphasizing the material covered in AVN-295. Prerequisites: Advanced Communications Systems Laboratory AVN354, and concurrent registration with AVN355.

AVN 375 - Co-op with Industry (0)
Junior standing is required for students to register for this zero credit hour course. 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.

AVN 376 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing.

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.

Prerequisite: AVN353

AVN 392 - Avionics Radar Lab (1)
Laboratory experiments to accompany the course material covered in AVN391. Laboratories designed to provide integral instruction in the operation and maintenance of radar equipment and systems. Prerequisite: AVN354

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 - Avions Sys. Analysis I Lab (1)
Laboratory project to emphasize material covered in AVN-401. Fall semester.

AVN 403 - Avions Systems Analysis II (3)
A continuation of AVN-401 with emphasis on avionics systems. Spring semester.

AVN 404 - Avions Sys. Analysis II Lab (1)
A continuation of the laboratory project begun in AVN-402. Spring semester.

AVN 421 - Global Positioning System (3)
This course defines the major system elements of GPS and covers trajectory and atmospheric characteristics which affect performance and coverage. Signal characteristics and coding are related to the performance objectives of the GPS. Interfacing characteristics are presented for some of the major GPS receivers. Laboratory exercises cover interfacing receivers with computers as well as typical navigation displays and lead up to a laboratory project to illustrate a GPS application.

Prerequisites: MATH244 Engineering Calculus III, PH-P161 Engineering Physics I, and electrical circuit analysis.

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

BME 100 - BME Orientation (1)
Introduction to BME Faculty and Students. Discussion of BME-related topics that involve math, chemistry, biology, physics, and engineering. Prerequisites: Freshmen standing or consent of instructor

BME 101 - BME Introduction (1)
Continuation of BME 100. Discussion of BME-related topics that involve math, chemistry, biology, physics, and engineering. Prerequisites: Freshmen standing or consent of instructor

BME 200 - BME Computing (0-3)
Introduction to computer modeling and analysis in biomedical engineering. Introduction to the MATLAB programming environment, develop algorithms and computer programs that address biomedical engineering problems. Prerequisites: CHEM162, BIOL106, PHYS161; Co-requisite: MATH244

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. Prerequisite: Sophomore standing. Offered every semester.

BME 305 - Measurements (3)
A study of various measurement techniques in engineering and statistical analysis of experimental data. Instrumentation concepts including linearity, frequency response, energy transduction, sensor fundamentals, signal-to-noise ratio, data acquisition. Measurement of pressure, flow, motion, force, temperature, electric and magnetic fields. Measurement system design from sensor to recording or display. Prerequisites: BME310

BME 310 - Signals (3)
Signal representations, Fourier methods, Laplace transforms, linear systems, transfer functions, system response in time and frequency, feedback, analog and digital processing of signals. Relating signal properties to physical parameters. Prerequisites: BME200, EENG201&202, MATH355.

BME 310 - Signals and Systems (3)
Signal representations, Fourier methods, Laplace transforms, linear systems, transfer functions, system response in time and frequency, feedback, analog and digital processing of signals. Relating signal properties to physical parameters. Prerequisites: BME200, EENG201&202, MATH355.

BME 320 - Mechanics (3)
Introductory topics in fluid, heat, and mass transfer including both integral and differential analysis. Develop and utilize Bernoulli’s equation, Navier-Stokes relationships, Fourier heat transfer relationships, and Fick’s laws. Analysis of problem statements and determination of assumptions for each set of equations is covered. Prerequisites: BME200, BME320, MATH355, PHYS341.

BME 340 - Materials Science (3)
Materials Science is a multidisciplinary field requiring knowledge of chemistry, physics, and mechanics. In this first course, we examine effect of chemistry on molecular structure and physical and mechanical properties of materials, and we examine methods of controlling those properties. Examples from the various engineering disciplines are used. Prerequisites: ESCI210, ESCI310; or BME320

BME 375 - Co-Op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Prerequisite: BME275 Offered every semester.

BME 376 - Internship with Industry (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 third experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing. Offered every semester.

BME 395 - Design of BME Lab Experiments (0-2)
Laboratory to provide an experience in engineering research and design at a level appropriate to the student’s background. Students will work on developing their laboratory skills and ability to successfully design and implement a research plan. Prerequisites: MATH403 And/Or consent of instructor.

BME 396 - Experimental Design & Analysis (0-2)
Laboratory to provide experience in engineering research design and analysis at a level appropriate to the student’s advanced background. Students will assist others in designing laboratory experiments to further develop laboratory skills. Key components are the statistical analysis of the experiment and presentation of the project. Prerequisites: BME 395 And/Or consent of instructor.

BME 396 - AFM Training (0)
Laboratory to provide experience in engineering research design and analysis at a level appropriate to the student’s advanced background. Students will assist others in designing laboratory experiments to further develop laboratory skills. Key components are the statistical analysis of the experiment and presentation of the project. Prerequisites: BME 395 And/Or consent of instructor.
### BME 401 - Biomedical Signals I (3)
Physiological origins of measured signals. Convolution, Fourier methods, analog and digital processing of biosignals. Relating signal properties to physiological parameters. Analysis of electrocardiograms, electroencephalograms, electromyograms, sleep patterns.

### 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)
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: BME 305, BIOL 260

### BME 410 - Biomedical Signals (3)
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: BME 310, BIOL 260

### BME 415 - Sensory Systems (3)
Topics include: relevant background in neuroscience; structure and function of central nervous system, perception, and movement. Integration of sensory and motor function. Specific sensor modalities including touch, pain, vision, hearing, smell, and taste. Senior Standing or consent of instructor. Prerequisites: BME 305, BIOL 260

### BME 420 - Biomechanics (3)
Advanced topics in skeletal tissue mechanics, including: skeletal biology, fracture healing, and bone remodeling; the mechanical properties, fracture resistance, and adaptability of bone to external forces; and the mechanics of synovial joints, cartilage, tendons, and ligaments. Prerequisites: BME 320, BIOL 260 Corequisites: BME 330, BME 340

### BME 425 - Prosthetic Systems (3)

### BME 430 - Rehabilitation Engineering (3)
With the foundations of fluid, heat and mass transfer established in Transport Fundamentals, this course focuses on specific biological examples of transport including oxygen transport, blood flow and solute transport in biological systems. Additionally, discussion will include integration of fluid, heat and mass transfer in specific biomedical examples such as artificial organ development and extracorporeal devices. Prerequisites: BME 200, BME 330, BIOL 360, MATH 403.

### BME 431 - Special Topics: (3)
This course will explore advanced topics in transport phenomena, including utilizing dimensional analysis & unsteady state equations and studying multipole forms of transport simultaneously. Mathematical techniques to reduce and solve partial differential equations will be investigated to model biomedical systems more accurately. Prerequisites: BME 430, BME 440, BME 310, & 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 500 - Seminars (0)
A biweekly departmental lecture-discussion presented by students, faculty, and invited guests. Registration required in the first semester. Seminar attendance expected in all semesters. Offered every fall semester.

BME 501 - Current Topics I (1)
Student presentations and discussion of papers selected from current literature. Offered every fall semester.

BME 502 - Current Topics II (1)
Continuation of BME 501. Offered every spring semester.

BME 503 - Current Topics III (2)
Continuation of BME 502. Offered every fall semester.

BME 504 - Current Topics IV (2)
Continuation of BME 503. Offered every spring semester.

BME 505 - Data Handling (3)
This required course addresses issues of data acquisition, filtering, model fitting, analysis, and visualization. The data will include one-dimensional signals, images, and multidimensional data. The course will serve as a general overview of data handling, and some students may follow with more specialized courses that address the specific topics. Offered every fall semester.

BME 506 - Ethics & Compromise (3)
Students and faculty will discuss the positive and negative impact of engineering and science on society. Examples and case studies will illustrate the scientific, economic, and social effects of new devices and new knowledge. The discussion will focus on the role of engineers and scientists, the ethical considerations, and the acceptable compromises. Offered every fall semester.

BME 515 - Sensory Systems (3)
Human mechanisms for sensing the environment will be addressed with a focus on the basic neurosciences and supplemented with material from various engineering sources that examine and describe specific sensory mechanisms. More advanced topics will include clinical tests of human sensing capability and efforts to compensate for sensory deficits. Offered every fall semester.

BME 520 - Continuum Biomechanics (3)
This course will expand on the two-dimensional mechanics typically offered in undergraduate biomechanics courses. The course will introduce and expand on the use of vectors and tensors to describe and analyze stresses and strains in biological tissues as well as complex man-made materials. Offered every spring semester.

BME 530 - Drug Delivery (3)
Appropriate delivery of a drug requires knowledge of both properties of the drug itself and properties of the body. This course covers the mathematics behind the distribution of a drug in a biological system including the study of drug delivery systems. Offered every fall semester.

BME 540 - Tissue-Material Interfaces (3)
This course will expand on the concepts introduced in the typical undergraduate biomaterials sequence. In particular, the response of tissues to implanted materials will be studied extensively. Offered every spring semester.

BME 541 - Tissue Engineering (3)
Beginning with the history of tissue engineering, this course will describe the challenges in developing new functional human tissue including the ethical and legal implications of “designing” tissue, relevant background, and current directions in research and development. Offered every other fall semester.

BME 545 - AFM Techniques and Training (0-2)
Laboratory to provide an experience and training in atomic force microscopy (AFM) to allow graduate students the ability to utilize the equipment in their research. Students will be exposed to AFM background, along with directed training and independent use of the microscope. Course requires instructor’s approval.

BME 550 - Experimental Technique & Design (0-2)
Laboratory to provide an experience in engineering research and design at a level appropriate to the student's background. Students will work on developing their laboratory skills and ability to successfully design and implement a research plan. Course open to BME graduate students with Instructor’s permission.

BME 553 - Special Topics (0-3)
A one-time or trial course.

BME 596 - Project Guidance (0-3)
For the M.S. project option.

BME 597 - Research Topics (1-3)
For research other than the thesis or project.

BME 598 - Graduate Reading Course (1-3)
An independent study with a faculty member.

BME 693 - Special Topics (1-3)
A one-time or trial course.

BME 697 - Research Topics (1-3)
For research other than dissertation research.

BME 698 - Graduate Reading Course (1-3)
An independent study with a faculty member.

Computer Engineering (CENG)
CENG 101 - Introduction to Computer Engineering (0-3)
Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Fall semester. Co-requisite: MATH142 or equivalent

CENG 205 - Digital Design (3)
Prerequisites: MATH-135.

CENG 206 - Digital Design Lab (1)
Laboratory experiments to emphasize materials covered in CENG-205. Spring semester Co-requisite or Prerequisite: CENG-205

CENG 210 - Engineering Circuits I (3)

CENG 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. Spring semester Prerequisite: CENG-210

CENG 212 - Electrical Science Lab (1-2)
Laboratory experiments to emphasize materials covered in CENG-210 and CENG-211. Spring semester Prerequisite or Corequisite: CENG-211.

CENG 301 - Signals and Systems (3)
Introduction to signals and systems. Linear time-invariant systems. Fourier analysis of continuous-time signals and systems. Fourier analysis of discrete-time signals and systems. The Laplace transforms, Z-transforms. Fall semester Prerequisite: CENG-211 and MATH-355 or equivalent.
CENG 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 Prerequisite: CENG-211, MATH-355, MATH-403, or equivalent.

CENG 304 - ECE Systems Modeling Lab (1)
This is a breadth first course in computer based system modeling and design group dynamics. This course is intended to prepare students for their capstone design sequence by introducing them to the design of multi-system open ended design problems. This introduction will be facilitated through the modeling of several design problems in Matlab. Students will work in design groups with similar objective as are expected in the capstone design class.

CENG 305 - Microprocessors (3)
Review of number systems. Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Fall semester Prerequisite: CENG-205

CENG 306 - Microprocessors Lab (2)
Concurrent registration with CENG-305. Laboratory experiments to emphasize materials covered in CENG-305. Fall semester

CENG 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. Fall semester Co-requisite or Prerequisite: CENG-312, CENG-205 and CENG-206.

CENG 312 - Computer Systems Design Lab (1)
Laboratory investigation of microcomputing systems covering the material in CENG-311. Practical aspects of computer design and implementation. Design, construction, microprogramming, programming, and testing of significant digital subsystems using computer simulators, hardware description languages, and software development tools. Fall semester Co-requisite or Prerequisite: CENG-312, CENG-205 and CENG-206.

CENG 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. Prerequisites: CENG-301, MATH-355.

CENG 417 - Microcomp-Based System Design (3)
Study of 16-bit microprocessors architecture, programming, and interfacing. On demand. Prerequisite: CENG405.

CENG 419 - Digital IC Design (3)
Introduction to digital electronics. Metal-oxide semiconductor transistors, (MOSTs, MOS inverter and gate circuits. Design of MOSFET based combinational and sequential circuits. Issues related to design of modern Digital Integrated Circuits is covered. Fall semester. Prerequisite: CENG-205 and CENG-309.

CENG 421 - Image Processing (3)

CENG 490 - Electrical Engineer Design I (0-3)
Principles of engineering experimentation and design. Development of engineering design proposal. Fall Semester. Prerequisite: Senior CE standing

CENG 491 - Electrical Engineer Design II (0-3)
Development, analysis and completion of detailed design in electrical engineering. Completion of a project under faculty supervision. Project results are presented in a formal report. Spring semester. Prerequisite: CENG-490.

CENG 493 - Spec Lecture in Electrical Eng (3)
Selected topics of special interest to electrical engineering majors. On demand. Prerequisite: Senior CE standing.

CENG 498 - Spec Topics in Electrical Eng (1-3)
Independent study on any electrical engineering topic under the direction of a faculty member. On demand. Prerequisite: Senior CE standing.

Electrical & Computer Engr (ECE)

ECE 101 - Introduction to Electrical and Computer Engine
Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Fall semester.

ECE 201 - Electrical and Computer Engineering Lab (3)
Basic DC circuit analysis techniques including current, voltage and power concepts, mesh analysis, node analysis and circuit reduction techniques. Basic AC circuit analysis techniques including impedance concepts, phasor notation, power principles, principles of circuit frequency response and filter concepts. Transient analysis of simple inductive and capacitive networks. Principles of operational amplifier circuit analysis including basic active filter design. Introduction to transformers, power supplies and motors.

ECE 202 - Electrical and Computer Engineering Laboratory
Laboratory experiments to emphasize materials covered in ECE 201. Every semester.

ECE 205 - Digital Design (3)

ECE 206 - Digital Design Lab (1)
Laboratory experiments to emphasize materials covered in ECE 205. Fall semester.

ECE 210 - Engineering Circuits I (3)

ECE 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.

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

ECE 275 - Co-Op with Industry (0-3)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used through the modeling of several design problems in Matlab. Students will work in design groups with similar objective as are expected in the capstone design class.

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

ECE 301 - Signals and Systems (3)
Introduction to signals and systems. Linear time-invariant systems. Fourier analysis of continuous-time signals and systems. Fourier analysis of discrete-time signals and systems. The Laplace transforms, Z-transforms. Every semester.

ECE 302 - Electromagnetic Fields (3)
ECE 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.

ECE 304 - ECE Systems Modeling Lab (1)
This is a breadth first course in computer based system modeling and design group dynamics. This course is intended to prepare students for their capstone design sequence by introducing them to the design of multi-system open ended design problems. This introduction will be facilitated through the modeling of several design problems in Matlab. Students will work in design groups with similar objective as are expected in the capstone design class.

ECE 305 - Microprocessors (3)
Review of number systems. Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Fall semester

ECE 306 - Microprocessors Laboratory (1)
Concurrent registration with ECE 305. Laboratory experiments to emphasize materials covered in ECE 305. Fall semester

ECE 307 - Electric Energy Conversion (3)
Magnetic theory and circuits. Transformers. Electromechanical energy conversion. Induction motors. Direct current machines. Electromechanical components of control systems. Direct energy conversion methods. Fall semester Prerequisite: ECE-211 and MATH-355 or equivalent.

ECE 309 - Electronic Circuit Design (3)
Review of semiconductor materials and their electronic properties and applications to electronic devices. Introduction to designing circuits using P-N junction (diodes), bipolar junction transistors (BJTs), and field effect transistors (FET). Introduction to design of Class A, B, and AB amplifiers. Analysis and design of single and multi-stage amplifiers using BJTs and FETs transistors. Spring semester Prerequisite: ECE 303.

ECE 310 - Electronics Laboratory (1)
Laboratory experiments to emphasize materials covered in ECE 309. Spring semester. Prerequisite or Corequisite: ECE 309.

ECE 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. Fall semester Co-requisite or Prerequisite: ECE 205, ECE 206 and ECE 312.

ECE 312 - Computer Systems Design Lab (1)
Laboratory investigation of microcomputing systems covering the material in ECE 311. Practical aspects of computer design and implementation. Design, construction, microprogramming, programming, and testing of significant digital subsystems using computer simulators, hardware description languages, and software development tools. Fall semester Co-requisite or Prerequisite: ECE 311, ECE 205 and ECE 206.

ECE 315 - Advanced Digital Design (3)
Design with Programmable Logic Devices (PLDs) and Field Programmable Gate Arrays (FPGAs); HDL design entry methods; Event driven simulation; Verification using simulation testbenches; Timing verification u sing Back Annotated simulations. Spring semester.

ECE 375 - Co-op with Industry (0-3)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 275.
ECE 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. Prerequisite: CHEM 151, ECE 211, PHYS 163, and MATH 355 or equivalent.

ECE 419 - Digital IC Design (3)
Introduction to digital electronics. Metal-oxide semiconductor transistors, (MOST’s), MOS inverters and gate circuits. Design of MOSFET based combinational and sequential circuits. Issues related to design of modern Digital Integrated Circuits is covered. Fall semester. Prerequisite: ECE 205 and ECE 309.

ECE 420 - Advanced Filter Design (3)

ECE 421 - Image Processing (3)

ECE 475 - Co-Op with Industry (0-3)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 375.

ECE 476 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department offering course. Offered every semester. Prerequisite: ECE 376 or Senior standing.

ECE 490 - ECE Design I (0-3)
Principles of engineering experimentation and design. Development of engineering design proposal. Fall Semester. Prerequisite: Senior ECE standing

ECE 491 - ECE Design II (0-3)
Development, analysis and completion of detailed design in electrical engineering. Completion of a project under faculty supervision. Project results are presented in a formal report. Spring semester. Prerequisite: ECE 490.

ECE 493 - Special Lecture (0-3)
Selected topics of special interest to electrical engineering majors. On demand. Prerequisite: Senior ECE standing.

ECE 498 - Special Topics in ECE (1-3)
Independent study on any electrical engineering topic under the direction of a faculty member. On demand. Prerequisite: Senior ECE standing.

Electrical Engineering (EENG)
EENG 101 - Introduction to Electrical Engineering (0-3)
Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Fall semester. Co-requisite: MATH142 or equivalent

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. Prerequisite: PHYS-163 and MATH-244, or equivalent.

EENG 202 - Electrical Engineering Laboratory (1)
Laboratory experiments to emphasize materials covered in EENG-201. Not for EE majors. Prerequisite or Co-requisite: EENG-201.

EENG 205 - Digital Design (3)
Prerequisites: MATH-135.

EENG 206 - Digital Design Lab (1)
Laboratory experiments to emphasize materials covered in EENG-205. Spring semester Co-requisite or Prerequisite: EENG-205

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. Spring semester Prerequisite: EENG-210

EENG 212 - Electrical Science Laboratory (1-2)
Laboratory experiments to emphasize materials covered in EENG-210 and EENG-211. Spring semester Prerequisite or Corequisite: EENG-211.

EENG 275 - Co-Op with Industry (0)
Prerequisite: Sophomore standing. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester.

EENG 297 - Co-Op in Electrical Engineering (0)
An optional supervised work experience with an agency, firm or organization which employs engineers. The student receives a PASS or NO PASS grade. 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. Fall semester Prerequisite: EENG-211 and MATH-355 or equivalent.

EENG 302 - Electromagnetic Fields (3)
The electromagnetic model. Vector analysis. Static electric fields, static magnetic fields. Time-varying fields and Maxwell’s equations. Plane electromagnetic waves. Spring semester Prerequisite: EENG-211 and MATH-355 or equivalent.

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 Prerequisite: EENG-211, MATH-355, MATH-403, or equivalent.
EENG 304 - ECE Systems Modeling Lab (1)
This is a breadth first course in computer based system modeling and design group dynamics. This course is intended to prepare students for their capstone design sequence by introducing them to the design of multi-system open ended design problems. This introduction will be facilitated through the modeling of several design problems in Matlab. Students will work in design groups with similar objective as are expected in the capstone design class.

EENG 305 - Microprocessors (3)
Review of number systems. Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Fall semester Prerequisite: EENG-205

EENG 306 - Microprocessors Lab (1)
Concurrent registration with EENG-305. Laboratory experiments to emphasize materials covered in EENG-305. Fall semester

EENG 307 - Electric Energy Conversion (3)
Magnetic theory and circuits. Transformers. Electromechanical energy conversion. Induction motors. Direct current machines. Electromechanical components of control systems. Direct energy conversion methods. Fall semester Prerequisite: EENG-211 and MATH-355 or equivalent.

EENG 309 - Electronic Circuit Design (3)
Review of semiconductor materials and their electronic properties and applications to electronic devices. Introduction to designing circuits using P-N junction (diodes), bipolar junction transistors (BJTs), and field effect transistors (FET). Introduction to design of Class A, B, and AB amplifiers. Analysis and design of single and multi-stage amplifiers using BJTs and FETs transistors. Spring semester Prerequisite: EENG-303.

EENG 310 - Electronics Laboratory (1)
Laboratory experiments to emphasize materials covered in EENG-309. Spring semester. Prerequisite or Corequisite: EENG-309.

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. Fall semester Co-requisite or Prerequisite: EENG-312, EENG-205 and EENG-206.

EENG 312 - Computer Systems Design Lab (1)
Laboratory investigation of microcomputing systems covering the material in EENG-311. Practical aspects of computer design and implementation. Design, construction, microprogramming, programming, and testing of significant digital subsystems using computer simulators, hardware description languages, and software development tools. Fall semester Co-requisite or Prerequisite: EENG-311, EENG-205 and EENG-206.

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. Prerequisite: EENG-275.

EENG 375 - Co-Op with Industry (0-3)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the second experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: EENG-275.

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. Prerequisite: Junior standing.

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. Prerequisite: Instructor's permission.

EENG 402 - Filter Design (3)

EENG 403 - Communications Systems (3)

EENG 404 - Automatic Control Systems (3)

EENG 407 - Transmission Lines & Waveguide (3)
Introduction, elementary transmission line concepts. Standing-wave AC configurations. Smith chart and matching problems. Plane waves and wave impedance. Mode theory of rectangular waveguides, Microstrips, stripline and other practical transmission lines. Fall semester Prerequisite: EENG-302.

EENG 408 - Antenna Engineering (3)

EENG 409 - Radar Systems (3)
Nature of radar, basic elements of the radar systems. Radar waveforms and applications. Tracking radar techniques and applications, radar electronic counter countermeasures (ECCM). On demand. Prerequisite: Instructor's permission or EENG-403.

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. Prerequisites: EENG-301, MATH-355.

EENG 416 - Modern Control Theory (3)

EENG 417 - Microcomputer-Based System Design (3)
Study of 16-bit microprocessors architecture, programming, and interfacing. On demand. Prerequisite: EENG405.

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. Prerequisite: CHEM-151, EENG-211, PHYS-163, and MATH-355 or equivalent.
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. Prerequisite: EENG-375.

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. Prerequisite: EENG-376 or Senior standing.

EENG 490 - Electrical Engineering Design I (0-3)
Principles of engineering experimentation and design. Development of engineering design proposal. Fall Semester. Prerequisite: Senior EE standing.

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. Spring semester. Prerequisite: EENG-490.

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

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. Prerequisite: Senior EE standing.

EET 155 - Circuit Layout & Fabrication (1)

EET 210 - Srvy Electricity & Electronics (3)
This course includes 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. Prerequisites: MT142, PH131.

EET 211 - Srvy Electricity & Electronic Lab (1)
This course includes laboratory projects to reinforce and supplement the lecture material in EETP-303. Prerequisite: Concurrent enrollment with EET310.

EET 275 - Co-Op with Industry (0)
Sophomore standing is required for students to register for this zero credit hour course. 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.

EET 293 - Electronic Devices I (3)
The course covers diode characteristics and circuits, bipolar transistor¿s circuits and applications, field-effect transistor¿s circuits and applications. Pre-Requisites: EET207, EET208 and MATH-143.

EET 294 - Electronic Devices I Lab (1)
Laboratory experiments to emphasize material covered in lectures of EET293. Pre-Requisites: EET208, concurrent registration EET293.

EET 295 - Electronic Devices II (3)
The course covers amplifiers¿ frequency response, power amplifiers, thyristors, differential amplifier, operational amplifier and applications, oscillators and regulated power supplies. Pre-Requisites: EET293, EET294.

EET 296 - Electronic Devices II Lab (1)
Laboratory experiments to emphasize material covered in lectures of EET295. Pre-Requisites: EET293, EET294, concurrent registration EET295.

EET 305 - Digital & State Machine Dsgn (3)
The course covers number systems, logic gates, Boolean algebra, combinational logic, PLD¿s, multiplexers, decoders, encoders, flip-flops, registers, counters, state machine design, memories and VHDL. Pre-Requisites: CSCI-140 and EET-293.

EET 306 - Digital & State Mach Dsgn Lab (1)
Laboratory experiments to emphasize material covered in lectures of EET305. Pre-Requisites: Concurrent registration of EET305.

EET 307 - Microproces & Microcontrollers (3)
The course covers microprocessors/microcontrollers basics, Motorola M68HC12 hardware, the M68HC12 instruction set, assembly language programming, assembler, interrupts, memory mapping, interfacing and applications. Prerequisite: EET305.

EET 308 - Microproces & Microcontro Lab (1)
Laboratory experiments to emphasize material covered in lectures of EET307. Pre-Requisites: Concurrent registration of EET307.

EET 351 - Electronic Communications (3)
Frequency generation, amplitude modulation transmission and reception, angle modulation transmission and reception, introduction to spread spectrum techniques, transmission lines, wave propagation, antennas. Pre-requirements: EET295 and concurrent registration with EET305 and EET345.

EET 352 - Electronic Communications Lab (1)
Practical applications of basic principles of electronic communications including signal generation, transmission reception and processing, methods of modulation and demodulation. Co-requisite: Concurrent registration in EET351.

EET 353 - RF Signals & Systems (3)
Wave propagation and microwave circuit elements are covered. The background for continued study of RF communications is covered in this course. Pre-requisites: EET351 and ET403.
Engineering Sciences (ESCI)

ESCI 101 - Freshman Engineering I (1-3-2) (1-2)
An introduction to the philosophy of engineering and engineering design. Introduction to the various laboratory and computing facilities on campus. Introduction to engineering drawing and computer aided drafting techniques.

ESCI 102 - Computer Aided Design (1)
Prerequisite: ESCI101. Further topics in the philosophy of engineering and engineering design. Further topics in skills and tools used in engineering.

ESCI 103 - Thermodynamics (3)
Properties, characteristics and fundamental equations of gases, application of first and second laws of thermodynamics in evaluation of engines, cycles and processes. Corequisite: MATH244.

ESCI 200 - Engineering Mechanics (4)
Vectors/force, moments, couples, equilibrium of particles and rigid bodies, trusses, frames, machines, friction, centroids, moments of inertia of areas, shear and moment diagrams, kinematics and kinetics of particles and rigid bodies. Prerequisite: MATH153 (or concurrent registration); PH A151 or PHYS161.

ESCI 210 - Statics (3)
Study of force systems acting on particles and rigid bodies, 2-D and 3-D equilibrium, trusses, frames machines, shear and moment diagrams, friction, centroids, area moment of inertia. Prerequisite: PHYS161 (or concurrent registration).

ESCI 211 - Dynamics (3)
Particle kinematics and kinetics in rectangular, cylindrical and normal-tangential coordinates; projectiles; relative motion using translating axes; work; conservative forces; conservation of energy; linear and angular impulse and momentum, conservation of momentum, rigid body kinematics and kinetics. Prerequisite: ESCI210 and MATH153.

ESCI 220 - Thermodynamics (3)
Properties, characteristics and fundamental equations of gases, application of first and second laws of thermodynamics in evaluation of engines, cycles and processes. Corequisite: MATH244.

ESCI 303 - Fluid Mechanics (3)
Fluid statics; kinematics of fluid flow; energy equation for steady flow of any fluid; viscosity; flow of incompressible and compressible fluids in pipes; fluid measuring instruments; momentum relations for steady flow; resistance of immersed bodies; dynamic lift and propulsion; flow of liquids in open channels; pumps, turbines. Prerequisite: ESCI200.

ESCI 310 - Mechanics of Solids (3)
Stress and deformation due to axial load, torsion, bending and shear; properties of materials; statically indeterminate problems, analysis of plane stress and strain; combined loading; pressure vessels; beam deflections. Prerequisite: ESCI200 or ESCI210 and MATH 254.

ESCI 311 - Mechanics of Solids Lab (1)
Concurrent Registration: ESCI310. Laboratory experiments to emphasize material covered in lectures of ESCI310.

ESCI 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 similarity; application to problems of inviscid and viscous flows, drag, flow measurements. Prerequisite:ESCI210,MTA244.

ESCI 330 - Linear Vibrations (3)
Single and two degrees-of-freedom with and without damping, vibration dampers and absorbers; model properties of vibrating systems; vibration of lumped parameter and continuous systems; approximate numerical methods and digital computation. Review of test equipment and methods. Prerequisite:ESCI211,MTA355.

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

ESCI 430 - Analysis & 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. Prerequisites: ESCI330 and MATH370.

EET 345 - RF Signals & Systems Lab (1)
Lab emphasizes the lecture covered topics. Use of RF and microwave equipment in making testing and measurement. Comparison of analytical and measured RF signals. Practical applications of RF signal and systems. Pre-requisites: EET351.

EET 370 - Co-Op with Industry (0)
Junior standing is required for students to register for this zero credit hour course. 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.

EET 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. Pre-requisite: Junior standing.

EET 421 - PC Interfacing & Applications (3)
A general approach to the uses of computers as embedded systems. Computer interfaces, serial, parallel, USB, LAN, etc. Interfacing projects using Serial, Parallel and the USB ports will be emphasized. Prerequisite: CSC140 or equivalent.

EET 475 - Co-Op with Industry (0)
Senior standing is required for students to register for this zero credit hour course. 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.

EET 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. Pre-requisite: Senior standing.

EET 490 - Senior Project I (2)

EET 491 - Senior Project II (3)
Implementation of a senior project. Completion of the development of a detailed project in EET under faculty supervision. Pre-requisite: EET490 or with concurrent registration.

EET 498 - Special Topics in EET (0-6)
Independent or lecture based study in an appropriate electronics engineering technology subject area under the direction of an EET faculty member. Pre-requisite: Senior Status.
ESCI 450 - Eng Economic Anal & Proj Mgmt (3)
Development and use of time value of money interest formulas. Bases for comparison of alternatives, including present worth, annual worth, rate of return and payout period methods. Depreciation and depletion methods. Engineering project planning, implementation and management. Spring semester. Prerequisite: MTA143 or equivalent.

Engineering Technology (ET)

ET 101 - Intro to Engineering Tech (1)
An introductory course into the philosophy of engineering technology designed to assist the student's transition into an academic program.

ET 102 - Intro to Engineering Tech Lab (1)
A laboratory projects to reinforce and supplement the lecture material in ET01. Prerequisite: Concurrent enrollment in ET101.

ET 105 - Sys Safety & Human Factors (3)
The course involves the study of the theoretical and practical application of safety concepts utilized in the technology environment. Included is an in-depth examination of safety philosophy from design onset through the manufacturing, utilization, and ultimate disposal of a system. Additionally, the study of human performance and its relationship with error and cost reduction and associated safety issues are examined.

ET 131 - Com Aid Dsgn with Unigrapic I (2)
This course involves an introduction to solid modeling, geometric dimensioning and tolerancing methods.

ET 231 - Com Aid Dsgn with Unigrapic II (2)
This course is a continued study of CAD, emphasizing the creation of assemblies and components and associated engineering drawings. Prerequisite: ET131.

ET 275 - Co-Op with Industry (0)
Sophomore standing is required for students to register for this zero credit hour course. 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.

ET 301 - Structures & Design (3)
This course introduces the student to static and fatigue analysis, failure theories, and analysis of riveted and bonded joints. Emphasis is on application of analysis procedures, industry standards, and cost-effective design. Prerequisite: ES310, ET331.

ET 302 - Structures & Design Lab (1)
This course includes laboratory projects to reinforce lecture material in ET301. Prerequisite: Concurrent registration with ET301.

ET 303 - Technology & Project Management (3)
This course allows the student to identify and understand the elements of project management in relation to an organizational strategy. Specific emphasis on tools and techniques as well as philosophies applicable to the management of technology oriented projects.

ET 307 - Material Testing (2)
This course includes an introduction to the methods of nondestructive testing of materials. NDI Flaw detection techniques. Eddy Current techniques, Ultrasonic, X-Ray, Liquid Penetrant and others used in the detection and identification of irregularities and non-uniformities in metallic and non-metallic structures.

ET 308 - Material Testing Lab (1)
Laboratory work in destructive and nondestructive testing. Laboratory projects include the use of tensile machines, hardness testing machines, industrial radiographic, magnetic particle, ultrasonic, eddy current, and liquid penetrant testing machines. Concurrent enrollment with ET307.

ET 309 - Logistics (3)
This course introduces the student to the structure, application, and concepts of contemporary logistics and associated systems.

ET 310 - Information Tech Networking (2)
Design, operation, application and management of LANs and topologies, cabling systems, protocols, bridges, routers, hubs, switches, security; media and transport systems; Internet and TCP/IP topics including the protocol stack, router operation and addressing issues. Pre-Requisites: CSCI140 Introduction to Computer Science or equivalent.

ET 331 - Metallic Materials (3)
This course is a survey of the sources, preparation, properties and uses of engineering materials. Topics include the following: the iron-carbon system, ferrous metallurgy, nonferrous metallurgy, heat treatment, properties, manufacturing and repair, and NDI of metals. Prerequisite: CHEM151.

ET 332 - Metal Materials Lab (1)
This course includes laboratory projects to reinforce the lecture material in ET331. Prerequisite: Concurrent registration with ET331.

ET 341 - Composite Materials (3)
This course is designed to develop the student's knowledge of advanced composite materials, including their use in the design, manufacture, and repair of products, systems, and components. Prerequisite: ESCI130.

ET 342 - Composite Materials Lab (1)
This course includes laboratory projects to reinforce the lecture in ET341. Prerequisite: Concurrent registration with ET341.

ET 351 - Quality Engineering I (3)
This course provides participants 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.

ET 354 - Methods in ET (3)
Introduction to analytical and numerical methods used in engineering technology problem solving. Introduction to transforms and their use in the analysis of electrical networks. Pre-Requisites: MT143 Calculus II and structured programming.

ET 375 - Co-Op with Industry (0)
Junior standing is required for students to register for this zero credit hour course. 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.

ET 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. Prerequisite: Junior standing.

ET 401 - System Analysis (3)
Network analysis stresses time and frequency domain analysis of electrical and electronics networks. Use of Fourier and Laplace transform techniques in the analysis of networks. Prerequisites: ET354.

ET 403 - Control Systems (3)
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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. Corequisites: PP110 and PP120.

FSCI 275 - Accident Investigation (3)
An introduction to aircraft accident investigation and its use as a tool in hazard identification, risk analysis and mishap prevention. Students will apply theory and practical skills developed in the classroom to an actual aircraft accident during the field work portion of the course. Prerequisite: PP210 and all associated pre/corequisites and PHYS122. Corequisite: PHYS124

FSCI 355 - Advance Aircraft Systems (3)
This course will provide the technical knowledge necessary to understand advanced aircraft systems on board typical modern turboprop/turbojet aircraft. Prerequisites: PP253, PP260, PHYS124

FSCI 395 - Air Charter Operations (3)
This course includes the study of the operation of a representative air charter operation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Prerequisite: FSCI335, PP260

FSCI 415 - Air Carrier Operations (3)
This course includes the study of the operation of a representative air carrier in commercial aviation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Prerequisite: FSCI335, Corequisite: FSCI425

FSCI 425 - Flight Deck Automation (0-3)
This course emphasizes effective management of technology and people in a modern flight deck through an understanding of situational awareness under normal, extended duration and emergency conditions. Line Oriented Flight Training (LOFT) Scenarios are used to reinforce theoretical principles. Prerequisite: FSCI335

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 445 - Aviation Law (3)
Basic principles of law which impinge on the use of the air; history of air law; principles and rules governing use of air space by aircraft; multilateral conventions pertaining to the use of air space among nations; aviation security procedures; product liability. Prerequisite: Junior standing.

Engineering, Aviation and Technology, Parks College of Engineering, Aviation and Technology

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. Pre or Corequisite AMGT405 or FSCI455

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. Prerequisite: PHYS161 Engineering Physics I and ESCI102 Intro to Computer Aided Design.

MENG 201 - Engineering Shop Practice (1)
This course conditions the students in the shop environment and the use of common hand and machine tools found in a typical fabrication shop. The students will be prepared for the design-build class projects. Emphasis is placed on using the right processes and right tools for the job. Safety in a fabrication shop is introduced and practiced.

MENG 225 - Manufacturing Process (0-3)
This course provides detailed discussion on various manufacturing processes: netshape, material removal, and joining and assembly processes. Students learn the fundamental principles and the tools-of-the-trade by working hand-on with the machine tools. The current manufacturing techniques such as rapid prototyping, manufacturing cells, and lean-manufacturing are discussed.

MENG 235 - Applied Thermodynamics (3)
This course is an extension of the course on Thermodynamics. A detailed study on cycle analysis is included. Applications to compressors, turbines, heat pump, refrigeration and air-conditioning are emphasized. A design, comparison and evaluation of several design cycles is included.

MENG 275 - Co-Op with Industry (0)
A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Sophomore standing.

MENG 297 - Co-Op in Mechanical Engineerin (0)
An optional supervised work experience with an agency, firm, or organization which employs engineers. The student receives a Pass or No Pass grade.

MENG 310 - Machine Design (3)
Design methodology, optimization, design of various machine elements including shafts, springs, belts, gears, and bearing. Design for strength and rigidity, fatigue and fracture.

MENG 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 377 - Kinematics (3)
A study of linkages and their motion, velocity and acceleration analysis, dynamics of mechanical systems. An emphasis is given to design and numerical methods with computer applications. Prerequisite: ESCI220 Thermodynamics.

MENG 339 - Measurements (3)
A study of various measurement techniques in engineering and statistical analysis of experimental data. Applications to the measurement of strain, force, pressure, temperature, and fluid flow. An emphasis is given to design of an experiment and error analysis using statistical data analysis. Prerequisite: EENG201 Electrical Engineering (or co-requisite).
MENG 441 - Optimal Design (3)
Development of math models for optimal design of engineered systems. Development and use of algorithms for optimization. Linear and non-linear programming. Prerequisite: MT P370 Advanced Math for Engineers.

MENG 444 - Mechanical Engineering Laboratory (1)
An experimental study of fluid flow in pipes, subsonic and supersonic air flows, different flow meters, stress and strain on structures, deflection of beams, vibration of beams, combined bending and torsion, refrigeration and air conditioning, temperature measurements, rolling, impact properties and hardness testing. An emphasis is given to the design of new experiment with available equipment. Prerequisite: ME-P339 Measurements (or co-requisite).

MENG 444 - Mechanical Engineering Laboratory (2)
An experimental study of fluid flow in pipes, subsonic and supersonic air flows, different flow meters, stress and strain on structures, deflection of beams, vibration of beams, combined bending and torsion, refrigeration and air conditioning, temperature measurements, rolling, impact properties and hardness testing. An emphasis is given to the design of new experiment with available equipment. Prerequisite: ME-P339 Measurements (or co-requisite).

MENG 445 - Principles of Mechantronics (0-3)
Introduction to basic components: sensors, transducers, microprocessor-based systems and PLC's. Applications in motion control (AC/DC motors & stepper motors). A major project in electro-mechanical system design and development. Corequisite: ESCI430.

MENG 450 - Design I (0-3)
Preliminary design of a mechanical system with emphasis on concurrent engineering, human factors, costs analysis, and material selection. The design project may be sponsored by industry or department. Also an emphasis is given to writing the design proposal and presenting it to a committee from the department. Prerequisite: MENG345 Machine Design.

MENG 451 - Design II (0-3)
Detailed design of a mechanical system, manufacturing the product if feasible, cost estimation, testing and demonstration of the product. A report on the final design is required and also the design should be presented to the faculty and peers from industry. Prerequisite: ME-P450 Design I.

MENG 457 - Co-op with Industry (0-3)
Prerequisite: ME-P375. A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the third experiential learning session. Grading system is determined by department offering course. Offered every semester.

MENG 451 - Internship with Industry (0-3)
A work experience with an agency, firm or organization that employs persons in this degree field. This course may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Junior standing.

MENG 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. Prerequisite: MENG351 Material Science (or co-requisite).

MENG 430 - Tribology (3)
A study of wear and lubrication. It includes viscometry, thrust and journal bearing, rolling contact bearing, dry bearing, and thermal effects. Prerequisite: ESCI220 Thermodynamics, ESCI 322 Fluid Dynamics, MATH 370; Corequisite: MENG355 Heat Transfer.

MENG 431 - Thermal Design (3)
A study of the modeling and design of thermal systems. These systems include pumps, fans, compressors, turbines, and heat exchangers. An emphasis is given to optimization, system control, and cost analysis. Prerequisite: MENG355 Heat Transfer.

MENG 432 - Experimental Mechanics (3)
An experimental study of stress and strain, electrical measurement of strain, optical methods of stress analysis including photoelasticity and Moire methods. An emphasis is also given to photoelastic coating, brittle coating and error analysis of data. Prerequisite: ME-P339 Measurements.

MENG 435 - Computational Mechanics (3)
Applications of matrix methods to the study of both statics and dynamics. An emphasis is given to the mechanics of rigid body as well as elastic body. The application of finite element method for static problems and eigen solution methods for dynamic problems are discussed. Prerequisite: ESCI310 Mechanics of Solids, MT P370 Advanced Math for Engineers.

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MENT 401 - Design of Mechanical Elements (3)
This course involves an overview of machine design parameters. Included are topics such as design deflection, strength, material selection, bearings, screws, gears, joining methods, fatigue, and failure analysis.
Prerequisite: ET301, ET331, ET341.

MENT 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 third experiential learning session.

MENT 490 - Senior Project I (2)
The first 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. Prerequisite: Senior standing and permission of the department.

MENT 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. Prerequisite: MENT490.

MENT 498 - Special Topics in MET (0-6)
Independent or lecture based study in an appropriate engineering technology subject area under the direction of an MENT faculty member.
Pre-Requisites: Senior Status

Aviation Science (Prof Pilot) (PP)

PP 100 - Flight IA (0)
All required PP .P courses are offered every semester. Introduction to flight; minimum hours include 19.5 hours dual flight instruction, 2 hours simulator instruction, 0.5 hours solo flight, and 6 hours pre and post-flight brief. At the end of this course, the student will have completed the initial solo flight and post solo stage check.

PP 101 - Flight IB (2)
All required PP .P courses are offered every semester. Minimum hours include 10 hours dual flight instruction, 3 hours simulator instruction, 14.5 hours local and cross-country solo flight and 5 hours pre- and post-flight brief. Upon successful completion of Flight IB, the student will meet the requirements to take the FAA practical test for certification as a private pilot with an airplane single engine land rating.
PP 110 - Basic Flight I (2)
This course provides the fundamental techniques and knowledge for aircraft control and a foundation in airmanship. Aircraft and FTDs are implemented during this course. The student is expected to perform solo operations as pilot in command. Corequisites: PP120, FSCI130.

PP 113 - Aeronautical Science IA (2)
Introduction to basic knowledge for aircraft solo, including requirements for pilot certification, aircraft engine and systems, weight and balance calculations, aircraft performance, and Federal Aviation Regulations.

PP 114 - Aeronautical Science IB (2)
Introduction to subjects relating to the post-solo phase of flight, including Federal Aviation Regulations pertaining to the private pilot, basic weather and weather chart interpretation, cross-country flight planning and navigation, flight physiology, and Federal Aviation Regulations. The student is prepared to take the FAA private pilot knowledge test upon successful completion of this course.

PP 120 - Fundamentals of Flight I (2)
This course will provide the fundamental knowledge required for the student to successfully learn the maneuvers and procedures for pre-solo flight; dual and solo; local operations; introduction to VFR cross-country. Corequisites: PP110, FSCI130.

PP 121 - Introduction to Flight (0)
This course is designed for students outside the professional pilot program seeking to broaden their aviation education. The course consists of three hours of flight and one and one-half hours of brief. Students enrolled in this course must contact the Department within the first week of classes for scheduling of flights. (Special fee assessed).

PP 153 - Basic Flight II (2)
This course provides the fundamentals of cross-country flight from solo pilot in command to the Private Pilot Certificate. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Prerequisite: PP110 and all associated pre/corequisites. Corequisite: PP160.

PP 160 - Fundamentals of Flight II (2)
This course will provide the fundamental knowledge for conducting VFR cross-country flights as pilot in command. The course will also provide an introduction to the fundamentals for instrument navigation. Prerequisite: PP120 and all associated pre/corequisites. Corequisite: PP153.

PP 200 - Aeronautical Science II (3)
This course includes all knowledge areas required by the FAA Approved Part 141 Aviation Regulations for the Instrument rating. Students will be introduced to aspects of instrument flight appropriate to the Private Pilot Certificate with an Instrument rating. Prerequisite: PP150 and PP151. Corequisite: PP201.

PP 201 - Flight Operations II (2)
This course is the second in the flight training sequence. Ground trainers are utilized to teach the knowledge and skills to control the airplane using only flight and navigation instruments. Additionally, multiple VFR solo cross-country flights are included. Prerequisite: PP151. Corequisite: PP200.

PP 202 - Flight II (2)
First of five courses leading to the commercial pilot certificate with an instrument and multi-engine ratings; minimum hours include 13 hours dual instruction in primary training aircraft, 18 hours solo, 3 hours simulator and 8 hours pre- and post-flight brief.

PP 203 - Flight III (2)
Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 9 hours dual instruction in primary training aircraft, 17 hours solo, 9 hours simulator and 8.6 hours pre and post-flight brief.

PP 210 - Intermediate Flight I (2)
This course provides instruction for the application of previously learned instrument flying and navigation skills to the in-flight environment and qualifies the student for the Instrument rating practical test. Prerequisites: PP153 and all associated pre/corequisites, PP160 and all associated pre/corequisites. Corequisite: PP220
PP 304 - Flight IV (2)
Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 14 hours dual instruction in primary and complex aircraft, 17 hours solo in primary and complex aircraft, 3 hours simulator and 7.8 hours pre- and post-flight brief.

PP 305 - Flight V (2)
Continued preparation for the commercial pilot certificate with instrument and multi-engine ratings; minimum hours include 9 hours dual instruction in primary and complex aircraft, 20 hours solo flight in primary and complex aircraft, 6 hours simulator and 5.5 hours pre- and post-flight brief.

PP 306 - Flight VI (2)
Final preparation for the pilot certificate with instrument and multi-engine ratings; minimum hours include 18 hours dual instruction in primary, complex, and multi-engine aircraft; 14 hours solo; 5 hours simulator; and 9.8 hours pre and post-flight brief. Upon successful completion of Flight VI, the student will meet the requirements to take the FAA practical tests for certification as a commercial pilot certificate with airplane single and multi-engine land and instrument ratings.

PP 307 - Flight VII (2)
Instruction leading to flight instructor certificate with Single Engine Land rating; minimum of 15 hours instructor training including 5 hours of dual flight instruction on analysis and performance of flight training maneuvers; 10 hours practice flight instruction with the flight instructor aboard the airplane and 7 hours practice ground instruction. Prerequisite: commercial pilot certificate with instrument rating. Corequisite: PP319 or approval of the Department Chair.

PP 308 - Flight VIII (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. Prerequisite: flight instructor certificate. Corequisite: PP320 or approval of the Department Chair.

PP 309 - Flight IX (1)
Instruction leading to the addition of a multiengine class rating to a flight instructor certificate; minimum of 10 hours instructor training including 7.8 hours analysis of flight training maneuvers and 8 hours practice flight instruction. Prerequisite: flight instructor certificate.

PP 310 - Flight Instructor Prep I (2)
This course will provide the appropriate knowledge and skill to expertly control the airplane from the right seat while teaching a student. Prerequisite: PP253, PP260. Corequisite: PP320

PP 318 - Aeronautical Science IV (3)
Multi-engine aircraft systems including normal and emergency procedures, weight and balance, weather radar, windshear avoidance, and high altitude flight physiology.

PP 319 - Aeronautical Science V (3)
Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Prerequisite: PP250.

PP 320 - Aeronautical Science VI (3)
Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. The content of this course is same as that approved under the old course number PP319. Prerequisite: PP253 and PP260. Corequisite: PP310

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
### Health Care Ethics (HCE)

**HCE 431 - Humanism and Health Care Ethics (3)**

This course introduces the central themes in the humanistic tradition and explores the intersection between these and health care. Topics include Post-Enlightenment thought and its affect on health care; the tension between scientific medicine and humanistic approaches; and the critical, educational, and supplementary functions of the humanities in health care. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

**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 - 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 decisions 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 531 - Humanism and Health Care Ethics (3)**

This course introduces the central themes in the humanistic tradition and explores the intersection between these and health care. Topics include Post-Enlightenment thought and its affect on health care; the tension between scientific medicine and humanistic approaches; and the critical, educational, and supplementary functions of the humanities in health care.

**HCE 589 - 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 Eth (3)**

A study of the methodological issues in philosophy concerning the nature and justification of fundamental ethical norms, including: philosophical ethics and non-philosophical disciplines; philosophical methods of justifying ethical norms; Kantian ethics; contractarian ethics; virtue ethics; ethics and psychobiology; different methods of justification; epistemological status of ethics.

**HCE 602 - Methods in Religious Ethics (3)**

A study of the hermeneutical significance of different methods in religious ethics and a critical analysis of the hermeneutical implications of these methods for the development of ethical theory.

**HCE 603 - Methods in Hith 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 614 - Mediation Skills for the Health Care Ethicist (1)
This course is designed to build knowledge and skills for students pursuing a career in health care ethics who have no certification in mediation. It introduces the concepts of conflict, family dynamics, mediation, and negotiation. This course further investigates how these concepts apply to further the successful resolution of problems that arise in the health care setting. It will also explore the differences between the use of bioethics consultation to reach an ethical conclusion and bioethics mediation to arrive at a party selected solution. Students will be expected to participate in role play in order to build mediation skills. This course is not meant to fulfill formal mediation certification requirements of this or any other state.

HCE 615 - Cultural Competence: Understanding in Clinical
This course pays close attention to the philosophical and pedagogical underpinnings of cultural competency education. The course will attempt to both sensitize students to the different culturally defined perspective of patients and practitioners, as well as investigate the theory of understanding between interlocutors in clinical contexts.

HCE 616 - Hlth Care Ethics Catholic Trad (3)
This course will examine moral methodology and critical issues in Catholic bioethics, primarily through the lens of four contemporary moral theologians who present differing, sometimes opposing, viewpoints on the subject matter.

HCE 632 - Gerontology and Ethics (3)
A study of the aging process and of the dying process in the context of end-of-life technology, including: quality of life; chronic pain; independence and inter-dependence; home care, care 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.
Clinical Laboratory Science (CLS)

CLS 100 - Introduction to Clinical Laboratory Science Lab
The purpose of this course is to describe and illustrate career options available to the Clinical Laboratory Science (CLS), Investigative and Medical Sciences (IMS) and Cytotechnology (CT) graduates. The course incorporates a combination of lectures, and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

CLS 301 - Hematology and Body Fluids (4)
Content emphasizes the physiology of the blood 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 or equivalent.

CLS 302 - Hematology and Body Fluids Laboratory (1)
Performance, interpretation, and troubleshooting of basic hematology procedures will be accomplished 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. Co-requisite: CLS-301.

CLS 303 - Immunohematology (3)
An introduction to the basic immunologic and genetic principles governing blood groups and blood transfusion practice. Prerequisites: BIOL-04 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.

CLS 305 - Urinalysis Laboratory (0-2)
A lecture course studying the basic physiology of the kidney and discussions 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. Prerequisites: BIOL-104 and CHEM-164 or equivalent.

CLS 306 - Hemostasis and Thrombosis (2)
Principles and laboratory analysis of normal hemostasis and fibrinolysis will be presented. Discussions will include the pathophysiology of bleeding and thrombotic disorders and their diagnosis using laboratory results. The physiology and laboratory monitoring of anticoagulant therapy will be discussed. Prerequisites: BIOL-104 and CHEM-164 or equivalent.

CLS 330 - Clinical Biochemistry (4)
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-342/344 or equivalent.

CLS 331 - Analytical Instrumentation (0-3)
A lecture/laboratory course providing 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 and principles of molecular biology and molecular techniques. Analysis of human body fluid specimens demonstrates selected principles. Prerequisites: CHEM-320 or CHEM-343/345 or equivalent.

CLS 350 - Medical Immunology (0-4)
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, hypersensitivity, immune deficiencies, transplantation and tumor immunology. Course also involves case study discussions and performance of basic serological and other immunological laboratory testing. Prerequisites: BIOL-104 or equivalent.
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 - 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 Urinalysis and Hemostasis (1)
The testing of urine and interpretation of test results is performed in the clinical setting. A wide array of both routine and diagnostic hemostasis testing will be performed and interpreted for the purpose of diagnosing bleeding and thrombotic disorders. For certificate students only. Prerequisites: CLS-305 and CLS-306.

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.

CLS 425 - Clinical Immunohematology (2)
Clinical laboratory experience in routine and specialized blood bank techniques such as antibody identification, crossmatching and component preparation.

CLS 426 - Research (0-3)
Experience in the basic principles of research design, data collection, data analysis and hypothesis testing through the 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. Students are encouraged to submit their research results for poster and oral presentations at professional meetings and their paper for potential publication. Prerequisites: CLS-440 or equivalent.

CLS 429 - Principles of Laboratory Management and Educ
Basic concepts of management theory and laboratory operations to include human resource management, financial management, quality assurance/improvement, and governmental regulations presented. Students will complete a course project that culminates in a formal presentation using the educational principles learned in CLS-440.

CLS 430 - Clinical Experience (0)
Studies in the clinical areas applying principles and procedures of laboratory testing. Prerequisite: Permission of Department Chairperson.

CLS 431 - Clinical Practicum (6-15)
Studies in the clinical areas applying principles and procedures of laboratory testing. Reserved for students with selectively adapted clinical experiences. Permission of Department Chairperson required.

CLS 432 - Special Studies (0-4)
Qualified students interested in doing special work in some field of clinical laboratory science or who wish to amplify their knowledge base may pursue an individualized course of study. Prerequisite: Permission of Department Chairperson. Prerequisite determined individually.

CLS 440 - Research Design, Critique Presentatio
This course focuses on the processes involved in biomedical research and presentation methods. Topics include an overview of human research and the Institutional Review Board (IRB) process and education principles. Additionally, steps in the research process from proposal development to presentation of the final product will be discussed. Critical evaluation of published literature will serve as a basis for developing one's own research project. The course culminates in the completion of an approved IRB proposal, research proposal, and a research-focused presentation. Prerequisite: RMET-410 or equivalent.

CLS 441 - Senior Synthesis (0-3)
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. One component of the course is experiential learning through the participation in an intern/shadowing experience. Students may participate in a modest research project or co-op experience. The course culminates with a written paper, career portfolio, and 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. For certificate students only.

CLS 451 - Seminar: Topics in Clinical Chemistry (2)
Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in clinical chemistry. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 452 - Seminar: Topics in Hematology (2)
Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in hematology. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 453 - Seminar: Topic in Microbiology (2)
Lecture series designed to introduce clinical laboratory science certificate students to advanced topics in microbiology. Theory and practice utilized in the clinical rotations are supplemented and reinforced through lecture, discussion and student presentations.

CLS 460 - Clinical Chemistry Practicum (6)
Biochemical investigation of body fluids in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Quality control, reaction principles, instrument operations and evaluation of results emphasized. For certificate students only. Prerequisites: CLS-330 and CLS-331, or equivalent.

CLS 461 - Clinical Hematology Practicum (6)
The application of the principles and theories of hematology and phlebotomy in a clinical setting. Students will learn the technique of blood collection and the performance of laboratory testing to quantitatively and qualitatively evaluate blood cells for disease. Laboratory procedures will be performed on blood, bone marrow and body fluids. For certificate students only. Prerequisites: CLS-301/302 and 306 or equivalent.

CLS 462 - Clinical Microbiology Practicum (6)
Clinical laboratory course applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in the clinical setting. For certificate students only. Prerequisites: CLS-362 and CLS-353 or equivalent.
Performance of associated laboratory experiences under the supervision of a

PREREQUISITE: CT-411.

associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-420.

Cellular and biochemical investigation of body fluids in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisites: CLS 301, 302, 305, 306, 330 and 331.

Review of key content areas, advanced topics, molecular diagnostics and specialty areas in the clinical laboratory. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations.

Clinical laboratory science cognitive knowledge and competencies along with basic managerial and educational principles are applied to the planning and implementation of a project that includes service to the community. Students prepare appropriate documentation and give formal presentations at the conclusion of this experience.

This lecture/laboratory course reviews the anatomy and histology of the processes of the uterine corpus, metastatic lesions, and lesions of the breast, thyroid, lymph nodes, salivary gland, bone, and soft tissue with emphasis on cytologic patterns associated with normal, benign, and malignant processes. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-440.

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to develop skills in microscopy and recognition of normal versus abnormal cell morphology.

This lecture/laboratory course provides an orientation to the profession of Cytotechnology. Content includes the history of the profession, ethics in practice, use and care of the microscope, and basic cell biology. Basic concepts of human pathology, anatomy, normal histology, and benign processes are covered. Prepared slides are used to develop skills in microscopy and recognition of normal versus abnormal cell morphology.

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-400.

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-400.

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-400.

This lecture/laboratory course emphasizes the malignant and disease processes of the uterine corpus, metastatic lesions, and lesions of the vulva and vagina. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. PREREQUISITE: CT-411.

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.

This course is taken through an agreement with St. Louis Community College at Forest Park. A course structured to meet the students' 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. All semesters.

This course is taken through an agreement with St. Louis Community College at Forest Park. A course structured to meet the students' 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. All semesters.

This course is taken through an agreement with St. Louis Community College at Forest Park. A course structured to meet the students' 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. All semesters.

The study of human nutrition, incorporating biochemical and physiological aspects; investigation of the role of food in normal growth, development and maintenance of body functions. Fall semester. Prerequisites: CHEM-161 and CHEM-162.
DIET 208 - Foundations in Nutrition (2-3)
The study of human nutrition, incorporating biochemical and physiological aspects; investigation of the role of food in normal growth, development and maintenance of body functions. Fall semester. Prerequisites: CHEM-161 and CHEM-162.

DIET 210 - Nutrition in the Lifecycle (3)
A study of the physiological and psychosocial changes throughout the lifecycle that influence the nutritional needs of individuals. Spring semester. Prerequisites: DIET-221 or DIET-208 or DIET-380; BIOL-104, PPY-254.

DIET 212 - Bar and Beverage Management (3)
This 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. All semesters.

DIET 221 - Basic Human Nutrition (2)
A study of the basic elements of nutrition and their inter-relationships. Students are introduced to the role of food and nutrition in health and disease, as well as current and controversial topics in nutrition. Spring semester.

DIET 290 - Culinary Intercession I (1)
Limited to Culinary Emphasis students. This class is an introduction to the operation of a food service establishment. In this class, students will learn purchasing requirements and receive hands-on experience with soup, salad, and entrée production. All cooking techniques will be reinforced, as well as organization, plate presentation, and proper mise en place. This course will begin 2 weeks prior to regular Fall semester courses of Junior year. Prerequisites: DIET350, DIET 370, plus Sanitation Certification.

DIET 303 - Sustainable Food Systems (0-3)
This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

DIET 308 - Nutritional Tutorials for Biochemistry (0)
Gives students an exposure to the biochemistry of nutrition in multiple settings. Topics to be covered include carbohydrate, fat, and protein metabolism, blood lipids and proteins, vitamins and minerals. These areas will be covered in the context of dietary intake of individuals. Fall semester. Prerequisite or Co-requisite: CHEM-393.

DIET 308 - Nutritional Tutorials for Biochemistry (1)
Gives students an exposure to the biochemistry of nutrition in multiple settings. Topics to be covered include carbohydrate, fat, and protein metabolism, blood lipids and proteins, vitamins and minerals. These areas will be covered in the context of dietary intake of individuals. Fall semester. Prerequisite or Co-requisite: CHEM-393.

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)
Lab included. 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. Fall and Spring semesters. Prerequisite: DIET-208.

DIET 360 - Food Science (0-3)
Lab included. The study of food chemistry and the role of ingredients in food products. The study of the chemical and physical factors that influence food quality and food products. Fall and Spring semesters. Prerequisites: CHEM-342 and DIET-350.

DIET 370 - Quantity Food Procurement/Prep (0-4)
Lab included. This course will consist of a lab and lecture designed to develop managerial food preparation skills. Students will be certified in foodservice sanitation. Spring semester. Prerequisite: DIET-350, DIET-414, and DIET-419.

DIET 375 - Food Specialties (2)
Advanced techniques of nutritionally sound food preparation and menu development as they apply to current 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. Spring semester. Prerequisite: DIET-370.

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. Fall semester. Prerequisites: CHEM-161 and CHEM-162.

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. Spring and Summer semesters. Prerequisites: BIOL-104, PPY-254, CHEM-393, and DIET-208.

DIET 385 - Advanced Nutrition (4)
This course will provide the student with an understanding of 1) nutrition from the cellular level to the whole organism; 2) the metabolism of carbohydrates, lipids and proteins; and 3) the digestion, absorption, transport, function, metabolism, excretion, deficiency, and toxicity of nutrients. Spring and Summer semesters. Prerequisites: BIOL-104, PPY-254, CHEM-393, and DIET-208.

DIET 389 - Internship Seminar (1)
Students will explore the process of applying to the dietetic internship. Students will learn how to prepare a professional quality, competitive application. Fall semester.

DIET 390 - Culinary Intercession II (1)
Limited to Culinary Emphasis students. A supervised work experience designed to expand career knowledge while increasing speed, timing, organization, and ability to advanced baking in an approved commercial foodservice and hospitality establishment. Baking science, terminology, equipment, technology, ingredients, weights and measures, and formula conversions are included with concentration on production techniques. This course will begin 2 weeks prior to regular Fall semester courses of Senior year. Prerequisites: DIET 290, DIET 414, DIET 419, and DIET 425.

DIET 401 - Catering I (1)
This course is designed to introduce students to catering fundamentals both on and off the premise. During this semester students will be exposed to culinary competitions sponsored by the American Culinary Federation and off-site catering demonstrations assisting an executive chef. Fall semester. Prerequisites: DIET-390 and ACCT220.

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.

DIET 410 - Medical Nutrition Therapy I (3)
Medical Nutrition Therapy I and II are semester-long courses that comprehensively cover the nutritional management of specific disease states. Fall semester. Prerequisite: DIET-385.

DIET 411 - Clinical Practicum Lab (2)
Lab that coordinates clinical and problem-based learning experiences with DIET-410: Medical Nutrition Therapy I, the nutritional management of different disease states. Fall semester. Co-requisite: DIET-410.
### DIET 414 - Adv Meat Analysis/Knife Skills (2)

An introduction to meat and meat fabrication for foodservice operations. In this course, you will learn the fundamentals of purchasing specifications; receiving, handling, and storing meat; techniques for fabricating cuts for professional kitchens. Emphasis is placed on primal and sub-primal cuts, federal inspections, grading, yields, and the classification of meats, poultry and fish / shellfish. Laboratory activities include hands-on-fabrication of beef, veal, lamb, pork, poultry, and fish / shellfish. Advanced knife skills will be integrated throughout the course. Fall semester. Prerequisites: DIET-350 and DIET-370.

### DIET 414 - Adv Meat Analysis/Knife Skills (0-2)

An introduction to meat and meat fabrication for foodservice operations. In this course, you will learn the fundamentals of purchasing specifications; receiving, handling, and storing meat; techniques for fabricating cuts for professional kitchens. Emphasis is placed on primal and sub-primal cuts, federal inspections, grading, yields, and the classification of meats, poultry and fish / shellfish. Laboratory activities include hands-on-fabrication of beef, veal, lamb, pork, poultry, and fish / shellfish. Advanced knife skills will be integrated throughout the course. Fall semester. Prerequisites: DIET-350 and DIET-370.

### DIET 415 - Medical Nutrition Therapy II (3)

Medical Nutrition Therapy I and II are semester-long courses which comprehensively cover the nutritional management of specific disease states. Spring semester. Prerequisite: DIET 410

### DIET 419 - Garde Manger (1-3)

Introduction in garde manger work including sandwiches, salads, sausage production, vegetable carving, canapés, aspic, chaud froid, and buffet presentation. Fall semester. Prerequisites: DIET-350 and DIET-370.

### DIET 425 - Baking (1-3)

Introduction in fundamental baking - including breads, cookies, and Danish. Principles and procedures of theory and practice of high quality crafted bakery items. Prerequisites: DIET-360, DIET-370, and DIET-385.

### DIET 426 - Pastry (1-3)

Introduction to pastry with fundamentals in icings, creams, cakes, sugars, decorating. Course will offer theory and practice of step-by-step procedures or makeup, assembly and production of quality bakery products. Fall semester. Prerequisite: DIET 425

### DIET 430 - Foundations in Comm. Nutrition (3)

This course explores the foundations of public health as well as current governmental programs, policies and administrative offices which address health, hunger and food safety issues at local, state, and national levels. Priority health issues relating to the promotion of good nutrition and preventive health care for each life stage area are examined. Students learn basic skills for designing, implementing, evaluating and marketing nutrition intervention programs. Students also learn about food insecurity and sustainability. Fall semester. Prerequisite: DIET 208

### DIET 435 - Food Systems Management I (3)

This course focuses on the systems approach to decision-making, kitchen design and layout, equipment purchase specifications, and HACCP regulations for foodservice facilities. Offered every fall semester. Prerequisites: DIET 370, BLS 451, MGT 300 and ECON 190 or ACCT 220

### DIET 436 - Food Systems Management II (0-3)

Lab included. Advanced preparation of students involved in foodservice management with emphasis placed upon management of financial and human resources. Operational budget preparation, strategic planning, marketing for customer satisfaction, and quality improvement projects will apply the concepts taught during this course. Spring semester. Prerequisites: DIET-435, MGT-300, and ECON-190.

### DIET 440 - Nutrition Education (3)

Study of principles and practices of nutrition education of groups, including aspects of public speaking and lesson planning. Spring semester. Prerequisites: DIET-350, DIET-410, and SOC-330.

### DIET 450 - Nutrition Counseling (0-3)

Fall semester. Prerequisites: DIET 210 and DIET 385

### DIET 485 - Dining Services (2)

Limited to Culinary Emphasis students. This course is an exploration of table service principles and skills with an emphasis on customer service in a restaurant. Topics to be examined include guest relations, professional communications, order taking in à la carte environment, service sequence, point-of-sale systems, cash handling, beginning merchandising, table skills, and dining room preparation. Practicum will be in Fresh Gatherings and one of premier dining establishments. Spring semester. Prerequisite: DIET 401.

### DIET 489 - Independent Study (0-3)

Qualified students interested in doing work in specific areas of dietetics or wishing to amplify their knowledge of dietetics may pursue an individualized course of study Department approval is required. Prerequisites: To be determined individually.

### DIET 490 - Culinary Intercension III (0-1)

Limited to Culinary Emphasis students. This course is designed to integrate students culinary training, academic studies, and cooking experiences into various practical applications. Students will plan, prepare, and execute events ranging in scale so that students will understand how to be successful when faced with the various challenges presented. There will be an emphasis placed on both front and back of the house planning and preparation. Spring Semester. Prerequisite: DIET 375, 390, 401 & 426.

### DIET 497 - Culinary and Medicinal Herbs (3)

This class will be divided into three sections. Section one will include techniques for identification of the most common classifications of herbs(7,37),(985,962) as well as a history of their uses. This section will focus on the culinary properties of herbs. The second section will focus on medicinal herbs with an evaluation of the indications for use, side effects, and drug/herb interactions. The third section is integrated laboratory experiences throughout the course, including culinary and medicinal preparations and garden design and planting. Spring semester. Prerequisite: DIET-385.

### DIET 501 - Survey of Nutrition for AHP (3)

This course offers a condensed presentation of the foundations of human nutrition, incorporating some of the biochemical and physiological aspects. The role of nutrition in normal growth, development and maintenance of body functions will be investigated. Additionally, nutrition in the management of disease, disease prevention, and physical performance will be addressed with guidelines for referral. Popular dietary supplements, including sport supplements will be reviewed for cost, effectiveness, and side effects. Projects will reinforce application of nutrition concepts. Offered every Spring semester.

### DIET 503 - Sustainable Food Systems (0-3)

This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

### DIET 510 - Human Nutr: Physio & Metab. (3)

Examines the role of nutrition in human metabolism and physiology with primary consideration of regulatory mechanisms; relationships appraised in both health and disease; emphasis on current research. Offered every Fall semester.

### DIET 511 - Nutritional Assessment (3)

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.

### DIET 513 - Human Nutr: Physio & Meta II (3)

Examines the role of nutrition in human metabolism and physiology with primary consideration of regulatory mechanisms; relationships appraised in both health and disease; emphasis on current research. Offered every Spring semester.

### DIET 522 - Gerontological Nutrition (3)

In-depth exploration of the physiological, psychological and social aspects of nutritional needs during the aging process; integration and application of nutritional needs to programs and support systems for the elderly. Offered every Fall semester.
DPT 412 - Kinesiology II (0-3)
This course extends the core principles of classical mechanics to human movement applications and covers the kinesiology of the shoulder and elbow. Upon completion of this course, the student will be prepared to describe and discuss human movement in biomechanical terms. In addition, students will be able to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion. This course includes a lab component.

DPT 412 - Kinesiology II (0-3)
Kinesiology II is intended to provide the student with the foundational knowledge necessary to analyze human motion and design appropriate intervention. Upon completion of this course, the student will be prepared to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion and will use the concept of normal motion as a reference point to understand the effect of pathology on motion. This course includes a lab component.
DPT 415 - Therapeutic Exercise (0-2)
This course emphasizes laboratory experiences where various types of therapeutic exercises are analyzed and the psychomotor skills for performing these exercises are developed. Case discussions where the student has the opportunity to select appropriate therapeutic exercise intervention based on patient examination will be included. This course includes a lab component.

DPT 420 - Developmental Biology (3)
The focus of this course is basic science knowledge needed in physical therapy. Topics covered include histology, embryology, and genetic influences.

DPT 455 - Basic Examination (0-3)
This course is designed to provide a basic knowledge of common physical therapy tests and measures. Essential concepts of measurement issues will be presented from a theoretical and practical viewpoint. Therapist-patient communication, therapist-patient safety, and respect for the cultural differences, values, and dignity of patients will be emphasized. This course includes a lab component.

DPT 460 - Clinical Research and Design (2)
This course examines how research is used to practice in an evidence based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of basic measurement skills like measurement of blood pressure.

DPT 470 - Basic Procedures (0-2)
The primary purpose of this course is to offer the senior physical therapy student an introduction to specific observation, examination and evaluation skills as well as designated treatment interventions in both a theoretical and practical application framework. It is expected that this material will act as part of the foundation on which the student will build throughout his/her professional career. Treatment interventions include: therapeutic patient positioning, patient transfer and transport, gait with assistive devices and infection control. Basic nursing procedures, i.e., IV, catheters, O2 administration, and their significance to physical therapy treatment are presented. Also included will be practical application of monitoring of previously acquired knowledge of vital signs as a critical measure of patient response to treatment. Throughout this course there will be an emphasis on therapist-patient verbal and nonverbal communication skills as well as therapist-patient safety. This course includes a lab component.

DPT 480 - Evidence-Based Clinical Pract. (0-2)
This course examines how research is used to practice in an evidence based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of the basic measurement skills like measurement of blood pressure.

DPT 484 - Skills Practicum (0-1)
Skills practicum is the PT student's first opportunity to practice basic PT skills in a clinical setting under the supervision of a clinical instructor. It is comprised of two components. The didactic or classroom component consists of class session in preparation for and discussion of the clinical component of the course. The clinical component of the course involves student participation in clinical experiences one-half day per week for 12 weeks in a variety of facilities with close supervision. The student practices communication, examination and intervention skills.

DPT 494 - Senior Residency I (0)
This registration shows that the student is in residence as a fall semester senior student in the Department of Physical Therapy.

DPT 495 - Senior Residency II (0)
This registration shows that the student is in residence as a fall semester senior student in the Department of Physical Therapy.
DPT 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 a physical therapy management plan. Emphasis will be placed on the understanding of normal and pathologic gait assessment. This course includes a lab component.

DPT 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. Clinical reasoning strategies will be introduced to the particulars of physical therapy management of patients with osteoporosis, arthritis, and connective tissue disorders. Please see the course schedule for a list of specific disorders covered. This course includes a lab component.

DPT 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. This course includes a lab component.

DPT 523 - Musculoskeletal Conditions IV (0-3)
Musculoskeletal Conditions IV 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. This course includes a lab component.

DPT 524 - Multi System Management (0-3)
This course is intended to be a companion to the physical therapy course and is designed to focus on the medical perspective as well as the impact of specific types of medical care on physical therapy procedures. The course will include 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. The course consists of various conditions, therapeutic interventions, and the effect of these on the patient/client. The conditions include oncologic conditions, burn injuries, wounds, lymphedema, HIV, childbearing year musculoskeletal dysfunction, and incontinence. This course includes a lab component.

DPT 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. This course includes a lab component.

DPT 526 - Neuropathology (2)
This course provides the student with current information on the medical diagnosis and management of disorders pertinent to the nervous system. This course is intended to be a companion to the physical therapy course on rehabilitation of neurological conditions.

DPT 527 - Neurological Conditions I (0-4)
This course provides students with a comprehensive approach to neurological conditions in primarily adult patients. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with adults with neurological conditions are integral course components. This course includes a lab component.

DPT 528 - Neurological Conditions II (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. This course includes a lab component.

DPT 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 includes a lab component.

DPT 530 - Lab Studies & Imaging (2)
This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

DPT 534 - Multi System Management (0-3)
This course provides students with a comprehensive approach to patients with medical and/or surgical conditions. Emphasis is placed on examination, evaluation and intervention strategies and the information that impacts the selection and implementation of these procedures. Students will develop skills in examination, evaluation, intervention, and pre-assessment, and will be able to provide principles and rationale for decisions. The course consists of various conditions, the therapeutic interventions, and the effect of these on the patient/client. The conditions include oncologic conditions, burn injuries, wounds, lymphedema, HIV, childbearing year musculoskeletal dysfunction, and incontinence. This course includes a lab component.

DPT 540 - Lab Studies & Imaging (2)
This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

DPT 542 - Pharmacology (1)
This one hour lecture course will provide a basic overview of drugs commonly used by patients seen in physical therapy. The process of pharmacokinetics, pharmacodynamics and autonomic pharmacology will be reviewed with an emphasis on age differences. General drug categories, specific actions, and adverse reactions will be discussed. Dosage determinations, based on age and weight, will be introduced.

DPT 560 - Department Administration (2)
This course covers the basic administrative, management, and leadership aspects of developing and operating a physical therapy service. Included are discussions of: the impact of the health care environment on physical therapy practice, values and motivations associated with the operation of a physical therapy practice, marketing, the organizational operation theories, structure, and processes. Students as a small group will develop a hypothetical new program using elements of a business plan.
DPT 561 - Applied Administration & Mgmt (3)
During this course the students will apply the concepts of management and administration to organization operations and interpersonal relationships. Students will be asked to refer to clinical environments familiar to them to serve as point of reference. Current literature will be reviewed. During the course the students will discuss recent trends in the health care delivery system and the implications for physical therapy services. The students will address legal issues that are relevant in management of physical therapy practice.

DPT 564 - Communication Processes in Patient Care I (1)
This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communicating within the clinical environment.

DPT 565 - Comm Process Patient Care II (2)
This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communication within the clinical environment.

DPT 566 - Communication Processes in Patient Care III (1)
This course introduces the students to several models of health beliefs as related to wellness. It covers adherence and models to improve adherence. The influence of spirituality on health and on healthcare is addressed.

DPT 570 - Patient Management I (0-2)
This course provides the opportunity to integrate the various dimensions of patient care into an organized problem-solving process in order to prepare the student for more advanced clinical rotations starting with Clinical Rotation II. This course will integrate content information from all previous and concurrent courses in the physical therapy curriculum. The clinical problem solving process will cover all aspects of patient management, from the gathering of subjective and objective data during the examination, through evaluation, diagnosis and prognosis phase, and into intervention planning and delivery. The primary focus of this course will be clinical decision-making for patients with orthopedic impairments through the life-span. Additionally, the identification and impact of critical issues related to medical status and patient safety through all aspects of patient care will be emphasized. Clinical reasoning for desired functional out-comes is reinforced as the student learns to form and communicate rationale which describes the relationship between identified impairments and desired functional outcomes. The student will have the opportunity to participate in interprofessional team case seminar.

DPT 572 - Patient Management III (2)
This course builds on the clinical problem-solving processes introduced in Patient Management I & II. It will continue to be reinforced and incorporated in this class using patient cases with a multi-system approach. Patient Management III adds the management of neurologic impairments to the clinical problem-solving process. The fabrication of intervention programs based on examination results and the modification of established intervention programs will be emphasized, including appropriate referrals to other health care providers. Additionally, patient management issues for the home health patient are discussed. The student will enhance his or her ability to critique and advance common exercise protocols given particular cases. The student will also have the opportunity to participate in an interdisciplinary team case seminar, and to improve visual kinematic evaluation skills through videotaped patient cases.

DPT 577 - Seminar Clinical Instruction (1)
This course covers clinical 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.

DPT 579 - Clinical Rotation I (0-2)
Clinical Rotation I is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 4 weeks in an acute/subacute clinical setting with a clinical instructor. The students practice skills previously learned and use clinical reasoning skills with maximal supervision of the clinical instructor.

DPT 581 - Clinical Rotation II (0-2)
Clinical Rotation II is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an outpatient orthopedic clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.
Health Information Mgmt (HIM)

HIM 220 - Compter Apps in Healthcare (1)
This course encompasses the various types of software applications that will be required of entry-level HIM practitioners. Software applications include the 3-M Encoder, electronic medical record, presentation and spreadsheet applications and project management applications.

HIM 250 - HIM Professional Development (2-3)
The focus of this course will be: understanding the evolution of the health information management profession. It will explore the current educational requirements, hot topics, affiliated associations, membership, governance, volunteer and service opportunities.

HIM 300 - Intro to Health Informatics (3)
The origin, uses, content and format of health records; accreditation, certification and licensure standards applicable to health records; the qualitative and quantitative analysis of health records; the content, format, maintenance requirements of the Master Patient Index (MPI), storage and retrieval systems security and control techniques for health records; and numbering and filing systems.

HIM 310 - Medico-Legal Aspects (3)
Legal terminology and procedures; the court system; liability of health care facilities and providers, health care legislation and regulation, including confidentiality, policies and procedures for the control and use of personal health information.

HIM 320 - Health Data Management (3)
Descriptive and vital statistics; reporting requirements; definitions and formulas for computing hospital and public health statistics; epidemiology concepts, data abstracting, and display techniques. Case mix classification and analysis; techniques of sampling and weighted averages.

HIM 330 - Classification Systems I (0-3)
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. Emphasis is on ambulatory coding using CPT/HCPCS. Format for the course is 2 hours lecture and 2 hours laboratory. Prerequisite: ANAT-100, PY-254, and HIM-470.

HIM 340 - Applied Health Informatics I (3)
This course introduces the fundamental concepts of database analysis, design and implementation, information file structures and data management in a networked environment. The course will cover databases used in today's networked client-server health care society. Topics will include ANSI SQL, data normalization, tables, queries, security, replication, data layout, backup/recovery, security, data warehousing and XML.

HIM 350 - Management for the Health Care Professional (3)
This course examines management in the health care environment including a study of the theories and concepts of management including the history of management, managerial ethics, planning, organizing, decision making, directing, controlling, organizational structure, conflict management, leadership styles, communication, group process, team building, and organizational change.

HIM 360 - HIM Theory & Practice (3)
Introduction to health record administration. The origin, uses, content and format of health records; the qualitative and quantitative analysis of health records; the content, format, maintenance requirements of the Master Patient Index (MPI), storage and retrieval systems and control techniques for health records; number and filing systems; exploration of other registries.

HIM 360 - HIM Theory & Practice (0-3)
Introduction to health record administration. The origin, uses, content and format of health records; the qualitative and quantitative analysis of health records; the content, format, maintenance requirements of the Master Patient Index (MPI), storage and retrieval systems and control techniques for health records; number and filing systems; exploration of other registries.

HIM 370 - Medical Terminology (3)
The basic language related to medical science and the allied health professions is covered including word analysis, construction, pronunciation, spelling, definition, and use of terms. Prerequisite: Keyboard Skills.

HIM 415 - Quality Improvement (3)
Process for reviewing, monitoring, and evaluating health care services; assessment through selection of quality indicators, monitoring opportunities for improvement, evaluation of effectiveness; risk management; utilization review; critical paths; tracking/profiling; tools of QI; JCAHO standards for performance improvement; Components of Six Sigma and Malcolm Baldridge Award Prerequisite: HIM-300

HIM 420 - Research Methods in HIM (3)
This class serves as an introduction to research. One of the purposes of the course is to enable students to become informed consumers of research published in health care and give students the skills to conduct research in their future careers. Critical evaluation of published literature serves as a basis for developing one's own research proposal. The course will pursue the planning phase of a research project including, culminating in the development of an IRB proposal for the planned study of an oral presentation of the planned project.
Inter-Professional Education (IPE)

IPE 460 - Evidence Based Practice (2)
This introductory course will define evidence-based practice and its importance for improving the health care of society. Working in interprofessional teams, students will perform literature searches using biomedical databases. Research topics will include nationally identified topics of concern in health care such as health disparities, health literacy, cultural sensitivity, patient/consumer education, and patient safety. Students will explore how health care questions may best be answered by looking in literature across professions and the value of collaboration for addressing challenges in improving health care.

Athletic Training (MAT) (MAT)

MAT 100 - Intro to Athletic Training (1)
This course introduces students to the athletic training profession and explores the specialties and opportunities for practice. The students participate in lectures and seminars by the athletic training faculty and practitioners across practice areas, including high school, collegiate professional, private and industrial settings. The historical foundations of athletic training and the evolution of the contemporary practice of athletic training are discussed.

MAT 414 - Exercise Physiology (0-3)
This course examines types of exercise, muscle physiology and training regimens to improve muscle strength, power and endurance. Cardiovascular and pulmonary responses to exercise and training regimens will be included. Concepts of obesity and its management also will be covered.

MAT 414 - Exercise Physiology (3)
This course examines types of exercise, muscle physiology and training regimens to improve muscle strength, power and endurance. Cardiovascular and pulmonary responses to exercise and training regimens will be included. Concepts of obesity and its management also will be covered.
MAT 501 - Principles of Athletic Training (3)
This course establishes the role of the certified athletic trainer in the prevention, recognition and treatment of commonly encountered athletic injuries. Basic concepts of injury prevention, mechanisms of injury, injury evaluation, and acute injury management are covered. Laboratory sessions to demonstrate and practice taping and wrapping are included.

MAT 510 - Athletic Training Kinesiology (3)
This course applies the foundational sciences of physics, human anatomy and human physiology in developing and understanding of the kinematics and kinetics of human movement in sport. Emphasis is placed on the functional motions of running, jumping, and throwing (overhand and underhand).

MAT 524 - Musculoskeletal Assessment & Management I (3)
This course explores the pathokinetiatics of selected pathologies within the upper quadrant of the human body, relevant examination techniques to assist in differential diagnosis, and subsequent intervention measures.

MAT 525 - Musculoskeletal Assessment and Management
This course covers the pathokinetiatics of selected pathologies within the lower quadrant and the examination, diagnosis and treatment of those conditions. Treatment procedures discussed and practiced include use of mobilization of bony and soft tissues, and other forms of active and passive exercise, both mechanical and non-mechanical, for a broad range of musculoskeletal conditions.

MAT 530 - Therapeutic Modalities in Athletic Training (0-4)
This course covers the physical, physiological, and therapeutic aspects of the thermal physical agents used as adjunctive interventions in rehabilitation. This course also is concerned with their physical, biological, physiological and psychological rationale for treatment utilizing electrical and mechanical agents. The course covers the theoretical and practical knowledge of specific modalities and the integration of these treatment procedures into an overall rehabilitation plan.

MAT 540 - Lab Studies and Imaging (2)
This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

MAT 542 - Pharmacology in Athletic Train (2)
This course provides a basic overview of drugs commonly used in sports medicine. The processes of pharmacokinetics and pharmacodynamics and autonomic pharmacology will be reviewed. General drug categories, specific actions, and adverse reactions will be discussed.

MAT 550 - Rehabilitation in Athletic Trm (0-4)
This course provides a framework for the design and implementation of athletic rehabilitation programs. The emphasis in the course is the use of therapeutic exercise in the treatment of athletic injuries and post-surgical conditions. Rehabilitation programs are considered from early stage through terminal conditioning and functional return. Advanced high-level activities are reviewed including plyometrics and advanced proprioceptive activities.

MAT 560 - Athletic Training Administration (3)
This course is concerned with the organization and administration of athletic training services in high school, collegiate, and professional athletics, as well as non-traditional athletic training sites including industry and health clubs. Topics of emphasis include medicolegal liability, budgeting, facility design, documentation and record keeping, drug testing, professional ethics, pharmacology issues and components of pre-participation physicals. NCAA compliance issues will also be discussed.

MAT 562 - Sports Psychology (3)
This course examines the effects of culture, motivation, personality, attitudes, competition and group dynamics on sport performance. In addition, the psychological effects of exercise and competition are discussed, including pathological conditions such as exercise addiction and disordered eating. The psychological response to injury and rehabilitation are described.

MAT 565 - Research in Athletic Training (2)
Change Course Description to: This course will introduce athletic training students to several types of clinical research designs including designs for group studies, epidemiological studies, survey research and qualitative studies. Review of literature, definition of problem and formatting design, reporting data and conclusions are presented. Interpretation of selected statistical methods will also be included.

MAT 570 - AT Clinical Practicum I (3)
This course is designed to provide the student with the first clinical experience in athletic training. Building on the basic knowledge acquired in MAT 501, the student will work in the training room under the supervision of an approved clinical instructor (ACI). The focus in this experience will be familiarization with the training room environment, developing competency in taping/wrapping, documentation and record-keeping, and practice/game preparation.

MAT 575 - AT Clinical Practicum II (3)
This is the second clinical course for the athletic training student. In this course, the student is assigned to an intercollegiate team for the semester and assists the ACI with pre-participation exams, daily preparation and coverage of practices and games (home and away) and injury management and rehabilitation. The student focuses on developing competency in the examination and treatment of upper and lower extremity injuries during this semester.

MAT 580 - Medical Conditions in Athletic Training (2)
This course is a review of responses of the body to exercise and sports with specific discussion of acute and chronic medical problems that can affect athletic performance. Medical conditions that are emphasized include asthma, diabetes, cardiac abnormalities, and viral diseases. In addition, this course covers dermatological conditions encountered in sport.

MAT 590 - AT Field Experience (2)
This in an internship with the athletic training staff of an outside agency affiliated with the program. Documentation will be kept in a portfolio format.

MAT 595 - AT Clinical Practicum III (4)
This is the third clinical course for the athletic training student. Expanding on their prior experience, students will be assigned for the semester as a senior student athletic trainer for one of the intercollegiate teams, and will also have additional training room coverage hours. Through the mentoring of the ACI and these expanded responsibilities, the student is expected to show development of the communication, time management and organizational skills necessary to succeed in a high volume athletic training setting. With an emphasis on problem solving and critical thinking skill development, the student will be expected to take a more active role when providing athletic health care to the injured athletes.

MAT 616 - Enhancing Athletic Performance (2)
This course is designed for students to use knowledge of anatomy, physiology, kinesiology, and coaching techniques in designing strength and conditioning programs for athletes. Consideration will be given to strategies for improving sports-specific agility, speed, power, strength, and cardiovascular/respiratory fitness.

MAT 670 - AT Capstone Project (2)
In this capstone course in the final semester, the student will select a study a topic in athletic training. Each student selects a faculty advisor to provide guidance in planning, coordinating, conducting and presenting the project. The study can take several different forms including a literature review, a mentored research project with a faculty member, or a community service project in athletic training.

MAT 671 - AT Clinical Practicum IV (4)
In this final clinical experience, students will be assigned to an athletic training site for the semester under supervision and instruction from an ACI. The fieldwork will emphasize greater involvement in the day-to-day organization and administrative tasks and professional development and responsibilities.

MAT 680 - Seminar in Athletic Training (3)
In this course, students will fine-tune their clinical skills in preparation for the NATA certification examination. Advanced topics in Athletic Training will be presented by a variety of health care providers.
Masters in Health Informatics (MHI)

**MHI 520 - Intro to Health Informatics (3)**
This course surveys the fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, telehealth, decision theory and decision support, human-computer interfaces, consumer health informatics, e-Health, and the personal health record. Department-specific applications are discussed.

**MHI 530 - Information Security (3)**
This course addresses the legal, ethical and social challenges of health care informatics. The regulatory environment, licensure, Joint Commission, HIPAA, confidentiality, disclosure and accountability will be discussed.

Occupational Therapy (MOT)

**MOT 500 - Found. Concepts in Occup Sci (2)**
This course introduces post-baccalaureate students to the basic concepts of occupation and occupational science, as well as initial development of professionalism as an Occupational Therapist. This knowledge will form a basis for understanding the importance of participation in occupation in future occupational therapy coursework.

**MOT 500 - Fundamentals of Occupational Science (2)**
This course introduces post-baccalaureate students to basic concepts and terminology of occupation and occupational science. This inception and evolution of the scholarly discipline of occupational science, and its relationship to occupation therapy will be explored. Students will gain familiarity with the trends, findings, and leadership in the research. They will develop an understanding of the forms and functions of occupation through the life span, and the impact of occupational opportunity and expression on society and individuals. The impact of physical, economic, cultural, and other aspect of context on the expression of human occupation will be explored.

**MOT 501 - 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 progression policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Fieldwork Coordinator.

**MOT 502 - Professional Development I (1)**
This seminar will introduce students to the necessary preparatory prerequisites for participation in Level II Fieldwork including progression policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Fieldwork Coordinator.

**MOT 515 - Kinesiology (0-3)**
Students learn biomechanical and occupation based approaches across a range of musculoskeletal conditions. Assessment and intervention approaches are applied to congenital and acquired conditions encountered in person of middle age through older adulthood. Lab Required.

**MOT 515 - Kinesiology (0-2)**
Students learn biomechanical and occupation based approaches across a range of musculoskeletal conditions. Assessment and intervention approaches are applied to congenital and acquired conditions encountered in person of middle age through older adulthood. Lab Required.

**MOT 517 - Neuroscience in OT (4)**
This course will address the neuroanatomical and neurophysiological bases of sensory perception, emotion, cognition and learning, and movement that are foundational to occupation performance. Disorders that affect the nervous system resulting in impaired functional ability will also be discussed, including management and evaluation techniques utilized by occupational therapy. Prerequisites: BIOL 110, ANAT 100, CHEM 153, PPY 254.

**MOT 520 - Clinical Conditions & Phenomenon (0-3)**
This course will address how disability from traumatic or chronic illness disrupts occupational patterns and the role of occupational therapy in returning individuals to quality of life experiences.

**MOT 525 - Policy & Administration (1)**
An introduction to the principles of management and organizational leadership, professional and personal development, and entrepreneurship 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 530 - Fundamentals of OT Practice (0-3)**
This course introduces the learner to fundamental, contemporary foundations of occupation therapy practice, with a continuous focus on meaningful occupation as both a means and an outcome of therapy. The history of the profession and its evolution through a succession of paradigm shifts is explored. The general and specific meanings of what it is to become a professional are explored. Professionalism within occupation therapy is emphasized, including ethical Standards of Practice, the domain and process of occupational therapy, and the therapeutic use of self. Professional language and documentation are introduced and practiced. Basic skills in analyzing, selecting, modifying, and using activities therapeutically are introduced and applied.

**MOT 535 - Theoretical Foundations of Occupational Therapy**
Students in this course will understand the nature and components of a scientific theory, and how theories relate to clinical application as frames of reference, and ways to evaluate the worth of any theory. A variety of theories that inform contemporary occupational therapy practice and paradigm will be reviewed and applied through beginning clinical reasoning. Students will understand the fundamental concepts and language of each theory reviewed, the population and practice settings typically addressed, examples of evaluation and intervention approaches supported by each theory, and examples of research that has tested aspects of each theory.

**MOT 535 - Person-Environment-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-Environment-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 540 - OT in Rehabilitation 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 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.

**MOT 541 - OT In Mental Health I (0-3)**
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences.

**MOT 545 - Occupational Performance & Assessment of Inf (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.
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.

MOT 546 - Person Environ Occupation III (0-3)
This course addresses occupational therapy services with older adults living in the community. Learning experiences include a range of applied primary, secondary, and tertiary interventions with elders and their families. Lab required.

MOT 546 - OT with Older Adults (0-3)
This course addresses occupational therapy services with older adults living in the community. Learning experiences include a range of applied primary, secondary, and tertiary interventions with elders and their families. Lab required.

MOT 549 - Applied Research I (1)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

MOT 550 - Applied OT Research II (1-3)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

MOT 550 - Applied OT Research (2-3)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

MOT 555 - Human Environ-Adaptation V (0-3)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to neurological and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 555 - OT in Rehabilitation II (0-3)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to neurological and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 556 - Human Environ Adaptation IV (0-3)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to psychosocial and psychiatric dysfunction will be explored through case studies and community experiences. Lab work included in course.

MOT 556 - OT in Mental Health II: Intervention & Group Sk
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to psychosocial and psychiatric dysfunction will be explored through case studies and community experiences. Lab work included in course.

MOT 560 - Occup Thrapy w/Infnts & Chldrn (0-4)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for child/adolescent client conditions. Compensatory and adaptive approaches to psychosocial, psychiatric, and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 560 - Human-Environ-Adaptation III (0-4)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for child/adolescent client conditions. Compensatory and adaptive approaches to psychosocial, psychiatric, and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 565 - Applied OT Research II (2-4)
Building upon the foundation established in the OT Applied Research I course, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner’s appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master’s project, which is related to their faculty mentor’s scholarship.

MOT 565 - Applied Research III (2)
Building upon the foundation established in the OT Applied Research I course, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner’s appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master’s project, which is related to their faculty mentor’s scholarship.

MOT 570 - Advanced Field Work I (0-6)
This course provides students with a supervised 12-week practicum required to develop entry-level skills in occupational therapy.

MOT 585 - Independent Study Masters (1-3)
This course is the final of three applied research courses in which the student’s master’s project is completed under the continuing guidance of their faculty mentor.

Physical Therapy (MPT) (MPT)

MPT 101 - Introduction to PT I (3)
This course explores the specialties and opportunities for practice in the field of physical therapy. The students participate in laboratory sessions which expose them to very basic skills of physical therapy patient care. The historical foundations of physical therapy and participation on a health care team are discussed. Medical terminology is learned in order to orient the student to future studies.

MPT 102 - Introduction to PT II (1)
The focus of this course is on laying a foundation for the psychosocial, cultural, attitudinal and communication aspects involved in interacting with patients and families.

MPT 105 - Intro to Sports Medicine (3)
This course is an introduction to the disciplines within the field of Sports Medicine, and includes an overview of the historical background, legal issues, professional associations, and career opportunities. This course also focuses on the prevention, recognition, and treatment of common sports injuries. Laboratory sessions are designed to demonstrate and practice common wrapping, taping, and injury management skills.

MPT 108 - Student Development I (0)
Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The course is designed to complement the students coursework for that semester. Guided reflective journaling is included.

MPT 110 - Student Development II (0)
Each semester this course provides information, guidance, and small group discussion to assist the student in maximizing their educational experience at the university. The course is designed to complement the students coursework for that semester. Guided reflective journaling is included.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPT 208</td>
<td>Student Development III (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 210</td>
<td>Student Development IV (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 308</td>
<td>Student Development V (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 310</td>
<td>Student Development VI (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 401</td>
<td>Fundamentals of PT I (1)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 402</td>
<td>Fundamentals of PT II (1)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 405</td>
<td>Human Growth &amp; Devt: Lifespan (0-4)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 407</td>
<td>Basic Exam I (0-2)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 408</td>
<td>Concepts of Motor Learning (1)</td>
<td>This course will introduce basic concepts of motor learning as they relate to healthy individuals.</td>
</tr>
<tr>
<td>MPT 409</td>
<td>Student Development VII (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 410</td>
<td>Biomechanics (0-2)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 411</td>
<td>Clinical Kinesiology (0-3)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 412</td>
<td>Student Development VIII (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 415</td>
<td>Applied Exercise Physiology (0-3)</td>
<td>This course examines muscle physiology; specific types of exercise; endocrine, cardiovascular and respiratory response to exercise and training; training regimens; nutrition and diabetic management.</td>
</tr>
<tr>
<td>MPT 419</td>
<td>Basic Examination II (0-2)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 483</td>
<td>Skills Practicum I (0)</td>
<td>Skills Practicum I is the clinical component of Clinical Seminar I. This course involves the students participating in clinicals one-half day over 12 weeks in the fall semester of the senior year. The students are assigned to a variety of facility types and receive close supervision from physical therapists. The student practices verbal and non-verbal communication, assessment and intervention skills. Skills Practicum I is a Pass/Fail course. The clinicals are within 60 miles of the University.</td>
</tr>
<tr>
<td>MPT 491</td>
<td>Scientific Inquiry (2)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 507</td>
<td>Applied Neuroscience (0-2)</td>
<td>This course presents motor control theory and applications as related to healthy individuals and the treatment of patients. Motor learning will be reviewed.</td>
</tr>
<tr>
<td>MPT 508</td>
<td>Student Development IX (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 510</td>
<td>Student Development X (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 511</td>
<td>Student Development XI (0)</td>
<td>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.</td>
</tr>
<tr>
<td>MPT 513</td>
<td>Thermal Agents (0-2)</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 effect 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 pathokinematics, 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 pathokinematics of selected pathologies of the upper quadrant. Students will become familiar with tests and measures to assist in differential diagnosis and appropriate interventions.

MPT 526 - Neuropathology (2)
This course is a broad survey of the neurologic pathologies. It includes discussion of the etiology, pathology, symptomology, sequelae, medical management and treatment approaches for selected neuropathological conditions.

MPT 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, pharmacodynamics and autonomic pharmacology will be reviewed with an emphasis on age differences. General drug categories, specific actions, adverse reactions, dosage, and PDR use will be discussed.

MPT 552 - Seminar: Clinical Instruction (1)
This course allows the participant to apply the principles of teaching and learning to clinical education. Topics include psychosocial aspects of working with students, models of supervision in clinical education, student performance evaluation, planning for students in the clinic, structuring learning experiences in the clinic, adult learning, setting objectives for students in the clinic, the art and science of questioning and dealing with challenging situations in the clinic.

MPT 560 - Departmental Administration (2)
The course covers the basic administrative and management aspects of developing and operating a physical therapy service. Included are discussions of corporate organization; planning and decision making; personnel, fiscal and operations management; marketing; and quality improvement.

MPT 562 - Professional Issues in PT (1)
This course presents issues faced by physical therapists in various clinical settings. These issues include ethical dilemmas, interactions with other health professionals, legal aspects of practice, and current professional issues influencing physical therapy practice.

MPT 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.
Continuation of NMT 341.

Sectional human anatomy. Technologies and techniques. The course will include a study of cross

This course is designed to introduce students to advanced imaging

NMT 341 - Imaging Clinical Practicum (7)

Students will perform in a wide variety of nuclear medicine procedures, including in vivo, diagnostic and therapeutic treatments in multiple clinical settings under the direct supervision of qualified medical professionals.

NMT 342 - Radiopharmacy Clin. Practicum (3)

Students will prepare radiopharmaceuticals, perform associated quality control, dispense drugs and perform record keeping under the direct supervision of qualified medical professionals in a radiopharmacy setting.

NMT 343 - Emerging Technologies (2)

This course is designed to introduce students to advanced imaging technologies and techniques. The course will include a study of cross sectional human anatomy.

NMT 399 - Clinical Practicum (0)

Continuation of NMT 341.

Nuclear Medicine Technology (NMT)

NMT 331 - Radiation Physics and Radiation Protection (4)

A study of atomic structure, radioactive decay modes, x-ray production, mathematics of decay, and interaction of radiation with matter. Radiation units, regulations regarding maximum permissible exposures to radiation, radiation monitoring and surveying, and principles of radiation protection. Concepts in radiobiology and dosimetry are covered.

NMT 332 - Radiochemistry/Radiopharmacy (3)

A study of basic radiopharmaceutical principles, generators, chemistry of radionuclides and their associated compounds, dosage forms, quality control and regulations. This course will include demonstrations and lab exercises in the radiopharmacy.

NMT 333 - Nuclear Med Instrumentation (2)

Use of these principles will be applied to understanding the theory of radiation detection with application to current imaging instruments. Students will be introduced to tomographic imaging cameras, including SPECT and PET/CT, with their necessary quality control. This course will include demonstrations and lab exercises to reinforce concepts explained in the classroom.

NMT 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. This course will also include concepts and applications dealing with patient care, the health care delivery systems, CPR, and health related agencies.

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.

OCS 100 - Seminar in OT Practice (2)

This course is uniquely designed for the traditional freshman student, incorporating concepts learned in EDHI 100 Enhancing First Year Success, as well as, introduces those interested in the profession as a career to the realm of occupational therapy practice.

OCS 101 - Intro to Occup. Sci & Therapy (2)

The purpose of this course is to introduce freshman and sophomore students to the concept of occupation, the academic discipline of Occupational Science (OS), and the health care discipline of Occupational Therapy. Learners are encouraged to be reflective of the evolving process of their personal and professional development and their choice of occupational therapy as a career.

OCS 200 - Concepts in OS and OT (2)

This course lays the conceptual foundations for the ongoing development of students throughout the Bachelor of Science in Occupational Science and masters in Occupational Therapy program.

OCS 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 that process. This seminar will provide students with an introduction to the prerequisites for participation in level I fieldwork beginning fall semester senior year.

OCS 305 - Applied Terminology I (2)

This course is a competency based guided self-study to teach the roots, prefixes and suffixes associated with clinical conditions and organ systems.

OCS 306 - Applied Terminology II (1)

This course is a competency based guided self-study to teach the roots, prefixes, and suffixes associated with the musculoskeletal system.

OCS 312 - The Study of Occupation (3)

This course is an introduction to occupational therapy. It focuses on the individual meaning of occupation, the construction of self through human action, reconstruction of the self following disruption of occupation due to trauma or disability, and design of therapeutic occupations. Patterns of occupation are examined, as well as subjective dimensions of occupational experience. Reflection and insight regarding the occupational patterns of the individual student are studies.

OCS 322 - Contexts of Occupation (3)

This course is an overview of the temporal, spatial, and socio-cultural contexts of occupation as a basis for design of the therapeutic contexts of intervention. Topics in regards to temporal context of occupation including the impact of industrialization on daily patterns of activity and the social construction of the meaning of time. The spatial context of occupations will include topics such as visual experience and cognitive mapping, and the social construction of public and private space. The socio-cultural dimension of occupational context will include the concepts of culture, community, ritual, symbol, institutions, relationships, gender, and diversity, with a focus on ethnic groups in the St. Louis area.

OCS 332 - Devt of Occup. Across Lifespan (3)

This course builds on knowledge acquired in NURS-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 population 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 provides 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 progression policies and procedures. In addition to scheduled seminars students will meet in small groups and individually with the Fieldwork Coordinator.

OCS 417 - Neuroscience in OT (4)
This course will address the neuroanatomical and neurophysiological bases of sensory perception, emotion, cognition and learning, and movement that are foundational to occupation performance. Disorders that affect the nervous system resulting in impaired functional ability will also be discussed, including management and evaluation techniques utilized by occupational therapy. Pre-requisites: BIOL 110, ANAT 100, CHEM 153, PPHY 254.

OCS 425 - Prof. Development & Leadership (4)
An introduction to the principles of management and organizational leadership, professional, and personal development, and entrepreneurialism in traditional and non-traditional settings.

OCS 440 - OT in Rehabilitation I (0-3)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, biomechanical and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab required.

OCS 440 - Human Environ Adaptation I (0-3)
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, biomechanical and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab required.

OCS 441 - Human Environ Adptation 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 444 - OT in Mental Health I: Theory, Evaluations & Tr
Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab included.

OCS 445 - Occupational Performance & Assessment of Inf
From a developmental perspective, this course will address how environment, activities, tasks, and roles of a client are used as meaningful occupations in planning interventions. This course will address child/adolescent meaningful occupations. Lab required.

OCS 446 - Person Environ Occupation III (0-3)
This course addresses occupational therapy services with older adults living in the community. Learning experiences include a range of applied primary, secondary, and tertiary interventions with elders and their families. Lab required.

OCS 449 - Applied Research I (1)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

OCS 450 - Applied OT Research II (1-3)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

OCS 450 - Applied OT Research I (2-3)
This course provides opportunities for OT students to apply evidence-based research concepts in a practice setting. An integrative approach in class is utilized to 1) support students’ exploration of problems and needs presented in the practice setting, 2) facilitate the discovery of research questions and approaches that relate directly to the needs of the OT academic and practice setting, and 3) promote the successful development of projects that relate directly to the practice environment. Throughout the investigative process students work with faculty mentors and practice setting staff.

OCS 452 - 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 Occup Centdr Prac (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.
OCS 472 - Fundamentals of OT Practice (0-3)
This course introduces the learner to fundamental, contemporary foundations of occupational therapy practice, with a continuous focus on meaningful occupation as both a means and an outcome of therapy. The history of the profession and its evolution through a succession of paradigm shifts is explored. The general and specific meanings of what it is to become a professional are explored. Professionalism within occupational therapy is emphasized, including ethical Standards of Practice, the domain and process of occupational therapy, and the therapeutic use of self. Professional language and documentation are introduced and practiced. Basic skills in analyzing, selecting, modifying, and using activities therapeutically are introduced and applied.

OCS 482 - Theoretical Foundations of Occupational Therapy
Students in this course will understand the nature and components of a scientific theory, and how theories relate to clinical application as frames of reference, and ways to evaluate the worth of any theory. A variety of theories that inform contemporary occupational therapy practice and paradigm will be reviewed and applied through beginning clinical reasoning. Students will understand the fundamental concepts and language of each theory reviewed, the population and practice settings typically addressed, examples of evaluation and intervention approaches supported by each theory, and examples of research that has tested aspects of each theory.

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.

Occupational Therapy (OCT)
OCT 432 - Specialty Practice (3)
This course explores advanced treatment techniques in occupational therapy across a range of physical and developmental conditions.

OCT 438 - OT Theory & Prac: Neuro Assmt (5)
A continuum of OCT-H336 covering occupational therapy assessments and interventions pertinent to a variety of neurologic conditions and settings.

OCT 442 - Senior Inq & Research in OT (4)
Overview of research design, methodologies, and statistics applicable to occupational therapy. Students will apply this knowledge to an original research question relevant to occupational therapy.

OCT 450 - Admin, Sprvis, & Pub Pol in OT (5)
An introduction to the principles of managing a department of occupational therapy in traditional and non-traditional settings (quality assurance, personnel management, budgeting, documentation, program planning, program evaluation, legal and ethical issues) and analysis of service delivery systems relative to occupational therapy.

OCT 451 - Clinical Fieldwork (4-6)
An optional 2-3 month full-time, supervised clinical experience in a psychosocial practice setting. Designed for the student who seeks clinical experience in a specialty area.

OCT 454 - Clinical Fieldwork (6)
Supervised 12 week clinical experience required to develop entry level skills in occupational therapy.

OCT 456 - Clinical Fieldwork (6)
Supervised 12 week clinical experience required to develop entry level skills in occupational therapy.

Physician Assistant Educ (PAED)

PAED 304 - Psychosocial Dynamics: Hlth Cr (3)
This course introduces the student to the psychological, social, and family context of health, illness, and health care. A major premise of this course is that to adequately meet the needs of the patient, the PA must consider not only disease factors, but also psychosocial factors, which affect the disease and are affected by it as well. Topics include personality, development from infancy through old age, the family’s role in health care, sex and sexuality, death and dying, and health care ethics.

PAED 400 - PA Seminar (1)
This multifaceted course spans the entire professional curriculum. It includes sessions on PA employment and professional issues, health promotion and disease prevention, alternative medicine and clinical problem solving. In this course students participate in an interprofessional case seminar and are instructed in the use of technology in PA education, research and clinical practice.

PAED 404 - Physiology (4)
This is a comprehensive course that covers all major systems of the human body. Special emphasis is placed on the clinical application of this knowledge to patient management. It is designed specifically for PA students as they prepare for courses in pathophysiology and clinical medicine.

PAED 499 - Independent Study (0-3)
This course is designed for Program graduates working on degree requirements.

PAED 500 - Psychosocial Dynamic Hlthcare (2)
This course introduces the student to the psychological, social and family context of health, illness and health care. A major premise of this course is that to adequately meet the needs of the patient, the PA must consider not only disease factors, but also psychosocial factors, which affect the disease and are affected by it as well. Topics include personality, development from infancy through old age, the family’s role in health care, sex and sexuality, death and dying.

PAED 501 - Professional Issues of Physician Assistant Pra
This course explores through lecture and discussion the factors affecting the development of the profession and role socialization with emphasis on standards of quality assurance, credentialing of continued competence, as well as ethical and legal issues governing clinical responsibilities and practice on a health care team.

PAED 501 - Hist & Legl Issue of PA Practc (2-3)
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 504 - Physiology (4)
This is a comprehensive course that covers all major systems of the human body. Special emphasis is placed on the clinical application of this knowledge to patient management. The course is designed specifically for PA students as they prepare for courses in pathophysiology and clinical medicine. Previous physiology or combined anatomy/physiology is a prerequisite.

PAED 505 - P.A. Seminar (1)
This course explores through lecture and discussion the factors affecting the development of the profession and role socialization with emphasis on standards of quality assurance, credentialing of continued competence, as well as ethical and legal issues governing clinical responsibilities and practice on a health care team.

PAED 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 backgrounds, ages and personalities. A self-guided medical terminology course is also included.

PAED 508 - Medical Documentation (2)
This course focuses on how to record a complete medical history and physical exam in the appropriate format using the problem 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)
This course explores basic concepts and practical application of genetics and the role it plays in health and disease. Students learn to integrate this information into diagnosis, treatment and prevention of common diseases and to provide fundamental guidance in genetics to various patient populations.

PAED 510 - Foundations in Clinical Med (6)
The essentials of human pathophysiology and their relationship to clinical signs and symptoms elicited in the medical history and physical examination are presented. The etiology, epidemiology, pathophysiology, clinical manifestations and diagnostic aspects of the common diseases within each organ system are discussed and correlated. General approaches to medical management of selected problems are also presented. Although an organ-systems approach is utilized, the systems are integrated for discussion of multi-system pathology.

PAED 511 - Intro Systems App & Integument (2)
Initial component of this course will introduce the student to the general approach to the patient. The Dermatology course provides an integrated approach to understanding the pathophysiologic basis of dermatologic disorders as well as the pharmacological rationale for their therapy. Material is introduced in a stepwise fashion beginning with normal organ-specific anatomy, progressing to the pathophysiology, clinical features and treatment of representative disorders. Emphasis will be placed on an understanding of the basic functions of these organ systems, manifestation of disease both local and systemic, evaluation, diagnosis and treatment.

PAED 512 - Prin & Pract of Hematology (2)
This course examines the physical manifestation, evaluation of laboratory and clinical data, differential diagnosis and treatment of major disorders of the hematologic system. Included in this course are common laboratory tests used in the evaluation of other anatomic systems including the significance of abnormal findings.

PAED 513 - Prin & Pract. Otorth & Opthmigy (2)
This course explores all aspects of diseases of the head, ears, eyes, nose and throat, including the physical manifestation of disease, examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies. Cases are used throughout the course to support student integration of content into a unified approach to the patient.

PAED 515 - Clinical Pharmacology (2)
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.

PAED 517 - Surgical Skills Patient Care (2)
Basic surgical principles and techniques are presented, including asepsis fundamentals, O.R. procedure and conduct, wound care and healing, closure, debridement and dressings. Laboratory sessions include minor surgical techniques and other procedures. Surgical instruments, anesthesia, pre-and post-operative care, common surgical procedures and surgical complications are discussed. ACLS training is included in this course.

PAED 520 - Clinical Therapeutics (2)
This course is a continuation of PAE-H 420, Clinical Pharmacology, with increased emphasis on clinical therapeutic applications and more intensive review of selected major drug categories.

PAED 521 - Prin & Pract of Pulmonology (3)
Signs and symptoms, evaluation methods including arterial blood gases, diagnosis, management and treatment of pulmonary disorders will be examined with attention focused on acute and chronic respiratory disturbances. Students will utilize clinical cases to integrate theory into practical management processes.

PAED 522 - Prin & Pract of Cardiovascular (5)
This course explores all aspects of cardiovascular medicine including the examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies including a directed approach to understanding the principles of electrocardiography and its applications to clinical practice.

PAED 523 - Prin/PRACT of Gastroenterology (3)
The Gastrointestinal/Nutrition (GIN) course provides an integrated approach to understanding the pathophysiologic basis of gastrointestinal, hepatic and nutritional disorders as well as the pharmacological rationale for their therapy. At the same time, students are introduced to the clinical approach to these disorders, including physical examination, clinical, laboratory, and radiographic findings.

PAED 524 - Prin/PRACT of Nephro & Genitou (3)
Renal and genitourinary disease are examined in this course including the physical manifestation of disease, examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies including acid-base balance. Cases are used throughout the course to support student integration of content into a unified approach to the patient.

PAED 525 - Prin & Pract of Endocrinology (2)
Manifestations, evaluation methods, diagnosis, management and treatment of endocrinologic disorders. Major topics of the course include normal and abnormal sexual development, normal and abnormal growth and pubertal development, reproductive endocrinology, infertility, glucose homeostasis, diabetes, pituitary disorders, thyroid physiology and disease, adrenal disorders, endocrine hypertension, and disorders of mineral metabolism. Students will utilize clinical cases to integrate theory into practical management processes.

PAED 530 - Evidence Based Medicine (2)
This course introduces the concepts of evidence-based medicine using a patient oriented approach. Students learn how to conduct an on-line medical database search using reputable resources such as the Cochrane Database of Systematic Reviews. Learning exercises designed to critically review the relevance and validity including the statistical significance of results are focused in articles about therapy, diagnostics, systematic reviews, and practice guidelines.

PAED 531 - Prin/PRACTc: Orthpcs & Rheumtl (3)
This course explores all aspects of diseases of the bones and joints including the examination, laboratory and imaging evaluation, diagnosis and clinical management of associated etiologies.

PAED 532 - Prin/PRACTs of Neurology (3)
The neurology course provides an integrated approach to understanding the pathophysiologic basis of disorders of the central and peripheral nervous system as well as the pharmacological rationale for their therapy. At the same time, students are introduced to the clinical approach to these disorders, including physical examination, clinical, laboratory, and radiographic findings and various management methods.

PAED 533 - Essentials of Surgery (2)
The fundamentals of surgical disease are explored with discussions on the etiology, pathophysiology, clinical manifestations and appropriate management of major and minor surgical conditions and care of the acutely injured and critically ill patient. Topics are discussed with emphasis on clinical presentation and pre- and post-operative management. Laboratory sessions are used to familiarize the student with aseptic technique and basic surgical procedures such as airway control, various catheter placements, surgical bleeding control and wound management.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAED 534</td>
<td>Essentials of Emerg. Medicine (2)</td>
<td>This course introduces the principles of life support technique as well as the initial identification and management of acute medical and traumatic conditions.</td>
</tr>
<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 specialties.</td>
</tr>
<tr>
<td>PAED 536</td>
<td>Essentials of Pediatrics (2)</td>
<td>This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.</td>
</tr>
<tr>
<td>PAED 537</td>
<td>Essentials of Behavioral Medicine (2)</td>
<td>Basic psychiatric manifestations and how to work with both patients and families exhibiting psychological problems are examined. Topics include psychiatric diagnosis, the effect of society on behavior, the basis of drug and alcohol abuse, and basic intervention and treatment modalities.</td>
</tr>
<tr>
<td>PAED 538</td>
<td>Essentials of OB &amp; Gynecology (2)</td>
<td>This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.</td>
</tr>
<tr>
<td>PAED 540</td>
<td>Internal Medicine (4)</td>
<td>Six weeks. Students actively participate in all aspects of direct patient care in inpatient and/or outpatient adult medicine. This fundamental clinical experience places emphasis on patient evaluation and assessment, oral and written case presentations, understanding the complexities and interrelationships of disease processes and diagnostic and therapeutic collaboration.</td>
</tr>
<tr>
<td>PAED 540 I</td>
<td>Internal Medicine I (4)</td>
<td>Six weeks. Students actively participate in all aspects of direct patient care in inpatient and/or outpatient adult medicine. This fundamental clinical experience places emphasis on patient evaluation and assessment, oral and written case presentations, understanding the complexities and interrelationships of disease processes and diagnostic and therapeutic collaboration.</td>
</tr>
<tr>
<td>PAED 542</td>
<td>Family Medicine (4)</td>
<td>Six weeks. Practicum provides the second-year student with an opportunity to gain experience in a primary care setting. This experience exposes the student to a wide range of common ambulatory care problems.</td>
</tr>
<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>
</tr>
<tr>
<td>PAED 551</td>
<td>General Surgery (4)</td>
<td>Six weeks. This clinical experience provides exposure to concepts and principles that characterize the practice of general surgery. Students participate in the pre-operative, operative and post-operative care of patients admitted to a variety of surgical services in both inpatient and outpatient settings.</td>
</tr>
<tr>
<td>PAED 560</td>
<td>Pediatrics (4)</td>
<td>Six weeks. Practical experience in the recognition and management of common pediatric problems is provided, including assessment of the newborn, well baby care, preventive pediatrics and parent counseling.</td>
</tr>
<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>
</tr>
<tr>
<td>PAED 575</td>
<td>Women's Health (4)</td>
<td>Six weeks. This clinical experience encompasses the fundamentals of women's health. Emphasis is on the medical history, physical examination, diagnosis and treatment involved with pre-natal, post-natal and general gynecologic care.</td>
</tr>
<tr>
<td>PAED 580</td>
<td>Emergency Medicine (4)</td>
<td>Six weeks. This clinical experience includes the management of acute medical and surgical problems with an emphasis on the importance of precise diagnosis as well as the principles of emergency therapy.</td>
</tr>
<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>
</tr>
<tr>
<td>PAED 586</td>
<td>EBM Clerkship (4)</td>
<td>Six weeks. As an adjunct to PAED-530, students critically review one area of the medical literature based on a clinical question of interest and develop a comprehensive project that includes concepts of evidence-based medicine and Healthy People 2010 components.</td>
</tr>
<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>
</tr>
<tr>
<td>PAED 593</td>
<td>Clinical Elective (4)</td>
<td>Six weeks. Many options are available for this elective experience. Specific clinical disciplines may be chosen based upon special interests of the student or upon what he or she determines would best augment existing clinical knowledge and skills.</td>
</tr>
<tr>
<td>PAED 600</td>
<td>Senior Seminar (1)</td>
<td>This is the capstone experience for the physician assistant program. The purpose is two-fold: to ascertain if the student has both the broad and specific knowledge expected of someone holding a master's degree. Second, to determine whether the student has been able to integrate knowledge obtained from individual courses into unified concepts which link the students' own specialization to other fields of study. The student is given an oral exam, a written examination and a clinical skills examination in the form of an Objective Score of Clinical Evaluation (OSCE).</td>
</tr>
<tr>
<td>PPY 254</td>
<td>Human Physiology (4)</td>
<td>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.</td>
</tr>
<tr>
<td>PT 310</td>
<td>Professional Development I (1)</td>
<td>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).</td>
</tr>
<tr>
<td>PT 315</td>
<td>Exercise Physiology (0-3)</td>
<td>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.</td>
</tr>
</tbody>
</table>
PT 401 - Fundamentals of PT (0-1)
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.

PT 405 - Human Growth & Development (0-3)
This course provides students with a comprehensive approach to pediatric patients with congenital, developmental, and/or neurological conditions. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with children with developmental challenges are integral course components.

PT 410 - Professional Development II (1)
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).

PT 411 - Kinesiology I (0-2)
This course extends the core principles of classical mechanics to human movement applications and covers the kinesiology of the shoulder and elbow. Upon completion of this course, the student will be prepared to describe and discuss human movement in biomechanical terms. In addition, students will be able to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion.

PT 412 - Kinesiology II (0-3)
Kinesiology II is intended to provide the student with the foundational knowledge necessary to analyze human motion and design appropriate intervention. Upon completion of this course, the student will be prepared to explain the contributions and interactions of the muscular, skeletal, and nervous systems in purposeful human motion.

PT 415 - Therapeutic Exercise (0-2)
This course emphasizes laboratory experiences where various types of therapeutic exercises are analyzed and the psychomotor skills for performing these exercises are developed. Case discussions where the student has the opportunity to select appropriate therapeutic exercise intervention based on patient examination will be included.

PT 420 - Developmental Biology (3)
The focus of this course is basic science knowledge needed in physical therapy. Topics covered include histology, embryology and genetic influences.

PT 455 - Basic Examination (0-3)
This course is designed to provide a basic knowledge of common physical therapy tests and measures. Essential concepts of measurement issues will be presented from a theoretical and practical viewpoint. Therapist-patient communication, therapist-patient safety, and respect for the cultural differences, values, and dignity of patients will be emphasized.

PT 460 - Clin Research and Design (2)
This course will introduce students to several types of clinical research designs including designs for group studies, epidemiological studies, survey research and qualitative studies. Interpretation selected statistical methods will also be included.

PT 465 - Comm. Proc. Patient Care I (0-2)
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.

PT 470 - Basic Procedures (0-2)
The primary purpose of this course is to offer the senior physical therapy student an introduction to specific observation, examination and evaluation skills as well as designated treatment interventions in both a theoretical and practical application framework. It is expected that this material will act as part of the foundation on which the student will build throughout his/her professional career. Treatment interventions include therapeutic patient positioning, patient transfer and transport, gait with assistive devices and infection control. Basic nursing procedures, 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.

PT 480 - Evidence-Based Clinical Pract (0-2)
This course examines how research is used to practice in an evidence based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. Implementing this process should be as familiar to practitioner as is performance of basic measurement skills like measurement of blood pressure.

PT 484 - Skills Practicum (1)
Skills Practicum is the PT student's first opportunity to practice basic PT skills in a clinical setting under the supervision of a clinical instructor. It is comprised of two components. The didactic or classroom component consists of class 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.

PT 507 - Applied Neuroscience (0-2)
Motor control theory and applications, and motor learning principles are presented as they relate to healthy individuals and patient interventions. Principles of neuroanatomy and neurophysiology are reviewed and applied to patient case studies.

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 optimum 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT 514</td>
<td>Physical Agents II</td>
<td>0-2</td>
<td>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 the opportunity to acquire theoretical and practical knowledge of electrical and mechanical agents and will also have the opportunity to begin planning an overall patient treatment care program for optimum goal achievement.</td>
</tr>
<tr>
<td>PT 519</td>
<td>Biomechanical Interventions</td>
<td>0-3</td>
<td>Biomechanical Interventions is focused on physical therapy management for patients with impairments, functional limitations, or disability as a result of neuromusculoskeletal pathologies that require orthotic/prosthetic and/or soft tissue management. Students will study theoretical frameworks, practice examination techniques (history, systems review, and tests and measures), evaluate examination data, and design appropriate intervention. The course will focus on the clinical reasoning framework that was introduced in previous classes in order to practice clinical decision making.</td>
</tr>
<tr>
<td>PT 520</td>
<td>Musculoskeletal Conditions I</td>
<td>0-2</td>
<td>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 course will focus on the clinical reasoning framework that was introduced in previous classes in order to practice clinical decision making.</td>
</tr>
<tr>
<td>PT 521</td>
<td>Musculoskeletal Conditions II</td>
<td>0-3</td>
<td>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.</td>
</tr>
<tr>
<td>PT 522</td>
<td>Musculoskeletal Conditions III</td>
<td>0-4</td>
<td>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.</td>
</tr>
<tr>
<td>PT 523</td>
<td>Musculoskeletal Conditions IV</td>
<td>0-2</td>
<td>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.</td>
</tr>
<tr>
<td>PT 524</td>
<td>Clinical Gait</td>
<td>0-2</td>
<td>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.</td>
</tr>
<tr>
<td>PT 525</td>
<td>Neuropathology</td>
<td>2</td>
<td>This course provides students with a comprehensive approach to neurologic 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 neurologic conditions are integral course component.</td>
</tr>
<tr>
<td>PT 526</td>
<td>Neurological Conditions</td>
<td>0-4</td>
<td>This course provides students with a comprehensive approach to neuromusculoskeletal pathologies. Students 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 course will focus on the clinical reasoning framework that was introduced in previous classes in order to practice clinical decision making.</td>
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<tr>
<td>PT 527</td>
<td>Cardiopulmonary Conditions</td>
<td>0-3</td>
<td>This course is intended to be a companion to the physical therapy course on rehabilitation of neurological conditions.</td>
</tr>
<tr>
<td>PT 528</td>
<td>Medical/Surgical Conditions</td>
<td>0-2</td>
<td>This course is intended to present the student with a comprehensive approach to the management of 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.</td>
</tr>
<tr>
<td>PT 529</td>
<td>Cardiopulmonary Examination</td>
<td>0-3</td>
<td>This course provides students with a comprehensive approach to the management of patients with medical and/or surgical conditions. Emphasis is placed on examination skills and intervention strategies. The course consists of various conditions, 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 year musculoskeletal dysfunction, and incontinence.</td>
</tr>
<tr>
<td>PT 530</td>
<td>Lab Studies &amp; Imaging</td>
<td>2</td>
<td>This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.</td>
</tr>
<tr>
<td>PT 540</td>
<td>Pharmacology</td>
<td>1</td>
<td>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.</td>
</tr>
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</table>
PT 560 - Department Administration (2)
This course covers the basic administrative, management, and leadership aspects of developing and operating a physical therapy service. Included are discussions of: the impact of the health care environment on physical therapy practice, 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.

PT 561 - Appl Administration & Mgmt (3)
During this course the students will apply the concepts of management and administration to organization operations and interpersonal relationships. Students will be asked to refer to clinical environments familiar to them to serve as point of reference. Current literature will be reviewed. During the course the students will discuss recent trends in the health care delivery system and the implications for physical therapy services. The students will address legal issues that are relevant in management of physical therapy practice.

PT 565 - Comm Procss in Pmt Care II (2)
This course covers teaching skills, interviewing skills and other communication skills needed in the clinical environment. This course also provides opportunity to apply learning theory, personality theory and developmental theory to communicating within the clinical environment.

PT 566 - Comm Proc Pnt Care III (1)
This course introduces the students to several models of health beliefs as related to wellness. It covers adherence and models to improve adherence. The influence of spirituality on health and on healthcare is addressed.

PT 570 - Patient Management I (2)
This course provides the opportunity to integrate the various dimensions of patient care into an organized problem-solving process in order to prepare the student for more advanced clinical rotations starting with Clinical Rotation II. This course will integrate content information from all previous and concurrent courses in the physical therapy curriculum. The clinical problem solving process will cover all aspects of patient management, from the gathering of subjective and objective data during the examination, through evaluation, diagnosis and prognosis phase, and into intervention planning and delivery. The primary focus of this course will be clinical decision-making for patients with 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.

PT 571 - Patient Management II (2)
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.

PT 572 - Patient Management III (2)
This course builds on the clinical problem-solving processes introduced in Patient Management I & II in order to further prepare the student for more advanced clinical rotations. While all skills learned in Patient Management I & II will continue to be reinforced and incorporated in this class using patient cases with a multisystem approach, Patient Management III adds the management of neurologic impairments to the clinical problem-solving process. The fabrication of intervention programs based on examination results and the modification of established intervention programs will be emphasized, including appropriate referrals to other health care providers. Additionally, patient management issues for the home health patient are discussed. The student will enhance his or her ability to critique and advance common exercise protocols given particular cases. The student also will have the opportunity to participate in an interdisciplinary team case seminar, and to improve visual kinematic evaluation skills through videotaped patient cases.

PT 575 - Health Promotion & Wellness (2)
This course will identify national health indicators as based on Healthy People 2010 (U.S. Department of Health and Human Services) and discuss specific health policies that are promoting health and wellness programs for defined populations. Students will identify cultural differences that impact health promotion and will discuss motivational concepts that help facilitate long-term adherence to wellness. Students will value health promotion as part of physical therapy services that require an interprofessional effort. Students will have the opportunity to work with students from other professions to implement a health promotion project for a targeted group within the community.

PT 579 - Sem in Clinical Instruction (1)
This course covers the interpersonal and technical components of clinical education. Establishing a positive environment for learning, principles of student supervision, student assessment, and alternative models of clinical education are covered. Application of educational set, body, closure, and planning are covered. The Meyers-Briggs Type Indicator is used as a model for personality, teaching, and learning styles. Educational objectives for clinical education, questioning, adult learning, and a model for working through Challenging Student situations are discussed.

PT 580 - Clinical Rotation I (2)
Clinical Rotation I is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 4 weeks in an acute/subacute clinical setting with a clinical instructor. The students practice skills previously learned and use clinical reasoning skills with maximal supervision of the clinical instructor.

PT 581 - Clinical Rotation II (2)
Clinical Rotation II is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an outpatient orthopedic clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

PT 582 - Clinical Rotation III (2)
Clinical Rotation III is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 5 weeks in an adult inpatient or outpatient clinical setting with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals.

PT 583 - Clinical Rotation IV (12)
Clinical Rotation IV is comprised of two components. The didactic or classroom component consists of class sessions in preparation for and discussion of the clinical component of the course. The clinical component involves the student spending 18 weeks in two separate clinical settings (each 9 weeks in length) with a clinical instructor. The student will perform all phases of assessment and intervention including goals, discharge planning, treatment progression and interaction with appropriate healthcare professionals for an entry-level caseload.
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 (2-3)
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 and Technology (3-4)
Introduces concepts and terminology of radiation therapy treatment setups. 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 Practicum 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 Practicum I

XRT 335 - Clinical Practicum I (2-6)
Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed examined and evaluated. 2 credit hours (0 didactic/2 practicum) Prerequisites: Introduction to Radiation Therapy Practicum Co-requisite: Principles of Radiation Therapy Practice I, Treatment Technique

XRT 342 - Radiation Therapy Practice II (3)
This course is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease will be presented and discussed. 3 credit hours (3 didactic/0 practicum) Prerequisites: RX-4200, RX-4300, RX-4450 Co-requisite: RX-4650, RX-4550

XRT 343 - Emerging Technologies (2)
The supervised use of radionuclides for positron emission computed tomography (PET) and other modalities.

XRT 344 - Clinical Dosimetry (4)
Reviews basic concepts introduced in Treatment Planning, further examining factors that influence and govern dose determination and planning treatment for radiation therapy patients. Emphasizes clinical application of photon and electron beam characteristics, dose calculations, and related factors to safely and optimally treat the radiation therapy patient. Several laboratory sessions supplement the lectures. Some focus is directed on clinical dosimetry and treatment planning for radiation oncology special procedures. 4 credit hours (4 didactic/0 practicum) Prerequisites: NMT Radiation Physics and Protection, Treatment Planning Co-requisite: Principles of Radiation Therapy Practice II

XRT 345 - Clinical Practicum II (0-2)
Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Continuation of Clinical Practicum I. 2 credit hours (0 didactic/2 practicum) Prerequisites: Clinical Practicum I Co-requisite: Clinical Dosimetry, Principles of Radiation Therapy Practice II

XRT 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 respective rules affecting the radiation oncology workplace, staff, and patients are emphasized. The role of the radiation therapist in patient care, safety and quality management is stressed. 3 credit hours (3 didactic/0 practicum) Prerequisites: Principles of Radiation Therapy Practicum 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 (0-3)
This course integrates previous knowledge and skills with significant, relevant issues and subjects in professional practice. Emphasizes professional role development of the new graduate and preparation for the national credentialing board exam.

1 credit hour (1 didactic/0 practicum) Prerequisites: All required radiation therapy courses
Computer Science (CSCI)
CSCI 226 - Adv Object-Oriented Design & Syst (3)
Classes and methods, messages, instance, initialization, inheritance, static and dynamic binding, and polymorphism.
Nursing (NURS)

NURS 140 - Introduction to Nursing (1)
This course introduces the student to nursing as a profession. Various roles and functions of the nurse are explored. Emphasis placed on the organization and education of nursing, nursing systems in various settings, and recipients of nursing care. Exploration of the conceptual and philosophical basis of nursing and the role of critical thinking in the nursing process will be examined. The structure. Open to non-nursing majors.

NURS 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 233 - Introduction to Clinical Decision Making in Nursing
This course introduces the student to clinical decision-making in nursing. The nursing process is presented with the focus on making ethical and cultural context of decision making in nursing is explored. Research is introduced as a method of inquiry and as a foundation for evidence based clinical decisions. Clinical decision-making to promote patient adaptation is emphasized. Students have the opportunity to practice decision-making skills in simulated and actual patient settings. Prerequisites: ANAT 100, CHEM 153, ENGL 190, PPY 254 and PSY 101. Prerequisite or Corequisites: NURS 210, 242, 370 and RMET 410.

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 330 - Pharmacology in Nursing Pract (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 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 335 - Pharmacology in Nurs Pract 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 Pract II (2)
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 360 - Pathophysiology (4)
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 370 - Health Assessment (0-3)
This course focuses on the assessment component of the nursing process in the health care of individuals and families across the lifespan. The course integrates assessments of physical health, functional capacity, growth and development, and psychological, sociocultural and spiritual health of individuals, families, and immediate communities. The university laboratory experience provides for learning a systematic method of performing health assessments and development of assessment skills.

NURS 377 - Essentials of Therapeutic Nutrition: A Nursing Option
Building on fundamental knowledge gained in previous courses, this course introduces the student to the essentials of nutrition. Students are introduced to the role of the nurse in food and nutrition in the promotion of health and disease prevention across the lifespan while exploring the clinical evidence that supports therapeutic nutrition. The emphasis on this course is to provide a foundational knowledge in nutrition that can be applied in nursing practice. Prerequisites: CHEM 153, NURS 210, 233, 370. Prerequisites or Corequisites: NURS 330, 333 & 360.

NURS 380 - Conceptual Framework for Practice (3)
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 405 - Introduction to Clinical Decision Making in Nursing
This course introduces the student to clinical decision-making in nursing. The nursing process is presented with the focus on making ethical and cultural context of decision making in nursing is explored. Research is introduced as a method of inquiry and as a foundation for evidence based clinical decisions. Clinical decision-making to promote patient adaptation is emphasized. Students have the opportunity to practice decision-making skills in simulated and actual patient settings. Prerequisites: ANAT 100, CHEM 153 to 164 (one course), PPY 254 and PSY 101. Prerequisite or Corequisites: NURS 210, 242, 370 and RMET 410.

NURS 406 - Critical Issues in Evidence Based Nursing (2)
Building on fundamental knowledge gained in previous courses, this course examines how research is used in evidence based practice. Critical issues in interprofessional health care and their effect on health care quality, access and cost will be examined. Nursing interventions that promote patient adaptation and safety will be investigated. Critical appraisal of evidence and the use of evidence in practice will be emphasized.
NURS 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 serve 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, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined.

NURS 429 - Public Health Nursing (4)
This course introduces the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups in the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined. Limited to Accelerated Option. Prerequisites: NURS-335, NURS-360, NURS-370, NURS-401, NURS-402, NURS-421, & NURS-423.

NURS 431 - Psych/Mental Hlth Nrs Thy/Clin (0-4)
The concept of adaptation serves as the basis for the promotion, maintenance, and restoration of health in clients across the life span. Emphasis is placed on individuals, families and groups to implement professional relationships, based on principles of therapeutic communication and knowledge of psychopathology. As a member of the interdisciplinary health care team, the student will care for psychiatric mental health clients in a variety of settings.

NURS 432 - Public Health Nursing (0-4)
The focus of this course is the introduction of the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups within the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, and referral by home visiting and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-370.

NURS 433 - Maternal-Child Hlth Nur Theory (4)
This course uses a family-centered approach to the study of the health care needs of women, infants, children, and adolescents. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to significant health care issues within these populations. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-370. Prerequisite or Co-requisite: NURS-433.

NURS 434 - Nursing Care of Child-bearing Families (3)
This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected women, infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings. Prerequisites: NURS-330, NURS-333, NURS-360, & NURS-370. Prerequisite or Co-requisite: NURS-433.

NURS 435 - Nursing Care of Children (3)
This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings. Focuses on nursing care.

NURS 436 - Nursing Care of Adults and Older Adults (4)
This course focuses on nursing care of adults and older adults experiencing alterations in health status. The Adaptation Framework is used to analyze the multidimensional impact of acute and chronic alterations on clients. The nursing process is organized to promote the care of clients to promote adaptation across the continuum of care. The course includes legal and ethical issues which affect the delivery of care.

NURS 437 - Nursing Care of Adults (3)
This course focuses on providing nursing care for adults and older adults in both acute care and community-based settings. The student applies knowledge of adaptation, functional approach, and specific health alterations to the nursing process for assigned clients. The student will have opportunities to work collaboratively with members of a health care team.

NURS 438 - Nursing Care of Older Adults (3)
This course focuses on providing nursing care for older adults in acute care settings. The student applies knowledge of specific health alterations to the nursing process for assigned clients. The student will have opportunities to work collaboratively with members of a health care team. University Laboratory will provide the student with simulation experiences to develop skills related to geriatric assessment and participation in the Aging Game. Prerequisites: NURS 330, NURS 333, NURS 360, NURS 370. Prerequisites or co-requisites: NURS 436.

NURS 441 - Care of Client Thru 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. Prerequisites: NURS-431, NURS-432, NURS-433, NURS-434, NURS 435, NURS-436, NURS-437, NURS 438. Senior Standing.

NURS 480 - Comprehensive Nursing Practice (4-5)
This clinical course focuses on the analysis of health care needs of clients and the application of organizational and management theories. Students are expected to demonstrate increased competence in a variety of nursing roles, including care giver, teacher, advocate, and collaborator. Students will manage the nursing care of individuals, families, and groups at various points on the health-illness continuum. Prerequisites: NURS-431, NURS-432, NURS-433, NURS-434, NURS 435, NURS-436, & NURS-437, NURS 438. Co-requisite: NURS-456.

NURS 485 - Comprehensive Nursing Practice (4)
See Course Description for NURS480.

NURS 491 - Community Project (2)
This course is designed to provide the student with an experience of planning with the community to meet its needs. Working from the knowledge and competencies gained in Public Health Nursing and in collaboration with members of the community, students will 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 or a more just society. Prerequisites: NURS-431, NURS-432, NURS-433, NURS-434, NURS 435 NURS-436, & NURS-437, NURS 438.

NURS 492 - Community Project (1-2)
This course is designed to provide the student with an experience of planning with the community to meet its needs. Working from the knowledge and competencies gained in Public Health Nursing and in collaboration with members of the community, students will provide a service to an agency or population group based on community assessment data. Seminars will provide opportunities for students to discuss and reflect on how service activities express the health nurses responsibility for planning and evaluating population-based services in collaboration with others.

NURS 503 - Ethics in Nurs and Hlth Care (2)
This course offers an overview of ethical theory, principles, and norms which should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases which arise in the practice of nursing are analyzed and evaluated in light of the identified ethical theory, principles, and norms.

NURS 505 - Theor Foundations Nrs Prac (3)
Theories and models relevant to advanced nursing practice are analyzed. Innovation, change and decision-making theories/models are explored in the context of a systems perspective as applied to nursing and the management of resources. Selected nursing, learning, and role theories will also be explored.

NURS 506 - Care Systems: Decision Making (2)
Innovation, change, chaos, and decision making theories/models are explored within the context of systems and contingency theories as applied to nursing and patient care systems. Focus is given to planning models for strategically managing human and fiscal resources. Computer-supported decision-making for advanced nursing practice also is emphasized.

NURS 507 - Case Mgmt/Managed Care (2)
Managed Care is explored as a patient care delivery and health care reimbursement system with health policy implications. Nursing case management models are examined within an interdisciplinary framework across the continuum of care. In addition, this course introduces the evaluation of patient care outcomes within the context of continuous quality improvement.

NURS 508 - Advanced Pharmacology (3)
The course focuses on concepts, principles, and application of pharmacotherapeutics used by a nurse practitioner in the management of health problems encountered in primary care. Emphasis is placed on the action, absorption, metabolism, excretion, and toxicity of the major classes of drugs used in clinical practice. Lifespan considerations that affect management are included.

NURS 512 - Phys Correlates of Behavior (2)
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.

NURS 517 - Advanced Pathophysiology (3)
Provides an in-depth study of the physiological changes and responses to altered health states and their impact on the functional status of patients. Lifespan and vulnerable population considerations are integrated throughout.

NURS 518 - Hlth Promo/Prot Disease Preven (0-4)
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.

NURS 519 - Adv Hlth Asstmt Indv Prim Care (2)
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.

NURS 522 - Advan Clin Studies: Adult Care (4)
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.

NURS 531 - Adv Asstmt Applic Tech in Acute (3)
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.

NURS 536 - Adv Clin St: Acute Care Nrs Pr (4)
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.

NURS 540 - Ecol Approach to Hum Behavior (3)
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.

NURS 542 - Adv Clin St: Psych/Mental Hlth (4)
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 Nrs 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 Nrs Educ (2)
Students will gain experience in the development and critique of selected instructional methods for course and lesson development. Teaching-learning principles will be incorporated in the application of educational strategies relevant to clients, staff, and nursing students. Various evaluation methods will be examined. Issues in the selection of instructional strategies and evaluation methods will be discussed.

NURS 559 - Practicum in Nursing Education (2)
Course facilitates the graduate student's integration of educational theory and nursing knowledge. The student will participate in a teaching practicum under the guidance of an experienced nurse educator. Concurrent seminars will address topics promoting the student's role-socialization as an educator.

NURS 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 childbearing 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, sociocultural, 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 Asmsmt/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.
NURS 587 - Administration Care Systems I (3)
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.

NURS 588 - Administration Care Systems II (3)
This course focuses on mastering 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.

NURS 589 - Adv Prac Nrs: Sem/Practicum (0-5)
Provides opportunities to develop competencies as an advanced practice nurse. The selection of practice areas and experiences are based on the educational and career goals of the student. Emphasis is placed on decision making and active participation in interdisciplinary delivery of health care. Seminar allows students to discuss role issues.

NURS 600 - Theory Development in Nursing (3)
Study of theory development in nursing from historical and philosophical perspectives. Analysis of the process of theory construction, including current approaches to organizing and building nursing knowledge. Evaluation of selected theoretical models in terms of their relevance for practice and research.

NURS 601 - Research Issues in Health Promotion, Disease
Examines social/behavioral and health science research on promoting the state of health and risk factors associated with vulnerability to health impairment. Includes research which addresses protection of vulnerable populations from health problems and limitations of disability. Analysis of research addresses conceptual, theoretical, methodological, and nursing practice issues.

NURS 602 - Measurement of Nursing Var (3)
Analysis of selected mid-range theories and related research in nursing concerned with individual and family responses to health conditions. Includes study of measurement theory, quantitative methods and designs, and instrument construction and evaluation.

NURS 603 - Nursing Issues and Leadership (2)
Examines the influence of historical events and nursing leaders on contemporary issues that are relevant to the development of nursing in the United States. Analysis of health-related policy issues and leadership strategies, including research, to address problems related to nursing and health care.

NURS 604 - Care Acute/Chronically Ill Pop (3)
This course focuses on advanced study of evidence-based practice related to physiological and behavioral responses to acute and chronic illness. Students analyze current research to promote effective nursing care of acutely and chronically ill populations. Emphasis is on knowledge development to advance nursing as a discipline.

NURS 609 - Quantitative Mthds Nrsch (3)
This course examines the selection and use of quantitative methods and approaches in nursing research. It focuses on nursing research design, analysis, and knowledge generation from a quantitative perspective. Emphasis is given to writing nursing research proposals, grant applications, and the role of peer review in the research process.

NURS 610 - Qualitative Mthds Nrsng Rsch (3)
Examines the philosophical and theoretical foundations of qualitative research. Study of methods, designs, ethical and scientific issues, and techniques of data collection, analysis, and interpretation.

NURS 612 - Iss Sci Integrity in Nrs/Hlth (1)
This course discusses the historical development of principles of research ethics with particular focus on their evolution in nursing and health research. Students explore issues associated with intellectual responsibility for and avoidance of misconduct in individual work. They also explore issues of mentoring, intellectual property, and conflict of interest associated with joint work. The course augments the consideration of issues associated with research on human subjects with illustrative case studies in nursing.

NURS 613 - Knowledge Dev in Nursing (3)
This course will examine the development of nursing knowledge from diverse philosophical perspectives and traditions. Different conceptions of truth, knowledge, rationality, personhood, the body, and the moral good will be examined as a foundation for understanding and investigating nursing phenomena.

NURS 614 - Interpretive Phenomenology: Research Metho
The course will examine phenomenology as a methodology for understanding human actions and for conducting research into human practices. The hermeneutic turn for developing knowledge for practice disciplines (e.g., education, psychology, family therapy, nursing, social work, public administration, and medicine) will be addressed together with issues and skills in conducting interpretive research. Post-modern conceptions of validity for evaluating interpretive research will also be examined.

NURS 700 - DNP Forum (0)
This forum provides the student with a mechanism for the discussion of ideas and issues related to the DNP program and capstone project.

NURS 710 - Health Care Policy & the APN (3)
Provides an overview of health care policy and policy models. Factors impacting policy development and policy making processes are explored. The influence of advanced practice nurses on policy in health care delivery, outcomes and nursing as well as skills to analyze policy processes and politically competent actions are emphasized.

NURS 711 - Health Care Delivery Systems (3)
This course focuses on the assessment of the health care delivery system and the organizational theories and behaviors involved in those systems. Systems processes are examined to reduce health disparities and promote patient safety. Trends in health care delivery models will be explored. Innovative health care delivery models will be envisioned.

NURS 713 - Interprofessional Collaboration (3)
This course utilizes an interprofessional framework to guide the exploration of complex patient-centered care of individuals, families, communities, and vulnerable populations. Course topics include: the history of interprofessional practice, its philosophic principles, terminology, current research, team competencies, and frameworks of practice.

NURS 715 - Clinical Informatics (3)
Explores information literacy and the use of computers in health care. Students learn processes for selection and evaluation of information systems. Patient care technology is studied and used to analyze outcomes and examine patterns. Information systems/decision supports and clinical tools are discussed to support and improve patient care.
Health Care Ethics (HCE)

HCE 431 - Humanism and Health Care Ethics (3)
This course introduces the central themes in the humanistic tradition and explores the intersection between these and health care. Topics include Post-Enlightenment thought and its affect on health care; the tension between scientific medicine and humanistic approaches; and the critical, educational, and supplementary functions of the humanities in health care. This course has a pre-requisite/co-requisite of a 200-level HCE course OR Junior or Senior standing.

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 decisions 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. Germaine 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 Ethi (3)
A study of 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 531 - Humanism and Health Care Ethics (3)
This course introduces the central themes in the humanistic tradition and explores the intersection between these and health care. Topics include Post-Enlightenment thought and its affect on health care; the tension between scientific medicine and humanistic approaches; and the critical, educational, and supplementary functions of the humanities in health care.

HCE 589 - 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 Ethi (3)
A study of the methodological issues in philosophy concerning the nature and justification of fundamental ethical norms, including: philosophical ethics and non-philosophical disciplines; philosophical methods of justifying ethical norms; Kantian ethics; contractarian ethics; virtue ethics; ethics and psychobiology; different methods of justification; epistemological status of ethics.

HCE 602 - Methods in Religious Ethics (3)
A study of the hermeneutical significance of different methods in religious ethics and a critical analysis of the hermeneutical implications of these methods for the development of ethical theory.

HCE 603 - Methods in Hlth 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 611 - Intro/Medicine for Ethicists (1-3)
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 - Clinical Ethics (1)
A study of fundamental skills and core areas of knowledge essential for ethics consultation, integrating process and outcomes, to identify, analyze, and resolve ethical dilemmas, cases and issues, that emerge in the context of patient care.
HCE 614 - Mediation Skills for the Health Care Ethicist (1)
This course is designed to build knowledge and skills for students pursuing a career in health care ethics who have no certification in mediation. It introduces the concepts of conflict, family dynamics, mediation, and negotiation. This course further investigates how these concepts apply to further the successful resolution of problems that arise in the health care setting. It will also explore the differences between the use of bioethics consultation to reach an ethical conclusion and bioethics mediation to arrive at a party selected solution. Students will be expected to participate in role play in order to build mediation skills. This course is not meant to fulfill formal mediation certification requirements of this or any other state.

HCE 615 - Cultural Competence: Understanding in Clinical
This course pays close attention to the philosophical and pedagogical underpinnings of cultural competency education. The course will attempt to both sensitize students to the different culturally defined perspective of patients and practitioners, as well as investigate the theory of understanding between interlocutors in clinical contexts.

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/ecclisial 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 - Practicum, Health Care Ethics (1-3)
This practicum engages students in medical care settings with these goals: to experience a wide range of acute clinical care; to observe the patient/family/caregiver dynamics involved in clinical care; to reflect critically on the ethical challenges and principles involved in these patient care settings.

HCE 642 - Prac II:Comm/Public Hlth Settling (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 Descriptive Ethics (3)
Prerequisites: Enrollment in the quantitative track of the certificate program and RMET650 Multivariate Statistical Analysis. This course provides the opportunity to design and carry out directed, quantitative research in descriptive ethics. The course fosters the development of skills necessary to secure grant funding, to gain Institutional Review Board approval, and to do empirical research that can be integrated into the doctoral dissertation in health care ethics.

HCE 653 - Qualitative Rsch in Descriptive Ethics (3)
Matriculation in and in the second year of the J.D.-PhD program. Course fosters the development of research skills needed to conduct legal and ethical research on topics related to healthcare. Through close mentoring, students will also develop expertise on a specific topic in health law and ethics and a publishable manuscript.

HCE 660 - Bioethics and the Law (2)
This course examines legal issues in health care decision making in areas typically considered a part of bioethics, such as organ transplantation, genetic medicine, end-of-life care, determination of death, and experimentation with human subjects. While the course focuses on cases, statues and regulations applicable to these issues, the course also studies the leading approaches in ethics as they are applied in these situations. The course includes consideration of the primary processes used for dispute resolution in bioethics, including litigation , institutional ethics committees, and institutional review boards.

HCE 660 - Bioethics and the Law (3)
This course examines legal issues in health care decision making in areas typically considered a part of bioethics, such as organ transplantation, genetic medicine, end-of-life care, determination of death, and experimentation with human subjects. While the course focuses on cases, statues and regulations applicable to these issues, the course also studies the leading approaches in ethics as they are applied in these situations. The course includes consideration of the primary processes used for dispute resolution in bioethics, including litigation , institutional ethics committees, and institutional review boards.
Theological Studies (THEO)

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<tr>
<th>Course Code</th>
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<tr>
<td>THEO 110</td>
<td>Liturgy &amp; Sacraments I (2)</td>
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<td>This course is offered for Philosophy and Letters students only.</td>
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<td>THEO 111</td>
<td>Liturgy &amp; Sacraments II (2)</td>
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<td>Catholic Doctrine II (2)</td>
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Adlt Contemporary Spirituality (ACSP)

ACSP 361 - Spirituality: Work and Vocation (3)
This course will examine the lifelong process of discernment that leads to the identification of one's vocation or calling in life, as well as the meaning and spirituality of work. The course will involve personal reflection and internalization of the spiritual dimension of the student's life experience.

ACSP 460 - Spirituality Peace and Justice (3)
This course will introduce the student to the Catholic social teaching tradition regarding peace and justice. It will also explore the dynamic relationship between the work of peace and justice in contemporary society and the spiritual life.

ACSP 461 - Spirituality: Ethics/Leadership (3)
This course will explore the theological meaning of ethical work, and the spiritual dimension of leadership. Students will be introduced to the basic theories and concepts of ethics as applied to professional settings. Spiritual-based leadership styles will be studied. Students will use case studies to analyze ethical dilemmas that arise in one or more areas of leadership and professional life.

ACSP 462 - Contemporary Adlt Spirit Conf (1)
This capstone experience will pull together the spirituality theme grounded in each foundation course. Student course papers will be presented, interdisciplinary discussion panels and plenary sessions will be held and a keynote address from one of the course text authors will be given. Students will also write a final reflection from the event for CAS certification.

Adult Study Abroad (ASA)

ASA 341 - Con. of Eco. & Env. Costa Rica (3)
This course is an introduction to the science of ecology. It gives students the opportunity to learn theory and field methods of environmental ecology in a unique tropical setting. Study of general theories, models and problems in population, community and ecosystems will prepare students for application of these principals to various political, cultural and conservation issues. The first seven weeks of the course are taught online; the last week of the course is offered at Carara National Park (CNP), on the Pacific coast of Costa Rica. The location and unique ecosystems of the park makes it ideal to study a number of current conservation issues, particularly impacting the rainforest.

ASA 393 - Faith, Art & Culture in Spain (3)
Spanish culture, art and faith traditions will be explored in this interdisciplinary course. Students will explore the geography, history, art, music, and literature of Spain in the classroom and first hand in the city of Madrid. The rich history and grandeur of Spain offers an appealing backdrop to this course. The one-week emersion 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.

General Studies (BGS)

BGS 480 - Capstone Course (3)
This course will constitute a synthesis of the general studies major courses. The course will address such questions as what is the foundational role of the arts, culture, communication, social science, physical science and inquiry in the personal and professional development of an individual living and working in a global society. The student will complete the BGS Program Portfolio as one requirement of the course. Registration Restriction: Senior Status

Criminal Justice (PS) (CJST)

CJST 300 - Intro to Criminal Justice (3)
Survey of the criminal justice systems with particular emphasis on the interrelationship of the components of the system (police, courts, corrections, legal profession) to each other and to society.

CJST 310 - 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 360 - Social Issues in Criminal Justice (3)
This special topics course emphasizes critical thinking, using the sociological perspective to examine and make sense of human criminal justice phenomena, especially with what is happening NOW in our American communities. Sub-topics will include hate crimes, death penalty cases, family violence, adult and child sexual abuse, child custody issues and "restorative justice." The common themes are social responsibility, vulnerability, culpability, public safety and social justice.

CJST 365 - White Collar Crime (3)
This course will take an intensive look at white collar crime. Students will be introduced to the nature of white collar crime and will be advised as to the many different ways that non violent crime can be accomplished, the people that commit these crimes and the motivation for their actions.

CJST 370 - The Death Penalty (3)
This course is designed to be an intensive investigation into the death penalty. The investigation will include a brief review of the history of the death penalty, both in America and internationally. The investigation will continue into a review of how and why the death penalty is being used as a means of punishment in current times.

CJST 375 - Introduction to Corrections (3)
Overview of the corrections field; courts, detention, sentencing, adult institutions, probation, parole, and staffing and personnel issues.

CJST 380 - Deviance and Social Control (3)
Social and psychological theories leading to punishment vs. rehabilitation debate; suggestions of workable alternatives based on behavior modification and defensible space; scientific method, system analysis, creative problem solving.

CJST 385 - Hate Crimes (3)
This course provides the student with a basic understanding of hate and bias crimes in the United States, their history, the types and reasons for such crime, and the response of law enforcement, courts and legislatures. The course identifies the major types of hate groups active in the United States, their goals and philosophies, as well as the history of such kinds of organizations and movements in American history and the manner in which they interact with and impact American society.

CJST 390 - Introduction to Terrorism (3)
This course will review the nature of domestic and international terrorism and the ways in which it affects the United States and its criminal justice system. It will consider various roots and causes of terrorism, methods of terrorism, ideologies associated with terrorism, and the response of the American criminal justice system.

CJST 414 - Drugs and Behavior (3)
This course gives the student a basic understanding of the common drugs used and abused in American society today by focusing on the history of drug use in the United States, the identification of legal and illegal drugs, the manner in which drugs affect the human body, and governmental policy in regard to drug use in the United States and its social implications.
Communication (PS) (CMMK)

CMMK 100 - Intro to Human Communication (3)
This course offers comprehensive coverage of the fundamentals of human communication including perception, listening, self, and verbal and nonverbal messages; interpersonal and intercultural communication; small group communication, including interviewing; and mass communication. Research and theory in classical and contemporary approaches will be covered. The knowledge and skills learned will be applied across the entire curriculum.

CMMK 121 - Public Speaking in Org. Life (3)
This course promotes principles of effective public speaking and provides opportunities for the development of speaking skills. The course will examine: standards for evaluating personal performance and the performances of others; speeches and presentations required in modern organizations; speaking clearly and persuasively; and effective audience interaction. Students will become familiar with presentation technologies. The knowledge and skills learned will be applied across the entire curriculum.

CMMK 201 - Principles of Effective Communication (3)
This course surveys major concepts, theories, and research approaches in the study of human communication(s). Students will examine the ways communication(s) shapes our experience of the world, the role of communication(s) in shaping personal identities, and establishing and maintaining interpersonal relationships in professional settings and organizations. The course covers basic human communication processes in the contexts of relationships, groups, organizations, culture, as well as the interface of human and mediated interaction(s), with an emphasis on communication (i.e., communication technology, mass media and society, visual type communications, etc.) instead of just human communication.

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 350 - Ethics in Professional Communication (3)
This course is an overview of current ethics, corporate and organizational philosophies. The course will closely examine and apply ethical practice in specific professional and organizational situations. Upon completion of the course, students will have a clear comprehension of theoretical and practical methods with which to develop and apply personal guidelines for decision making to the business, corporate, and organizational world.

CMMK 360 - Public Relations Princ & Pract (3)
This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will attain knowledge and understanding of the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Learning will be reinforced through case study analysis and development, written papers, interactive discussion, and oral presentations.

CMMK 365 - Professional Communication Between Cultures
This course explores the role of communication in understanding, accepting and appreciating cultural differences in business, corporation and/or organization. Students in this course will learn that organizational culture includes not only issues of nationality, ethnicity and race, but also gender, socioeconomic status, age, etc. Using a number of co-cultural, cross-cultural and intercultural examples, students will explore and apply intercultural communication methods and techniques in bridging cultural differences at the workplace through project-based assignments.

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, case analysis, written assignments, oral presentations, and the critical analysis of an advertising campaign.

CMMK 415 - Public Relations Principles and Practices (3)
This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will attain knowledge and understanding of the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Learning will be reinforced through case study analysis and development, written papers, interactive discussion, and oral presentations.
**Computer Science Tech (CST)**

**CST 111 - Computer Applications (1)**
This is a hands-on course where you will learn to use the most commonly used Microsoft programs including the Windows operating system, Internet Explorer for navigating the Internet, and the four most popular programs within the Microsoft Office Suite - Word, Excel, Power Point, and Access. Word is a word processing program with which you can create common business and personal documents. Excel is a spreadsheet program that organizes and calculates accounting-type information. Power Point is a presentation graphics program with which you can develop slides to accompany an oral presentation. Access is a database program that organizes large amounts of information in a useful manner. You will learn to be an intermediate level user of the Microsoft Office Suite.

**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 200 - Discrete Structures I (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 and advertising perspectives; develop marketing and advertising strategies; integrate advertising with other elements of the communications mix; and create advertisements and commercials. Ethics and social responsibility will emphasize throughout the course. Learning will be facilitated through interactive discussions, case analysis, written assignments, oral presentations, and the critical analysis of an advertising campaign.

**CMMK 427 - Advertising Principles and Practices (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 in professional settings. Students will become familiar with theory and research in the field and apply strategies and techniques of persuasion across professional communication contexts. Learning will be demonstrated through interactive discussions, research papers, group projects and professional presentations. There will be an emphasis on social/organizational strategies, tactics and influence regarding the application and practice of persuasion in professional settings.

**CST 295 - Principles of Data Analysis (3)**
This courses 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 toward employing statistical and discrete methods for problem solving.

**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 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-semester 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 toward the analysis of experimental and survey data. Data analysis software will be used as a tool to collect, organize and process data.

**CST 298 - CST Independent Study (1-4)**
Prior approval of sponsoring professor and Program Director required.

**CST 300 - Principles of Software Engineering (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 Progmg (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 - Cnpts 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 & Telecom 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 460 - Networking & Telecom 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.

CST 472 - Adv Object Oriented Programmmg (3)
Prerequisites: Grade of "C" or better in CST 310 and ENGL 190. This course covers advanced concepts in programming using object-oriented languages within various environments. The emphasis of the course will be on developing programming real-world business/scientific applications that are effective and reliable. Students will design, code, and document programs in an object-oriented language using object-oriented analysis and design methodology.

CST 475 - Advanced COBOL Programming (3)
This course will expose the student to the techniques necessary to solve complex business-oriented problems. Modular and efficient program design is stressed along with documenting, testing, and debugging techniques. Advanced programming topics will include multiple file processing, direct, random, and indexed file processing, subprogram development, advanced string manipulation, and multiple level arrays/table processing.
Also be explored.

techniques and applications of Earned Value Management (EVM). The FAR will be reviewed. Students will be introduced to the basic business owner, as a contract professional you are ultimately responsible.

This course will explore the contract management process in three broad phases: pre-award, contract award, and post-award. Each step of the phases will be addressed from both the Buyer and Seller perspectives, in both the federal and commercial environments. Key learning points include procurement planning, bid and proposal preparation, source selection, and contract administration. Students will participate in realistic team exercises to enhance their contracting skills, to include mock negotiations, dispute resolution and oral proposals.

This course will focus on the criteria and methodology used for selection of suppliers and subcontractors as well as identifying the optimal contract type and monitoring contract performance using key metrics. Topics include: legal relationships; adequate definition and specification of requirements; single VS multiple sourcing; strategic teaming agreements and partnerships between companies and contract planning and scheduling. Students gain an understanding of how an outsourcing plan can facilitate selection of the right contract type, the right supplier(s) with the right capabilities at the right price and allow for the monitoring of both cost reimbursable and firm-fixed price type contracts.

In this course, students will learn the basics of project management and gain a working knowledge of the nine major areas of the Project Management Body of Knowledge (PMBOK as defined by the Project Management Institute) including: human resources management, communications management, scope management, quality management, scheduling/time management, cost and resource management, risk management, contract/procurement management and project integration.

The fundamental aspects of managing a project on time and within budget will be studied.

In this course, students will acquire an understanding of the formation and administration of a contract in accordance with Common Law, the Federal Acquisition Regulation (FAR), and the Uniform Commercial Code (UCC). Other areas covered include contract types, contracting authority, contract terms and conditions, contract changes, defaults, communication between parties, contract termination, conflict resolution and claims.

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The fundamental aspects of managing a project on time and within budget will be studied.

This course will focus on the criteria and methodology used for selection of suppliers and subcontractors as well as identifying the optimal contract type and monitoring contract performance using key metrics. Topics include: legal relationships; adequate definition and specification of requirements; single VS multiple sourcing; strategic teaming agreements and partnerships between companies and contract planning and scheduling. Students gain an understanding of how an outsourcing plan can facilitate selection of the right contract type, the right supplier(s) with the right capabilities at the right price and allow for the monitoring of both cost reimbursable and firm-fixed price type contracts.

In this course, students will learn the basics of project management and gain a working knowledge of the nine major areas of the Project Management Body of Knowledge (PMBOK as defined by the Project Management Institute) including: human resources management, communications management, scope management, quality management, scheduling/time management, cost and resource management, risk management, contract/procurement management and project integration.

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The fundamental aspects of managing a project on time and within budget will be studied.
CTM 425 - Contracting in the Global Marketplace (3)
Today there is little doubt that we have a global economy in which we must compete. In this course, students will learn how to procure and develop international contracts. The history of global trade and the complex legal and cultural environments of international trade will be explored. Students will learn about the various international bodies and conventions that apply to international contracting. Students will also gain an appreciation for the financial implications and learn methods they can use to assess the risk involved as well as resolve international trade conflicts.

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, emotional, 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 366 - 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 401 - Professional Internship I (1)
Formative examination and reflection of the educational process and practice through candidate’s classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 402 - Professional Internship II (1)
Formative examination and reflection of the educational process and practice through candidate’s classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 403 - Professional Internship III (1)
Formative examination and reflection of the educational process and practice through candidate’s classroom experiences and observations. Involves on-going collaboration with RenoPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)
ED 404 - Professional Internship IV (1)
Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves on-going collaboration with RenPro-A candidates, Ren-Pro Chair, University Educators, and Educator Mentors. Participation in district professional development program is required. (Taken by all RenPro-A Candidates.)

ED 410 - Principles of Education: Inclusion, Diversity, Beh
Integrative course designed to investigate educational strategies that promote inclusion for all learners; to evaluate, compare and contrast school and related social institutions with a focus on cultural relationships; to investigate methods for implementing communication and behavior management strategies in the school environment; and to develop competency in selection and application of technology into the curriculum. (Taken by Elementary, Middle and Secondary RenPro-A candidates.)

ED 420 - Assmt 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 - Classrms Without Borders II (3)
This examines the ideas and events that teachers can implement in the classroom for enrichment of the curriculum. Candidates will gain a better understanding of the resources of the community and how to incorporate its economic, political, intellectual, and cultural offerings into the classroom. Upon completion of the course, the candidate will know how to incorporate a variety of innovative subjects into the classroom curriculum. All classes will be field based. Prerequisite: acceptance into the Teacher Preparation Program.

ED 428 - Classrooms Without Borders II (3)
This course will continue to examine the ideas and events that teachers can implement in the classroom for enrichment of the curriculum. Candidates will gain a better understanding 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. Pre-requisite: acceptance into the Teacher Preparation Program.

ED 430 - School Curriculum and Instruct (6)
Explores foundation for curriculum development and instruction, including classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. Taken by all Renaissance candidates.

ED 433 - Tchng Mthds in the Fine Arts (2)
This course will focus on the art and music education curriculum. Candidates will develop techniques for instruction as well as an awareness of age-appropriate developmental expectations. Integration of the arts into other content areas will be stressed as well as the role of the arts in extra-curricular endeavors. (Taken by Elementary and Special Education Candidates).

ED 434 - Tchng Methds in Phys Ed (1)
This course will focus on the physical education curriculum. Candidates will develop techniques for instruction as well as an awareness of age-appropriate developmental expectations. Integration of physical education activities into other content areas will be stressed as well as the role of physical education in extra-curricular endeavors. Prerequisite: acceptance into the Teacher Preparation Program.

ED 435 - Remedial Math procedures (2)
Integration of the fine arts (visual, music, and dramatics) and physical movement in the classroom. Candidates will learn to select, design, adapt, implement and assess creative arts and physical activities that are developmentally appropriate, meaningful, challenging and that lead to positive learning outcomes and the development of positive dispositions toward aesthetic and physical expression. (Taken by Elementary RenPro-A candidates)

ED 438 - Commnty Based Science Advntrs (3)
This course focuses on science as an exciting adventure for elementary and middle school students. Candidates will explore various community resources to grasp a better understanding of providing innovative and integrative science instruction and hands-on activities. Some classes will be field based.

ED 450 - Readng Methds I: Primary Grds (3)
Introduction to various approaches of reading instruction and examines current reading practices. Focus of this course is on emergent and developmental stages of learning to read, instructional methods and selection of materials. (Taken by Elementary Education and Special Education Renaissance candidates).

ED 451 - Rdng Methds II: Diag & Intrvnt (3)
Designed as an introductory course to identify reading difficulties and intervention strategies with an emphasis on classroom application and correction of the reading problem. This course includes the study of formal and informal assessments and current literacy issues such as No Child Left Behind and state testing. Includes Practicum Experience. (Taken by Elementary Education and Special Education Renaissance Candidates)

ED 452 - Strtgs in Literacy Instructn (6)
Examines research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes Practicum Experience. Taken by all Renaissance candidates.

ED 453 - Literacy in the Content Fields (3)
Examines research and best practices affecting student literacy development and instruction at the middle school and secondary level. Emphasizes the application of instructional strategies for developing reading and writing skills in the content areas. (Taken by Middle and Secondary RenPro-A Candidates)

ED 455 - Childs World of Literacy (3)
Live in that world...Laugh in that world...Learn in that world...with the child learns about reading and writing. Become a "kid-watcher" of literacy understanding how, what, and why the child is thinking; reflect on a "cutting edge" instructional plan. (This course is designed for elementary, middle school, "kid-watching" and "kid-watching" of diverse learners including the gifted child.)

ED 460 - Microcomp Apps & Tech in Ed (3)
An introduction to the principles underlying the application of technology in the school; selection and evaluation of various media incorporation of technology into the curriculum. (Taken by all Renaissance candidates).

ED 485 - Education Portfolio (1)
This seminar addresses the practices of portfolio development as they pertain to candidates prior to and during student teaching. The portfolio is built around the MO Step standards. This includes a composition for each MO Step standard and artifacts. Grade obtained must be C+ or higher for teacher certification and graduation.

Hospitality Management (HMGТ)
HMGТ 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 the managerial functions of planning, organizing, staffing, and controlling in a multicultural, dynamic organization.
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.


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 also will 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.

Informatics (IF)

IF 500 - Informatics Foundations (3)
A multidisciplinary based introduction to the informatics principles that support knowledge discovery and dissemination. Selected topics include basic information representation, processing and analysis; organizational informatics; current applications and trends in informatics; legal issues in informatics; the roles and responsibilities of informatics professionals; and informatics impact on the evolution of society.

IF 505 - Programming & Problem Solving (3)
A survey of the computer programming concepts used to solve problems within the study of informatics. The course will emphasize logical problem analysis, program development techniques, data organization and user interface concepts used to develop informatics applications.

IF 590 - Applied Informatics Project I (3)
The goal of the applied informatics project I is to prepare students in the areas of inferential statistics, the research process, study/project design and outcome analysis.

IF 591 - Applied Informatics Project II (3)
The goal of the applied informatics project II is for the student to use the skills they acquired over the course of their studies in informatics to analyze, develop and implement research plans that produce a pilot project, a proof of concept or a prototype system that has the potential to impact and/or promote knowledge discovery and dissemination.

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 393 - Advanced Special Topics (3)
Prior approval of sponsoring professor and Program Director required.

OSTD 398 - Advanced Independent Study (1-4)
Prior approval of sponsoring professor and Program Director required.

OSTD 410 - Concepts & Theories of 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 Strategy, 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 researeh 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 introduction to major concepts in the areas of marketing. Students will gain a deeper understanding of marketing within an organization and within the expanding global economy. Students will gain a deeper understanding of the external and internal variables that affect Marketing; eCommerce marketing; the roles of advertising, public relations, and sales; Integrated Marketing's role in the 21st century; and Strategic Marketing Planning. Students will integrate knowledge and skills acquired throughout the course with outside sources and information in order to develop an integrated marketing plan for an organization.
PSYK 445 - Personal & Career Advancement (3)
This course focuses on the career development process taking a broad, view of career, as a means to growth and job promotion, self-discovery, and an evolving series of role-related experiences across the lifespan. Students will learn about definitions of career, models for career development and the interplay of individual factors such as personality, aptitude and abilities upon career choice. In addition, students will study the impact of early experiences and other environmental factors upon career choice and how individual, social, chance, and environmental factors shape career decisions and choices. Explanations of the origin of individual aptitudes and abilities and the practice of aptitude and ability testing and how to use those techniques in selecting and placing employees will be discussed. Emphasis will be placed on skill development in career choice and decision making, career counseling, and identifying best-fit options.

PSYK 447 - Occupational Health & Stress (3)
This course focuses on issues involved in the development and maintenance of a healthy workforce, with an emphasis on physical, mental, and emotional health. Some of the topics to be addressed include: occupational stress and stress management, the Occupational Safety & Health Administration (OSHA) and its role in workplace health, the interplay between employee well-being and organizational effectiveness and the use of Employee Assistance Programs in organizations. The course will also provide students with specific tools, strategies, and techniques for managing stress and evaluating the health of their organization.

PSYK 472 - Developmental Psych: Adult (3)
Provides an overview of the process of adult development from early adulthood through late adulthood. Course will review theories of adult development and empirical findings from psychology, health and medicine, sociology, and economics that deal with issues of adult development including health, cognition, personality, relationships and sexuality, death and dying, culture, work and retirement, mental health, and stress. Students will research a physical, social or career-related concern of personal relevance and through self-assessment and reflection create a self-improvement plan.

PSYK 473 - Industrial Psychology (3)
Focuses on the application of psychological principles to improve the effectiveness of personnel management. The course covers the following primary topic areas: analyzing jobs, designing selection systems, developing performance appraisals, psychological measurement for personnel decision making, training and development design, and understanding the legal environment.

PSYK 475 - Training & Development (3)
This course focuses on the application of psychological principles to the development of an effective design, delivery, and evaluation of training in professional settings. It introduces a comprehensive approach to training and development including topics like: training needs assessment; learning theory, styles, and environment; training techniques and media; and evaluation design and training effectiveness. The course is interactive consisting of case analysis, experiential exercises and work place applications. Upon completion of the course, students will be able to apply the training model to the research, design and critique of strategic training programs.

PSYK 477 - Occupational Health & Stress (3)
This course focuses on issues involved in the development and maintenance of a healthy workforce, with an emphasis on physical, mental, and emotional health. Some of the topics to be addressed include: occupational stress and stress management, the Occupational Safety & Health Administration (OSHA) and its role in workplace health, the interplay between employee well-being and organizational effectiveness and the use of Employee Assistance Programs in organizations. The course will also provide students with specific tools, strategies, and techniques for managing stress and evaluating the health of their organization.

Pathway to College (PWY)
PWY 101 - Foundations of Professional Communications
This course will help students be confident, efficient and effective writers, communicators and users of technology. This course offers an opportunity to learn and apply the practical principles of professional communication. Emphasis is placed on understanding the fundamentals of writing and speaking in the workplace. This course will also introduce students to the fundamentals of technology used in today's workplace. Common computer principles and applications such as internet navigation, email, word processing, spreadsheets and presentation software will be covered.

PWY 102 - Foundations of Professional and Career Development
This course will help students acquire basic knowledge and skills necessary for maintaining an effective and productive work environment. This course offers the opportunity to learn and apply the practical principles of effective workplace behavior. This course will also introduce students to some of the knowledge and skills necessary to develop a path toward a career, including career exploration, time and stress management skills, and decision making.

PWY 103 - Foundations of Life Sciences (3)
This survey course will help students gain foundational knowledge about the life sciences necessary for understanding the workings of the human body. This course also offers the opportunity to learn medical terminology as applied in hospital situations. Students will be introduced to the scientific method of decision making and apply this process to actual medical case studies.

Real Estate & Community Development (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 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 transaction, the nature of public versus the private role in real estate transactions, the various methods for financing in a real estate transaction, and the decision analysis involved in identifying prospective site and projects. The prerequisite for this course is PST-310 Accounting Concepts for Professionals with a recommended prerequisite of RECD-300 Real Estate Roles and the Public Sector.

RECD 420 - Real Estate Appraisal, Market Research, and Finance
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 the technical and mechanical activities will be a major component of the lab activities. An understanding of the practical applications of spatial data and its digital management will be developed through lab exercises. General GIS principals are interpreted and related to their application in spatial information analysis and problem solving. Emphasis will be placed on the application of the GIS technology as a tool, and its importance in GIS project operations and product development.

RECD 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.

Theological Studies (THEO)
THEO 462 - Cont Adult Spirituality Conf (1)
Cont Adult Spirituality Conf
Biosecurity/Disaster Prep (BSDP)

**BSDP 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.)

**BSDP 510 - Human Toxicology & Envirn Hlth (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 makes 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.)

**BSDP 530 - Cntrl 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 allergenic agents that are found in either workplaces or the general environment. Through in-depth field exercise, lectures, and in case studies, students will learn how to identify, measure, and control biological agents that are present in a variety of settings. Basic concepts from aerosol science, industrial hygienie, microbiology, infectious disease epidemiology, sanitation, behavioral science, and environmental engineering are applied to problems of infectious or allergic disease prevention and control. (Offered annually.)

**BSDP 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.)

**BSDP 561 - Biosecurity and Safety for Laboratories (3)**
This course reviews the use and handling of biological materials in research and clinical laboratories in which there is potential for exposure to infectious agents. Particular attention will be placed on the use of live viruses where there is a need for extreme caution because they frequently cause animal and human diseases.

**BSDP 562 - Bioterrorism and Emerging Infectious Disease (3)**
This course introduces bioterrorism and emerging infectious diseases, including the rationale for using biological weapons, genetic engineering, and surveillance. Disease transmission simulation and patient mouldage will be used. Emerging infectious diseases (SARS, avian influenza, TB, MRSA, Mumps, and Pertussis), anti-infective therapy and vaccine, and pandemic planning will also be covered.

**BSDP 563 - Global Terrorism in the 21st Century (3)**
This course provides a comprehensive review of the global threat posed by the growth of violence in fundamentalist movements with a focus on violent Islamic fundamentalism (VIF) and its implications for public health security and preparedness. A historic overview of Islamic fundamentalism that traces its evolution, motivation, recruiting strategies, funding sources, and spread from the Mid East to Asia, Africa, Malaysia, the Philippines, and South America will be covered. This course will also explore the relationship of the Arab-Israeli conflict to the propagation of VIF. The history, geopolitical motivations of state sponsorship, intra-organizational relationships, leadership and current technical capabilities of Hamas, Hezbollah, and al Qaida will also be reviewed.

**BSDP 564 - Medical and Public Health Intelligence (3)**
This course introduces students to the rationale for the emerging role of the public health and medical communities in the intelligence gathering, analysis and dissemination process. Focusing on early detection of emerging physical threats and novel/emerging infectious diseases it will give the students the requisite knowledge and skills to provide the homeland security community with threat indications and warnings. Students will be given the analytical tools to allow them to gauge the impact of physical threats that would result in mass casualties and novel/emerging infectious diseases. They will be expected to develop and recommend rational and viable courses of action to those threats.

**BSDP 565 - Threat Characterization and Response Using**
This course provides the basic practical tools for analyzing a threat scenario using problem-based learning of standards statistical methods, culminating in application of those methods in decision analysis for informing policy makers of threat prioritization and the means to mitigate those threats as applied specifically to the general category of bioterrorism problems.

**BSDP 566 - Fundamentals of Disaster Planning (3)**
This course provides an overview of strategies for and challenges to planning for all types of disasters. All phases of the emergency management model will be addressed: mitigation, preparation, response, and recovery. Content includes tools and resources needed to develop and/or evaluate a facility or community all-hazards response plan and create exercises to test this plan.

**BSDP 570 - Public Health and Disasters (3)**
This course introduces the growing threat and potential public health consequences of all types of disasters. Content includes an introduction to public health and public health's role in disaster preparedness and response. In this course, threats to public health are introduced. Intentional disasters (chemical, biological, and radiological terrorism) and natural disasters are covered; emphasis is placed on infectious disease emergencies such as biological terrorism and emerging infections. (Offered annually)

**BSDP 571 - Terrorist Organizations and Their Motivations**
This course is designed to provide students a broad understanding of terrorist organizations and their motivations. History of terrorism, current movements and organizations (both domestic and international) will be covered. Emphasis will be placed on terrorist use of chemical/biological/radiological/nuclear weapons of mass destruction. (Offered annually)

**BSDP 572 - Communicable Diseases and Infection Control**
This course teaches the fundamentals of communicable diseases. Content includes the microbiology of contagious pathogens, disease transmission, and infection control measures to prevent or stop the spread of communicable diseases. Emphasis is placed on the pathogens that are likely to be used in a bioterrorism attack and new or re-emerging infectious diseases. (Offered annually)

**BSDP 573 - Disaster Planning (3-4)**
This course provides an overview of strategies for and challenges to planning for all types of disasters; emphasis is placed on bioterrorism 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)

**BSDP 574 - Epidemics & Other Disasters (3)**
This course is a survey of the potential impact of disasters on contemporary society, with emphasis placed on emerging, highly communicable, essentially untreatable diseases. Content includes the medical, social, economic and political consequences of historically significant epidemics and the complexities of managing and recovering from a highly lethal pandemic. The course will review past epidemics and pandemics, such as the Black Plague of the Middle Ages, the effects of the 15th Century introduction to smallpox in the Americas, the 1918-1919 influenza pandemic, Hoof and Mouth disease in Great Britain, hantavirus, and SARS. Chernobyly, Bhopal, and Hurricane Katrina will also be studied. Students are expected to apply historical data to contemporary epidemic simulation and planning efforts. (Offered annually)
BSDP 575 - Epidemiological Methods and Infectious Disease
Through audio lectures and readings, this course will present the student with the descriptive and analytical tools of epidemiology and surveillance. The student will analyze a data set using the epidemiological software package Epi Info. Students will participate in weekly internet discussions and analysis of problem sets. (Offered annually)

BSDP 576 - Disaster Communications and Media 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)

BSDP 578 - Behavioral and Cultural Aspects of Disasters
This course examines the behavioral and cultural implications of terrorism and other disasters. Students will study a range of adaptive and abnormal responses to catastrophic events. Cultural and psychosocial sources of resilience to terrorism will be reviewed. (Offered annually)

BSDP 581 - Biosecurity Practicum (3-4)
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)

BSDP 582 - Disaster Management and Risk Analysis (3)
This course will give the student an overview of the importance of biosecurity and the performance of vulnerability and risk assessments. It will also teach the skills necessary to be a competent manager/leader during an emergency. Management case studies will be used to help students identify limits to their knowledge and to help them recognize when they need to obtain additional resources. (Offered annually)

BSDP 584 - Advanced Topics in Infectious Diseases (3)
Students will be introduced to nodal epidemiology that evaluates diseases through understanding their natural characteristics. Methods of disease introduction will be covered in relation to disease protection. The students will review the manner in which diseases can become clinically apparent. In contrast to natural diseases, the students will look at the method of deployment, potential presentation, and control of diseases produced by human engineering.

BSDP 586 - Preparing for Disasters: Resiliency and Stress
While many private and public agencies have some sort of disaster response plan, few take into account the mental and emotional ramifications of disaster upon general and vulnerable populations. This course will investigate the use of resiliency and stress inoculation before disasters to lessen disaster impact and encourage effective and prompt recovery.

BSDP 587 - Facing the Challenge of International Bioterror
This course will examine bioterrorism - the hostile infliction of disease, and how National and Global governance should manage the challenges it raises. The issue will be addressed from a variety of perspectives including: political, legal, medical and public health, with a special focus on international cooperation in dealing with bioterrorism.

BSDP 588 - Emerging Infectious: Epidemiology and Public Health
This course will present to the student an overview of Emerging Infectious Diseases, not only in the United States, but internationally. The course will lead off with an overview of the topic, emphasizing topical issues and concerns. Selected topics in order of importance to public health will be examined, with an emphasis on the epidemiology of the infection and its public health impact, either potential or actual.
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.

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.

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.

The course provides direct research experience in behavioral science and health education. Content is developed jointly between the student(s) and a faculty mentor.

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)

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.)

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 participant. Students will design intervention research projects to address a public health problem of their choice. (Offered annually.)

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.

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.)

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.)

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 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 methods are presented. (Offered every semester.)

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.)

This course teaches statistical programming for statistical analysis using SAS software. Programming topics may include: working in the Windows environment, syntax development, creating data sets, reading and manipulating external data files, transforming data, formatting variables, statistical analysis and graphical display. Prerequisite: BSB 500, or permission of Instructor.

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.)

This course provides supervised experience in application of community health techniques through work in a public health agency or other health care organization.

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.)

This course introduces 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.)
BST 521 - Categorical Data Analysis (3)
This course introduces the theory and application of methods for categorical data, with emphasis on biomedical and social science applications. The course will cover the following topics: analysis of two-way, three-way, and higher dimension contingency tables using log-linear model, measures and tests of association for nominal and ordinal tables, logistic regression, weighted least squares, generalized linear models, and the use of computer software analyzing categorical data. (Offered annually.)

BST 522 - Longitudinal Data Analysis (3)
This course will focus on applications of various statistical methods for analyzing longitudinal, or repeated measures, data. The core concepts will cover multilevel analysis, growth curve modeling, and structural equation modeling.

BST 530 - Exploratory Data Analysis (3)
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 software (e.g., IMP) will be used throughout the course. (Offered every other year.)

BST 540 - Applied Data Management (2-3)
This course is an advanced course on data management for students in public health, health administration and health services research. 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.)

BST 541 - Clinical Trials (3)
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.

BST 542 - Sampling Theory and Survey Design in Public Health
This course will provide a survey of the fundamental types of probability sampling designs that are used for data collection with Public Health Surveillance Sample Surveys including: systematic random sampling (including Random-Digit Dialing), simple and stratified random sampling, cluster sampling and multistage sampling. The course will briefly discuss the applications of current survey research methods including web-based surveys and the use of cell phones within the context of surveillance systems and registry-based samples. The role of survey design choices in reducing total survey error as well as the role of questionnaire design in reducing non-sampling biases will be discussed briefly. The main topics to be covered in detail include: design-based parameter and variance estimation methods, construction and use of survey weights and statistical models incorporating sample designs as well as the use of survey sampling for registry based samples and matched case/control studies. Methods for evaluating, reducing and adjusting for survey nonresponse will also be covered.

BST 550 - Biostatistical Consulting (3)
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.

BST 594 - Internship in Biostat Consulting (0)
This course provides supervised experience in research and biostatistical consulting projects.

Community Health (CMH)
CMH 501 - FOUNDATIONS OF PUBLIC HEALTH PRACTICE
This course introduces students to the context of public health practice, including its legal basis, history, mission, the core functions of public health, and institutional structure of public health practice. Theoretical and practical perspectives are presented to illustrate the workings of public health at local, state, and national levels.

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 "hands on" experience with planning and marketing techniques. (Offered annually.)

CMH 505 - AIDS Epidemic: End of 21st Century (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 511 - Managerial Aspects of Public Health Practice (3)
This course presents concepts and methods of management tools useful for directing a public health agency. Topics concerning organizational design, finance and budgeting, human resources management, public relations, quality improvement, and planning are presented with examples primarily focused on state and local public health practice.

CMH 512 - Leadership & Ethics Public Health (3)
This course presents concepts of effective and ethical leadership within public health organizations. The course looks at ways of applying leadership to public health issues and covers theories and models of leadership, ethical issues of leadership, change management, and team organizational and community leadership.

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 Sexity: Childbrg/Childrn (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 542 - Social Resp & the Professional (3)  
This course engages students, faculty, and community professionals in interdisciplinary study, critical reflection, and dialog regarding social responsibility. Methods of critical thinking and ethical systems applicable to professional work and personal lives are explored, with a focus on ethical systems, current issues, community problems and responses. (Offered annually.)

CMH 543 - Understanding Hlth Disparities (3)  
A seminar format will be used to examine health disparities in ethnic and racial minorities, emphasizing disparities in chronic diseases affecting African American communities. The course will explore the political, social, and economic determinants of disparities in health status, health behavior, and access to and use of health care. (Offered annually)

CMH 544 - Eliminating Health Disparities (3)  
This course will examine community-based solutions for eliminating health disparities. Emphasis will be placed on examining the policy implications and evaluation of strategies and programs. Additionally, mechanisms for increasing cultural sensitivity and creating cultural competence among public health workers will be explored. (Offered every other year.)

CMH 545 - Work w/ Culturally Diverse Pop (3)  
This course will provide students with skills to work effectively with culturally diverse populations. In addition to exploring historical and social events that have resulted in prejudice against certain groups, this course will allow students the opportunity to explore their own beliefs and how they impact their work. Offered every other year.

CMH 548 - Understanding Mental Health (3)  
This course acquaints community health students with mental health and its implications for public health. Students receive an overview of positive mental health and psychiatric diagnoses, with particular attention to the role of stress and stress disorders in health behavior and disease. The epidemiology of psychiatric disorders is discussed, as well as mental health funding and public policy issues.

CMH 551 - Grant Writing (3)  
This course will provide information and hands-on experience on the content and process for preparing competitive grant proposals. Lectures and discussions will examine major funding sources and their interests, core components of grant proposals, the process for preparing proposals, strategies used by reviewers to evaluate grant proposals, and techniques for writing concisely. (Offered annually)

CMH 552 - Systems of Health & Healing (3)  
This course provides a survey of complementary (alternative) preventive health and health care approaches currently in use in the United States, with an emphasis on the philosophical and technical basis, as well as the medical and public health policy implications of each approach. Social, political, ethical, economic and environmental ramifications of the various systems of health are explored. Complementary health issues of individual interest are studied in detail by participating students.

CMH 561 - Remote Sensing in Public Health (3)  
This introductory course emphasizes the use of remote sensing techniques and methods as tools are applied to understand infectious disease and environmental health interactions. The goal of this course is to give students a combination of theoretical background, examples of applications in the literature and hands-on experience in using remote sensing hardware and software. This course will provide an introduction to the basics of remote sensing, focusing on analyzing and addressing public health issues. It is intended for graduate students and will provide information and experience to understand the basic concepts, language, and methodologies of remote sensing as related to the issues of concern to the public health workforce. This course will provide a platform of knowledge and expertise from which informed decisions concerning the application of remote sensing methodologies and interpretations can be made. This course will not produce remote sensing experts in the public health arena; however, individuals who understand the concepts, can frame pertinent questions, and coordinate with remote sensing analysts or spatial scientists to investigate and solve public health questions.

CMH 589 - Seminar in Health Disparities (0)  
Prerequisite: CMH 543 or 544 (taken concurrent). This course will build on the didactic work presented in CMH544. (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 592 - Community Health Rounds: Integrating Public  
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 - Practice Experience PH (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 596 - Research Project (0)
This course is an independent directed research project that culminates the Master of Science in Public Health. Under the guidance of the academic advisor and other qualified mentor(s), each student designs and implements a research project commensurate with their professional training and interests, using the skills developed in the MSPH curriculum.

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 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 depth 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 - Cntrl 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 allergenic agents that are found in either workplaces or the general environment. Through in-depth field exercise, lectures, and in case studies, students will learn how to identify, measure, and control biological agents that are present in a variety of settings. Basic concepts from aerosol science, industrial hygiene, microbiology, infectious disease epidemiology, sanitation, behavioral science, and environmental engineering are applied to problems of infectious or allergic disease prevention and control. (Offered annually.)

EOH 540 - Human Health Risk Analysis (3)
This course introduces the concepts of qualitative and quantitative methods of risk assessment. Class discussions, reading assignments, lectures and case studies are used to introduce and develop knowledge of information sources pertaining to assumptions, uncertainties, end-product determinations, and interpretations associated with the various components of the risk-assessment process. Students will apply quantitative risk analysis methods on real-life cases. (Offered annually.)

EOH 550 - 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
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 561 - Biosecurity and Safety for Laboratories (3)
This course reviews the use and handling of biological materials in research and clinical laboratories in which there is potential for exposure to infectious agents. Particular attention will be placed on the use of live viruses where there is a need for extreme caution because they frequently cause animal and human diseases.

EOH 562 - Bioterrorism and Emerging Infectious Diseases
This course introduces bioterrorism and emerging infectious diseases, including the rationale for using biological weapons, genetic engineering, and surveillance. Disease transmission simulation and patient moulage will be used. Emerging infectious diseases (SARS, avian influenza, TB, MRSA, Mumps, and Pertussis), anti-infective therapy and vaccine, and pandemic planning will also be covered.

EOH 563 - Global Terrorism in the 21st Century (3)
This course provides a comprehensive review of the global threat posed by the growth of violence in fundamentalist movements with a focus on violent Islamic fundamentalism (VIF) and its implications for public health security and preparedness. A historic overview of Islamic fundamentalism that traces its evolution, motivation, recruiting strategies, funding sources, and spread from the Middle East to Asia, Africa, Malaysia, the Philippines, and South America will be covered. This course will also explore the relationship of the Arab-Israeli conflict to the propagation of VIF. The history, geopolitical motivations of state sponsorship, intra-organizational relationships, leadership and current technical capabilities of Hamas, Hezbollah, and al Qaida will also be reviewed.
EOH 564 - Medical and Public Health Intelligence (3)
This course introduces students to the rationale for the emerging role of the public health and medical communities in the intelligence gathering, analysis and dissemination process. Focusing on early detection of emerging physical threats and novel/新兴 infectious diseases it will give the students the requisite knowledge and skills to provide the homeland security community with threat indications and warnings. Students will be given the analytical tools to allow them to gauge the impact of physical threats that would result in mass casualties and novel/新兴 infectious diseases. They will be expected to develop and recommend rational and viable courses of action to those threats.

EOH 565 - Threat Characterization and Response Using St
This course provides the basic practical tools for analyzing a threat scenario using problem-based learning of standards statistical methods, culminating in application of those methods in decision analysis for informing policy makers of threat prioritization and the means to mitigate those threats as applied specifically to the general category of bioterrorism problems.

EOH 566 - Fundamentals of Disaster Planning (3)
This course provides an overview of strategies for and challenges to planning for all types of disasters. All phases of the emergency management model will be addressed: mitigation, preparation, response, and recovery. Content includes tools and resources needed to develop and/or evaluate a facility or community all hazards response plan and create exercises to test this plan.

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 infectious disease disasters, such as bioterrorism and pandemics. Unique challenges to infectious disease disasters will be addressed, including isolation, quarantine, and pharmacological interventions. 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. (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 17th Century introduction to smallpox in the Americas, the 1918-1919 influenza pandemic, Hoof and Mouth disease in Great Britian, 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 biologicals, chemical 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 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)
The 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 Mthd 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 epidemiologic 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)
This course provides specialized study in epidemiology to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.
EPI 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 Management & Policy (HMP)

HMP 500 - Health Care Organization (3)
This course provides an overview of and orientation to the US health care delivery system. Topics include the delivery, financing, regulation, and administration of health care services, and the economic, legal, political, and social factors which influence the health care system. Historical and contemporary issues are addressed. (Offered annually.)

HMP 503 - Introduction to Health Care Accounting (3)
This course introduces students to the basics of financial and managerial accounting. The focus will be on the accounting concepts that are most critical to management decision making within a managed health care environment. Offered annually.

HMP 504 - Fundamentals 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 Management
This course examines the historical development, current concepts and techniques and future trends related to the monitoring and evaluation of the quality of health care services. Cases will be used to present current issues surrounding attempts to integrate quality management and increased accountability in health care organization. (Offered annually)

HMP 511 - Health Operations Management (3)
Course examines operational issues in health care management. Topics include systems analysis, continuous quality improvement and re-engineering, demand forecasting, facility location and design models, decision analysis techniques, linear programming, queuing and waiting models, inventory control models, and statistical quality control. The goal is to instill an understanding of the language, applications, and limitations of quantitative models with regard to decision making and problem solving in health care organizations. (Offered annually.)

HMP 513 - Health Information Systems (3)
This course is designed to develop four areas of student knowledge, skills, and competencies in Health Information Management (HIM). It provides a broad overview of the theory and application of computers in the health setting, with emphasis on the health manager's role in relation to the information function. It introduces students to computer hardware, software and operating systems through hands-on experience with specific application programs such as word processing, spreadsheets, statistical packages, and data base managers. Students learn to identify the necessary resources, staff support and change management required to develop, implement, and evaluate a health information system. Finally, the course explores the potential and limits of information technology in improving community level health delivery via such resources as the Internet. (Offered annually.)

HMP 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 - Behavioral and Environmental Aspects of Populations
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, cost-benefit, cost-effectiveness, and cost-utility analysis. This course will cover the theoretical basis for economic evaluation, its use in health, and the mechanics of the 4 types of analysis. (Offered annually.)

HMP 530 - Management of Health Care Organizations (3)
This course focuses on the macro-organizational concepts of managing complex health care organizations. Health care organizations are complex systems transforming inputs (professional, supplies, etc.) into outputs (health services) for customers (patients). To perform well, these systems require appropriate environmental assessments, strategy, governance, organizational structure, work processes, distribution of power, innovation and change. These requirements for effective organizational performance form the core content of the course. Offered annually.

HMP 531 - Medical Practice Management (3)
This course will focus on ambulatory health care delivery systems, comparing and contrasting them with other health care models. The managerial process, including financing, personnel, organizational structures, physical plant, and external relationships, will be explored. The relationship of demographic variables to the planning process for ambulatory care will be developed. (Offered annually.)

HMP 533 - Long-term Care Administration and Planning (3)
This course is designed to provide the student with a body of knowledge representative of the current state-of-the-art. Emphasis will be placed on adapting health care administration concepts to serving the long term care population with particular emphasis on continuity of care. Inter-disciplinary staff coordination and the complex family-client interrelationships will be examined as facets of promoting and maintaining optimum potential quality of life for each client. (Offered annually.)
### HMP 534 - Health Care Marketing (3)
The purpose of this course is to train future health services professionals in managing and marketing health services from a strategic perspective. The course is intended to present principles, theories, methods, and tools used in developing, implementing, and managing successful marketing strategies in the health care field. The 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 535 - Business Sectors in Health (3)
This course introduces students to business sectors within healthcare that strategically impact cost and quality of health services. Covered sectors include suppliers (pharmaceuticals, medical-surgical supplies, medical devices, distributors, and group purchasers), financial intermediaries (HMOs, PBMs) and care providers (hospitals, medical groups, nursing homes). Each sector is analyzed in terms of organizations, products/services, customers, and strategic business practices.

### HMP 537 - Organizational Behavior and Management (3)
This course provides an understanding of how decision makers manage an organization to achieve strategic initiatives and the impact that these efforts have on the behavior of people within the organization. Topics include: organizational effectiveness, strategic alignment, organizational structures and processes, group processes, leadership, decision making, negotiation, motivation, and human resource management. (Offered annually.)

### HMP 538 - Management of Human Resources in Health Care (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.

### HMP 539 - Leadership in Health Care Organizations (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 (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 542 - Health Care Ethics in Pluralistic 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 - Health Policy (3)
A course in health policy for advanced graduate students. The purposes of the course are to orient the students to the policy process, to increase the student's understanding of the nature of health policy making and health politics and to provide the student with an opportunity to develop an in-depth understanding of current health care policy issues. (Offered every other year.)

### HMP 552 - Legislative Health Policy and Procedures (3)
This course provides a theoretical and practical understanding of the procedures and practices that define legislative health advocacy in the area of Federal health policy. The course provides students with an understanding of the legislative procedures and process, and the skills needed to address public health policy issues at the federal level. Students will examine aspects of planning, strategic thinking and political endeavors necessary to develop and implement legislative policy. Prerequisite: HMP 550.

### HMP 553 - Leadership in Health Care Organizat
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 555 - Global Health Management and Policy (3)
This course addresses global variation in health care policy formulation and implementation as well as major differences in health care organization management structure and operations across health care systems. Throughout the course, specific health care systems will be compared via case studies to describe the globalization of health care.

### HMP 560 - Disaster Preparedness (3)
This practicum on disaster preparedness focuses on recent US human and natural disaster experience. The course is designed to introduce students to the evolution of disaster preparedness roles and organizations through didactic and field experiences.

### HMP 570 - Health Care Financial Mgmt (3)
Corporate finance techniques for financial decision-making are applied to health care organizations using "real world" case studies. In addition to basic finance concepts, topics include capital acquisition, cost of capital, capital investment decisions, tools of risk analysis, and financial and operating analysis. Both for-profit and not-for-profit health care organizations are studied. The course employs extensive use of Excel spreadsheets. (Offered annually.)

### HMP 571 - Financial 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, Medicare and Medicaid managed care. The course employs case analysis and team projects with local health-related organizations. (Offered annually.)

### HMP 572 - Government Financing of Health Care (3)
This course introduces the students to the economic theory of public goods and relates it to the role of government in providing for the maintenance and improvement of community health. The efficiency and effectiveness of current government financing strategies are analyzed. Topics include the theories of public goods and public choice, public budgeting processes, cost-benefit/cost effectiveness analysis of public investment, structure of Medicare, Medicaid and public health funding, and the economic effects of public financing of health-related services. (Offered annually.)

### HMP 580 - Strategic Management in Health Care Organizat
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 589 - State Health Policy Fellowship (3)
The purpose of this course is to give graduate students in Health Policy an overview of the health care policy process in the state of Missouri. Students will work first hand with a Legislator and their aides on every aspect of the policy process to build the skills necessary to understand the health policy process in Missouri. Students will attend legislative hearings, write policy documents, and help legislative staff work on health policy legislation throughout the legislative process. (Offered annually.)
HMP 591 - Health Management and Policy Rounds (0)
Career development lecture series designed to expose students to the philosophical approaches, leadership styles, policy processes and decision-making strategies used by successful health care management executives, health policy makers and health policy analysts across the spectrum of the health sector.

HMP 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.)

Human Resource Seminars (Ce) (HRS)

HRS 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.

Health Services Research (HSR)

HSR 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.

HSR 530 - Intro to Outcomes Research (3)
This course will assist students in understanding outcomes research and provide a background in the basic tools used in outcomes studies. The course will enable students to 1) conceptually define the meaning and purpose of outcomes research, 2) understand the role of epidemiology, biostatistics, health economics, and database and information technology in conducting outcomes research, 3) evaluate the usefulness and utility of outcomes measures, 4) recognize the different types of measures used in outcomes research, including clinical, health status, quality-of-life, health care utilization, and patient satisfaction, 5) obtain a basic appreciation of statistical analyses appropriate for outcomes research, and 6) interpret the results of health outcomes research.

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 120 - Introduction to the Helping Professions (2)
This course explores career opportunities in the helping professions. Fifteen professions are reviewed including clinical laboratory science, communication science and disorders, criminal justice, education, health information management, nuclear medicine technology, nursing, nutrition and dietetics, occupational science, physician assistant, physical therapy, psychology, public health, radiation therapy, and social work. Students receive presentations from faculty in each of these areas and engage in number of assignments to increase their knowledge of those professions in which they are most interested.

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 227 - Human Behavior and the Social Environment
This course focuses on the interactions between and among individuals, groups organizations, societies, and economic systems. It includes theories and knowledge of biological, psychological, social, cultural, spiritual aspects of human life across the life span; the range of social systems in which in live; and the ways social systems promote or deter people from achieving well being.

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 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 375 - SW Practice III: Groups (3)
This course focuses on 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 376 - SW Practice 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 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 (1-3)
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 (1-6)
Prior approval must be obtained from the undergraduate program director and from a faculty member who agrees to supervise the student in the independent study.

SWRK 700 - Values and 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 and the Family (3)
Problems and issues confronting American families and existing and proposed policy initiatives to address the matters. Focus on the values, the political forces, and the knowledge base behind policy intervention. Major emphasis on policy analysis as a systematic means of approaching this topic.

SWRK 710 - Policy Leadership Comm Dev (3)
This course will explore conceptual, analytical, and strategic parameters of effective policy leadership for community work. It seek 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 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 717 - Foundations of Peacemaking (3)
This course focuses on essential knowledge and skills necessary to engage in the peacemaking process. Students explore and analyze their own understandings of the concepts of peace and conflict. Catholic Social Teaching regarding peace and peacemaking is examined as a framework for approaching peacemaking. Emphasis is placed on the development and application of practical peacemaking strategies in responding to conflict at the interpersonal, community, and global level.

SWRK 718 - Care of Eldery: 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 include 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 Behvr/Environment (3)
This course is an introduction to theories, knowledge, and perspectives which explain the behavior of individuals and social systems. The theories are the basis of social work practice.

SWRK 734 - Health and Human Behavior (3)
Biopsychosocial framework for understanding how people think, feel, and act vis-a-vis their health.

SWRK 737 - Organizational Theory and Leadership (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 Health (3)
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 with Individuals, Famille
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 with Communities and
This is a foundation practice theory course which focuses on groups and communities.
SWRK 753 - Social Work Practice with Groups (3)
This course provides the student with a beginning concept of group therapy and process. It offers the opportunity to study and experience the process through structured experiences designed to teach the key processes of work.

SWRK 755 - Social Work Practice in the Health Field (3)
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; multidisciplinary 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 Practice (3)
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 systemic loss.

SWRK 765 - Loss, Grief and Healing (3)
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 systemic loss.

SWRK 766 - Health & Mental Health Policy (3)
Health care system of the United States from medical, sociological, political and economic perspectives; policy issues and alternatives.

SWRK 769 - Marital/couples Counseling (3)
An introductory skill development in dyadic/marital counseling. Focus on both premartial and long-term dyadic/marital developmental issues and the accompanying counseling/therapy content into experiential learning exercises. Prerequisite: SW S751

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.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>SWRK 812</td>
<td>INTRODUCTION TO GEOGRAPHICAL INFORM</td>
<td>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.)</td>
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<tr>
<td>SWRK 813</td>
<td>ISSUES IN PUBLIC ADMINISTRATION (3)</td>
<td>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.)</td>
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<tr>
<td>SWRK 814</td>
<td>Urban Economic Development (3)</td>
<td>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.)</td>
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<tr>
<td>SWRK 815</td>
<td>INTRODUCTION TO PUBLIC SECTOR BUDGE</td>
<td>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.)</td>
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<tr>
<td>SWRK 819</td>
<td>Foundation Integrative Practice Seminar (1)</td>
<td>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.</td>
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<tr>
<td>SWRK 820</td>
<td>Concentration Integrative Practice Seminar (1)</td>
<td>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.</td>
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<tr>
<td>SWRK 823</td>
<td>Practicum III (3)</td>
<td>Continuation of the development of specialized skills in the chosen concentration.</td>
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<td>SWRK 824</td>
<td>Practicum IV (3)</td>
<td>Continuation of the development of specialized skills in the chosen concentration.</td>
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<td>SWRK 825</td>
<td>Practicum V (3)</td>
<td>This elective provides additional practicum experience in an area of special interest to the student.</td>
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<tr>
<td>SWRK 898</td>
<td>Independent Study (3)</td>
<td>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.</td>
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