

English for Academic Purposes (EAP)

EAP 0610 - Reading Level 4 (3)

This course aims to improve students' level of reading from beginner high to the intermediate low level by developing students' reading strategies and skills necessary to be successful in an American academic learning environment. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0620 - Writing Level 4 (3)

This course will improve students' academic writing skills and content knowledge. This includes understanding the academic writing process, composing in various rhetorical modes, ability to do academic research, synthesizing materials from various sources, proficiency in MLA format, and improvement in the SLUWE. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0630 - Grammar Level 4 (3)

This course focuses on the form, meaning and use of grammatical structures necessary for successful communication in formal and informal contexts. Communicative and interactive classroom activities will help students build on their knowledge of the rules and exceptions of the English language. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0640 - Pronunciation Level 4 (2)

Students will understand how the alignment of words and other factors affect pronunciation. They will also learn to mark words in a phrase so that they become self-sufficient when working with their own American English pronunciation. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0650 - English through Service Level 4 (1)

This course will engage students in service as part of the mission of St. Louis University and foster a consciousness of social justice. Students participate in a minimum of 20 hours of organized service activities and discuss and reflect upon their experiences in class. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0660 - Content Course: Exploring Cultures (3)

Students will learn about American customs, culture, and history. In addition, students will improve their abilities to think critically, communicate clearly in speech and writing, listen and take notes during lectures, and become an active, productive member of American undergraduate courses. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 3 classes (IEP0510, IEP0520, IEP0530, IEP0540, IEP0550 and IEP0580) with a C or higher in Reading IEP 0510, Writing IEP 0520, Grammar 0530), ITP TOEFL reading and grammar sub scores of 460, and a SLUWE of 3-.

EAP 0700 - English VII: Intensive English for Academic Purposes (0-6)

Four-skill language and culture course. Includes academic reading, writing, grammar, class discussion, and test-taking strategies. Prerequisite: English Placement Exam score: TOEFL: 450 - 484 or its equivalent. Writing score 3-/3 or its equivalent.

EAP 0800 - Intensive English: Advanced Intermediate (1-6)

Academic English skills, including reading, writing, speaking, grammar, and American culture. Prerequisite: English Placement Exam score equivalent to level.

EAP 0810 - Reading Level 5 (3)

This course will develop students' reading strategies and skills necessary for comprehension of authentic texts and leveled readers. These skills include identifying main ideas and supporting details, understanding reading structure, identifying and evaluating arguments, developing vocabulary, summarizing, and note-taking. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0820 - Writing Level 5 (3)

The course focuses on writing as a process and helps students increase vocabulary and fluency in writing. Paragraphs, summaries, journals, and essays are written in response to readings and discussions. Editing for content, organization and grammatical accuracy is also emphasized. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0830 - Grammar Level 5 (3)

Students will use their own writing related to the topics of the content class to improve their grammar awareness and self-editing skills. Students will also work on advanced levels of test preparation skills and strategies for the structure sections. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0840 - Speaking Skills Level 5 (2)

This course is designed to develop skills and strategies necessary for giving effective academic presentations in university level courses. Special attention will be given to organizing and giving a variety of presentations, stage movement, using visuals, non-verbal behavior, pronunciation and self-evaluation. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0850 - English Through Service (1)

This course will engage students in service as part of the mission of St. Louis University and foster a consciousness of social justice. Students participate in a minimum of 20 hours of organized service activities and discuss and reflect upon their experiences in class. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0860 - Content Course: Contemporary Issues (3)

This course will develop academic and language skills necessary for university success through content-based instruction. In this course contemporary issues serve as the theme used to explore reading, writing, grammar, and spoken English. Prerequisites: A 2.5 semester GPA or higher in the EAP 600 level courses (0610, 0620, 0630, 0640, 650, 0660) with a C or higher in Reading EAP 0610, Writing EAP 0620, Grammar EAP 0630, the Content course EAP 0660, and SLUWE of 3 or higher.

EAP 0900 - English VIII: Intensive English for Academic Purposes (0-6)

Four-skill language and culture course. Includes academic reading, writing, grammar, class discussion, and test-taking strategies. Prerequisite: English Placement Exam score: TOEFL: 480 - 509 or its equivalent. Writing score 3+/4- or its equivalent.

EAP 1000 - Academic Writing and Editing Skills I (3)

This class is for international students who need to develop their writing and grammar skills from the intermediate high to advanced low level. Prerequisite: SLUWE score 3+.

EAP 1010 - Pathway Recitation Lab I (1)

This recitation lab is for international students who are enrolled in a humanities class that is part of the Pathway curriculum. The recitation and discussion activities help make the content and types of assignments more accessible to international students.

EAP 1020 - Academic Reading and Study Skills I (3)

This class is for international students who need to develop their reading skills from the intermediate high to advanced low level. Students will be preparing for intensive and extensive reading in social sciences and core curriculum classes in their university programs. This course also has a service learning component.

EAP 1030 - Academic Presentations and Speaking Skills (1)

The academic speaking skills class is designed to develop skills and strategies necessary for giving effective academic presentations in university-level courses. Prerequisite: TOEFL 510, Oral Evaluation 3+ and SLUWE score 3+.

EAP 1200 - Academic Writing and Editing Skills II (3)

This class is for international students who need to develop their writing and grammar skills from the advanced low to advanced level. Prerequisite: SLUWE score 4- or Acad. Writing and Editing Skills I.

EAP 1210 - Pathway Recitation Lab II (1)

This recitation lab is for international students who are enrolled in a humanities class in their second semester in the Pathway curriculum. The recitation and discussion activities help make the content and types of assignments more accessible for international students.

EAP 1215 - Recitation: Business (1)

This recitation section helps clarify and develop a better understanding of course topics and types of assignments in BIZ 1000. Co-requirement: BIZ 1000

EAP 1220 - Academic Reading and Study Skills II (0-3)

This class is for international students who need to develop their reading skills from the intermediate high to advanced low level. Students will be preparing for intensive and extensive reading in social sciences and core curriculum classes in their university programs. This course also has a service learning component.

EAP 1300 - College Reading & Study Skills (3)

This course is for international students whose assessment scores indicate a need for review and improvement of reading skills. Emphasis is placed on vocabulary expansion, improved reading comprehension and fluency, and critical thinking skills. Prerequisite: 535 PBT TOEFL.

EAP 1400 - Writing and Grammar Strategies (3)

Academic English skills, with an emphasis on writing and grammar. Prerequisites: 510 PBT TOEFL; and minimum 4- SLUWE score.

EAP 1500 - College Composition for International Students (3)

Course to improve proficiency in written expression. Intensive practice in paragraph and expository essay writing; study of rhetorical principles and techniques, including cross-cultural comparisons of rhetorical patterns. Equivalent to ENGL-1500. Prerequisite(s): 525 TOEFL; and minimum 4.0 SLUWE score. (Offered every Fall and Spring)

EAP 1900 - Rhetoric & Research Strategies (3)

Course designed to develop foreign students' skills in expository writing, and the ability to read and analyze expository essays. Study of principles and techniques of argumentation and persuasion through analysis of assigned readings; writing of organized essays and writing of research paper using appropriate methodology. Prerequisite(s): EAP-1500

EAP 2850 - Introduction to Literature for International Students (3)

Introduction to literary techniques: short story, essay, poetry, novel forms; cross-cultural interpretation of values and lifestyles.

EAP 3000 - Writing Skills for International Graduate Researchers (3)

This course develops international graduate students' mastery of the writing and research skills necessary for success in graduate school. Students build strategies for applying field-specific vocabulary, selecting and documenting effective research sources, and presenting ideas in a variety of forms. Prerequisite: Completion of Academic English Level 5 or equivalent. EAP 3020 recommended.

EAP 3020 - Reading Skills for International Graduate Researchers (3)

This course develops international graduate students' mastery of the reading and critical inquiry skills necessary for success in graduate school. These skills include recognizing and applying field-specific vocabulary, identifying structural and organizational patterns, analyzing and synthesizing explicit and implied arguments, and selecting appropriate sources for academic writing. Prerequisite: Completion of Academic English Level 5 or equivalent. EAP 3000 recommended.

EAP 3030 - Presentation Skills for International Graduate Researchers (3)

This course develops international graduate students' mastery of the skills required to give effective academic presentations. Students apply verbal, no verbal, visual, and organizational techniques to a variety of discourse situations including class discussions, in-class presentations, and conference presentations. Prerequisite: Completion of Academic English Level 5 or equivalent.

EAP 3040 - Grammar Skills for International Graduate Researchers (2)

This course develops international graduate students' mastery of the grammatical and mechanical skills necessary for success in graduate school. These skills include selecting and using field-appropriate vocabulary, producing the verb tenses and verb forms most frequently used in academic writing, generating a range of clause and sentence structures, and performing peer editing and self evaluation. Prerequisite: Completion of Academic English Level 5 or equivalent.

EAP 4000 - Introduction to Graduate Study 1 (3)

This course is designed to assist international graduate students transition to graduate studies at SLU. Students will be introduced to academic expectations at the graduate level and academic listening and speaking activities while developing the academic skills necessary to respond to their respective fields of study. Prerequisite: Enrollment in a Graduate Pathway.

EAP 4100 - Academic English for International Graduate Students 1 (3)

This course will improve students' English proficiency in graduate-level reading and writing. Students will work on reading skills, identification of topics and texts for research projects, integration of information for oral/ written assignments and conventions of the academic language/style used in their fields of study. Prerequisite: Enrollment in a Graduate Pathway.

EAP 4200 - Academic English for International Graduate Students 2 (3)

This course will build on graduate-level reading and writing skills from EAP 4100 with an emphasis on the student's specific field of study. Assignments are designed to deepen critical thinking skills and information analysis. Prerequisite: Successful completion of EAP 4100.

EAP 4500 - Composition & Research Writing for International Graduate Students (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.

EAP 4900 - Research Paper Writing for International Students (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.

English As A Second Language (ESL)**ESL 1200 - ESL History: Origins of the Modern World, 1500 to the Present (1-6)**

Prerequisite: English Placement exam: TOEFL between 70 - 80. This level prepares students for undergraduate and graduate admission. Courses offered: Adv. Writing/Editing Skills, Intro. Business English or Intro. Academic English, Cultural Keywords, Service Learning Project, Adv. Test-taking/Study Skills, Adv. Pronunciation/Communication Skills.

Honors (HR)

HR 1900 - Crossroads: Intro to Honors (3)

A cross-disciplinary, team-taught course which provides the entering student with an introduction to University Honors Program course work by focusing on a different theme or topic each year. Materials may drawn from a wide variety of disciplines, including Anthropology, Art History, Biology, Fine and Performing Arts, History, Literature, Philosophy, Social Sciences, and Theology. Required of Honors Program students. Every Fall.

HR 4860 - Honors Professional Development and Vocational Discernment (1)

This course will help students understand and specifically translate these experiences into the "real world." Through an intentionally sequenced five-part series, students will give shape to the substance of their academic and personal lives and reflect on the character and meaning of their future work. Students will emerge from this course with both concrete professional skills and philosophical insights to aid in the job search or graduate school application process.

HR 4930 - Honors Senior Seminar (0-3)

Topics change every year.

Intensive English Program (IEP)**IEP 0010 - Foundations in Reading (4)**

Students will improve their level of reading from pre-beginner to beginner levels by developing reading and academic skills. These skills include global and selective reading skills, critical thinking reading skills, and language acquisition through reading. Students will also work on test preparation skills and strategies. No prerequisites.

IEP 0020 - Foundations in Writing (4)

Students will improve their level of reading from pre-beginner to beginner levels by developing reading and academic skills. These skills include global and selective reading skills, critical thinking reading skills, and language acquisition through reading. Students will also work on test preparation skills and strategies. No prerequisites.

IEP 0030 - Foundations in Grammar (3)

Students will improve their level of reading from pre-beginner to beginner levels by developing reading and academic skills. These skills include global and selective reading skills, critical thinking reading skills, and language acquisition through reading. Students will also work on test preparation skills and strategies. No prerequisites.

IEP 0040 - Foundations: Pronunciation (2)

Students will improve their levels of pronunciation and conversation skills for social and academic environments at pre-beginner level. Students will use vocabulary from Reading and other classes to improve pronunciation and conversation awareness skills, as well as learn strategies for self-study and practice to improve their pronunciation independently. No prerequisites.

IEP 0060 - Listening and Note-Taking (2)

This course aims to improve pre-beginner students' ability to listen to spoken conversations and develop skill for listening and taking notes for class mini lectures. No prerequisites.

IEP 0080 - Vocabulary and Spelling Skills (1)

This course aims to improve pre-beginner students' ability to listen to spoken conversations and develop skill for listening and taking notes for class mini lectures. No prerequisites.

IEP 0100 - Beginner English I (1-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three hours pronunciation / conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 0 < 336 or its equivalent.

IEP 0200 - Beginner English II (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 337-369 or its equivalent.

IEP 0300 - Beginner English III (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370-399 or its equivalent . Writing score 2+ or its equivalent.

IEP 0310 - Reading Level 1 (3)

This course aims to improve students' level of reading from beginner to beginner high level by developing students' reading strategies and skills necessary to be successful in an American academic learning environment. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0320 - Writing Level 1 (3)

This writing course aims to improve students' level of writing from the beginner intermediate to the beginner high level of composition skills. Students will be introduced to the academic writing process and practice prewriting, drafting, peer-revising, revising and editing using standard English language syntax and structure. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with a C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0330 - Grammar Level 1 (3)

This course focuses on improving students' level of grammar at the Beginner through Intermediate level by studying specific targeted grammar points. Students will use the targeted grammar points in a communicative setting to succeed in academic writing at the sentence level and short paragraph level. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0340 - Listening Level 1 (2)

This class is designed to teach beginning students the relationship of vowels to consonants and how the alignment of these factors affects pronunciation and diction. Students will also learn to identify the differences between their own L1 (native language) diction and the target L2 (American English) diction. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0350 - English through Service 1 (1)

This course will engage students in service as part of the mission of St. Louis University and foster a consciousness of social justice. Students participate a minimum of 20 hours of organized service activities and discuss and reflect upon their experiences in class. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with a C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0380 - Vocabulary/Spelling 1 (1)

This course aims to improve students' vocabulary and spelling level. Students will learn the 2,000 most common words used in English, which account for 80% of daily conversation and reading. Students will also develop awareness of spelling patterns used in English. Prerequisites: A 2.5 semester GPA or higher in the IEP Foundation level classes (IEP0010, IEP0020, IEP0030, IEP0040, IEP0060 and IEP0080) with a C or higher in Reading IEP 0010, Writing IEP 0020, Grammar 0030), and a SLUWE of 2-.

IEP 0400 - Beginner English IV (6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370-399 or its equivalent . Writing score 2+ or its equivalent.

IEP 0410 - Reading Level 2 (3)

This course aims to improve students' level of reading from beginner high to the intermediate low level by developing students' reading strategies and skills necessary to be successful in an American academic learning environment. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0420 - Writing Level 2 (3)

This writing course will help students improve their level of writing from the beginner high to the intermediate low level of composition skills. Students will practice the academic writing process, write paragraphs and short essays, and develop test-taking skills. Prerequisites: IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with a C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0430 - Grammar Level 2 (3)

This course focuses on improving students' level of grammar at the High Intermediate level by studying specific targeted grammar points. Students will use the targeted grammar points in a communicative setting to succeed in academic writing at the sentence, paragraph and essay level. Prerequisites: IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with a C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0440 - Pronunciation Level 2 (2)

This class is designed to teach beginning students the relationship of vowels to consonants and how the alignment of these factors affects pronunciation and diction. Students will also learn to identify the differences between their own L1 (native language) diction and the target L2 (American English) diction. Prerequisites: IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with a C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0450 - English through Service Level 2 (1)

This course will engage students in service as part of the mission of St. Louis University and foster a consciousness of social justice. Students participate in a minimum of 20 hours of organized service activities and discuss and reflect upon their experiences in class. Prerequisites: IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with a C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0480 - Vocabulary/Spelling 2 (1)

This course aims to improve students' vocabulary and spelling level. Students will learn the 2,000 most common words used in English, which account for 80% of daily conversation and reading. Students will also develop awareness of spelling patterns used in English. Prerequisites: IEP Level 1 classes (IEP0310, IEP0320, IEP0330, IEP0340, IEP0350 and IEP0380) with a C or higher in Reading IEP 0310, Writing IEP 0320, Grammar 0330), and a SLUWE of 2.

IEP 0500 - Intensive English V (0-6)

Four-skill language course. Includes five hours of reading, five hours of writing, three to four hours pronunciation/conversation, five hours of grammar, and 3 hours lab. Prerequisite: English Placement Exam score: TOEFL: 370-399 or its equivalent. Writing score 2+ or its equivalent

IEP 0510 - Reading Level 3 (3)

This course aims to improve students' level of reading from beginner high to the intermediate low level by developing students' reading strategies and skills necessary to be successful in an American academic learning environment. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

IEP 0520 - Writing Level 3 (3)

This course aims to improve students' level of writing from beginner high to the intermediate low level by developing students' writing strategies and skills necessary to be successful in an American academic learning environment. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

IEP 0530 - Grammar Level 3 (3)

This course focuses on improving the student's level of grammar from the beginner-high to the intermediate-low level of targeted grammar points. Students will use their own writing to improve their grammar awareness and self-editing skills. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

IEP 0540 - Pronunciation Level 3 (2)

This class will teach the students to understand the relationship of vowels and consonants and how the alignment of these factors affects pronunciation and diction. The students will also be able to identify the differences between the own L1 (native language) diction and target L2 (American English) diction. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

IEP 0550 - English through Service 3 (1)

This course will engage students in service as part of the mission of St. Louis University and foster a consciousness of social justice. Students participate in a minimum of 20 hours of organized service activities and discuss and reflect upon their experiences in class. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

IEP 0580 - Vocabulary/Spelling Level 3 (1)

This course aims to improve students' vocabulary and spelling level. Students will learn the 2,000 most common words found on the General Service List as well as those on the Academic Word List, which account for 90% of academic texts in English. Students will also develop awareness of spelling patterns used in English. Prerequisites: A 2.5 semester GPA or higher in the IEP Level 2 classes (IEP0410, IEP0420, IEP0430, IEP0440, IEP0450 and IEP0480) with a C or higher in Reading IEP 0410, Writing IEP 0420, Grammar 0430), and a SLUWE of 2+.

Modern Language (MLNG)**MLNG 1000 - Contemporary Issues (3)**

This class studies American culture through topics of global issues, social justice, and cultural diversity. A service learning component will allow students to have an practical application of the knowledge, as well as leadership training in service projects in the urban setting of St. Louis. Required reading and movies will be about different sub-cultures within the United States and variety of global issues.

MLNG 1100 - Contemporary Issues (3)

This class studies American culture through topics of global issues, social justice, and cultural diversity. A service learning component will allow students to have an practical application of the knowledge, as well as leadership training in service projects in the urban setting of St. Louis. Required reading and movies will be about different sub-cultures within the United States and variety of global issues.

MLNG 1200 - Cultural Keywords: Comparing Studies of Western Philosophy and Culture (3)

This class offers an introduction to the main intellectual, artistic, and cultural movements of Western Culture from Western and non-Western perspective. The periods studied: Classic Greek/Romans, Middle Ages, Modern Age, including Neoclassicism, Romanticism, Realism, and Modernism. These movements will be compared with periods and philosophies from non-Western cultures, including China, India and Muslim cultures. Prerequisite(s): English Language Exam score at the EAP 1200 level.

MLNG 1300 - Hollywood & History: Storytelling through History & Film (3)

Through the use of storytelling from both history and film, the course looks at the wide diversity of narratives in the American culture. Movies and field trips will connect the topics to local events and historical sites. The goal is to help international students understand aspects of the American culture that can help them as background information in future classes or programs, both in the U.S. and in their home countries.

Pre-Law Studies (PLS)**PLS 1000 - Introduction to Law (3)**

The purpose of the course is to provide students an introduction to the law and legal principles. The structure of the court system, civil litigation and method 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 2000 - Intro Legal Research & Writing (3)

This course has two main objectives (1) to introduce students to the basics of legal research and writing and (2) to introduce students to the fundamentals of legal reasoning and analysis. Students will be required to complete a series of research and writing exercises and a final legal analysis paper.

PLS 2200 - Law: Service Learning (0-3)

This course offers exposure to a variety of contemporary legal and policy issues as they intersect with race, ethnicity, gender, socioeconomic status, and other underrepresented classifications. The course will focus on issues that affect diverse populations regionally, across the country, and internationally. Classes will include discussions, role playing, and other interactive activities designed to improve understanding of the course material. Students will be evaluated on multimedia reflections, online and class participation, individual and group research and presentations.

PLS 2500 - The Anatomy of the Lawsuit (2)

This hands-on course provides students with a practical understanding of the pretrial process and how discovery procedures shape and impact civil litigation today. The progression of class topics mirror the pretrial process within the context of a hypothetical case. Starting with the initial client interviews, class topics will include: (1) interrogatories; (2) requests for production; (3) discovery motions; (4) depositions; (5) pleadings; and (6) oral arguments. During the course students will be involved in simulated client contact, discovery proceedings, and motion arguments. Students will receive instruction on persuasive legal writing and oral advocacy and will prepare written motions and discovery documents.

PLS 2800 - Special Topics (1-3)

Pre-Law Studies topics course, content varies by section and semester.

PLS 3100 - Introduction to Trial Advocacy (2)

This course teaches students how to prepare a legal case for a jury trial. Students learn the basic building blocks of a jury trial, the development of trial strategy, and the use of evidence at trial. The course focuses on advocacy techniques and the application of those techniques to the court setting. In conjunction with this course, students are required to simultaneously enroll in PLS-3200 (Introduction to Trial Advocacy Lab) where students will use the techniques in a practical setting as members of the undergraduate mock trial teams.

PLS 3200 - Intro to Trial Advocacy Lab (0-2)

Students apply jury trial techniques learned in PLS-3100 (Introduction to Trial Advocacy). Students are introduced to, and participate in, mock trial competitions sponsored by the American Mock Trial Association as members of the undergraduate mock trial teams representing Saint Louis University. Students act as both attorneys and witnesses in the mock trial setting to further their understanding of the jury trial process.

PLS 3400 - Trial Advocacy Practicum Lab (0-2)

Students explore trial advocacy at an advanced level by participating in mock trial competitions sponsored by the American Mock Trial Association as both witnesses and attorneys. Students enrolling in this course must first complete PLS-3100 (Introduction to Trial Advocacy) and PLS-3200 (Introduction to Trial Advocacy Lab) or receive instructor permission.

PLS 3500 - 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 3900 - Intro to Appellate Advocacy (3)

This course introduces students to the role of appellate courts in the American justice system. Students learn and apply the basic elements of appellate argument including brief writing and oral advocacy. Students use a case problem to explore written and oral advocacy techniques in the court of appeals. Students prepare and present an oral argument at the end of the semester based upon the case problem.

PLS 3900 - Intro to Appellate Advocacy (1-3)

This course introduces students to the role of appellate courts in the American justice system. Students learn and apply the basic elements of appellate argument including brief writing and oral advocacy. Students use a case problem to explore written and oral advocacy techniques in the court of appeals. Students prepare and present an oral argument at the end of the semester based upon the case problem.

PLS 3935 - Issues in Health Law (3)

This course provides the opportunity to explore basic law as it applies to health-related issues and the health-care community. Special emphasis will be given to those laws that directly affect health-care businesses and care delivery such as the Health Insurance Portability and Accountability Act (HIPAA), the American Recovery and Reinvestment Act (ARRA), the Genetic Information Non-Discrimination Act (GINA), and the Americans with Disabilities Act (ADA). The student will also be introduced to the concepts of medical ethics and will explore the interplay between law and major ethical issues in health care. This is a rotating course that will address various areas of law. Possible courses include Sports Law and Race, Gender and Justice. This course will not substitute for MGT-2000.

PLS 4910 - Legal Internship (1-6)

Interns work in private legal service agency and federal, local, and state judicial systems. In selecting their internships, students are directed by the Pre-Law program and the Political Science department. Ideal for students interested in a legal career. Students MUST have secured their internship before enrolling in this course. If the student has any questions, please contact the Pre-Law program. Prerequisite(s): PLS-1000 and PLS-2000.

PLS 4960 - Comparative Legal Systems (3)

This course will build on the student's understanding of the American system of law. This course will broaden student's perspective of legal systems beyond their region. The student will also learn more about their own jurisdiction within the context of this global system. We will offer two different sections of this course which we will alternate. One section will focus on religious law. The other section will focus on a comparative analysis of nation-state's laws.

PLS 4965 - Foundations of Law (3)

This course is open to Pre-Law Scholars. Pre-Law students who have a GPA of 3.6 or higher can petition the course instructor for inclusion in the course. This is a seminar conducted by faculty of the School of Law. A final paper and class participation are major determinants of the grade.

Pre-Professional Health Std (PPHS)**PPHS 1000 - 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 1020 - 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 presentation 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 1050 - 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 2000 - Introduction to Medical Research Class (2)

The Introduction to Medical Research Class is a lecture-based course designed to introduce undergraduate students to clinical research in an academic medical setting via lectures and group work. Throughout the course, the class will address a range of topics including medical ethics, research modalities and tools in evaluating studies. Attending emergency medicine faculty from Saint Louis University Hospital will teach the course. The class will look at how clinical research and the application of evidence-based medicine is used to change treatment standards in patient care.

PPHS 2010 - Intro to Medical Research-Lab (2)

The Medical Research Lab will allow students to apply the skills learned during the Introduction to Medical Research Class. In the Medical Research Lab class students will work under the auspices of a primary investigator and possibly medical student teaching assistants to participate in a clinical research project. The project will primarily involve working in shifts in the emergency department to identify participants who would be eligible for active studies, consent these participants (if applicable), and to collect data from these participants. Other duties may include data/spreadsheet management, data entry, and analyzing information.

PPHS 4910 - Internship (3)

This course is designed to introduce undergraduate student to the practice of geriatric medicine in a residential setting. Throughout this course students will participate in a variety of activities designed to foster greater awareness of the challenges and rewards of geriatric medicine. The internship consists of three hours per week volunteering, shadowing and actively engaging with residents at Beauvais Manor on the Park, and one hour per week participating in a class discussion. Students will be supervised by attending faculty from Saint Louis University's School of Medicine, Department of Internal Medicine (Division of Gerontology and Geriatric Medicine) and supervising staff from Beauvais Manor.

University (UNIV)**UNIV 1020 - The First-Year Seminar-Madrid (0-1)**

Welcome to Saint Louis University. And to Madrid. A practical approach to the transitions that first-term students make at the Madrid campus. The course offers useful suggestions and mechanisms to respond to the pressures of meeting new people, living in a new culture (both that of the university and that of Spain), and making touch and maybe not so obvious choices. The four meetings connect students to University resources and introduce them to what to expect and not expect during their first few weeks on campus and in the most exciting city in Europe.

Center/Advanced Dental (CAD)**CAD 5010 - Pain: Anat, Phys, Psy, Trtmt (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 5030 - Advanced Oral Microbiology (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 5040 - 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 5050 - 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 5060 - Ethics and Dentistry (0)

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

CAD 5080 - Multidis Diag + Trtmt 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 5100 - 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 5110 - 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 5130 - Multidis Diag + Trtmt 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 5140 - TMJ Disorders (0-1)

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

CAD 5160 - 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 5170 - 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 5180 - 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 5190 - Advanced Head and 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 5220 - 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 5230 - 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 5240 - Implants/Temp Anchorage Device (1)

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

Endodontics (ENDG)**ENDG 5000 - 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 5200 - 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 5300 - Preclinical Teaching Practicum (0)

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

ENDG 5310 - Clinical Teaching Practicum (0)

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

ENDG 5410 - Pulp Biology (1)

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

ENDG 5450 - Review of Inflammation for Endodontics (1)

A didactic instruction to the essential principles, pathways and biologic components that are relevant to pulpal and periapical inflammatory disease processes. Offered in fall. Restricted to Graduate Endodontic Student status.

ENDG 5470 - Concepts in Biomedical Science (1)

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

ENDG 5510 - Princpls of Endodontic Surgery (1)

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

ENDG 5520 - Amrcn Brd of Endodontics Rview (1)

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

ENDG 5600 - Clinical Endodontics I (1)

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

ENDG 5910 - Endodontic Journal Club (0-1)

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

Orthodontics (ORTH)**ORTH 5010 - Fundamentals of Orthodontics (2)**

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

ORTH 5030 - Facial Development (2)

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

ORTH 5100 - Biomechanics (2)

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

ORTH 5250 - Clinical Cephalometrics (2)

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

ORTH 5310 - Oral Biology (1)

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

ORTH 5350 - Surgical Orthodontics (1)

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

ORTH 5370 - Ortho Probs with Cleft-Palate (1)

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

ORTH 5390 - Speech Probs + Oral Mechanism (1)

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

ORTH 5400 - History of Orthodontics (1)

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

ORTH 5490 - Diag Procedures in Orthodontic (1)

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

ORTH 5500 - Diagnosis and Treatment Plan I (1)

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

ORTH 5510 - Diagnosis + Treatment Plan II (1)

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

ORTH 5530 - Clinical Diagnosis I (1)

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

ORTH 5540 - Clinical Diagnosis II (1)

Continuation of Clinical Diagnosis I. Offered every year.

ORTH 5550 - Ortho Anlys + Trtmt Modalities (1)

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

ORTH 5560 - Clinical Case Conferences (0-1)

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

ORTH 5580 - Clinical Specialty Seminars (1)

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

ORTH 5600 - Intro to Clinical Orthodontics (1)

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

ORTH 5610 - Intro to Clin. Orthodontics II (1)

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

ORTH 5620 - Prin of Ortho Techniques I (2)

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

ORTH 5630 - Prin of Ortho Techniques II (2)

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

ORTH 5700 - Clinical Procedures (1)

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

ORTH 5710 - Clinical Orthodontics I (0-2)

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

ORTH 5800 - Sem: Child + Adol Psychology (1)

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

ORTH 5840 - Diag Sem: Mixed + Adult Dentit (0-1)

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

ORTH 5840 - Diag Sem: Early& Mixed Dentitn (0-1)

A didactic course on the development of the occlusion, growth-related imbalances and interceptive treatment. Discussions include psychological handling of younger patients, pros and cons of early intervention, early decisions to preserve spaces and pertinent literature review.

ORTH 5890 - Review for the ABO Examination (0)

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

ORTH 5910 - Literature Review (0-1)

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

Pediatric Dentistry (PDED)**PDED 5200 - Pediatric Dentistry Literature Review (1)**

A review of classical literature recommended by the American Academy of Pediatric Dentistry and current articles recommended by the program director. Residents will evaluate the value of the articles, discuss the findings, and gauge the impact on clinical practice in the context of evidence-based dentistry. Offered each semester. Limited to graduate students in the Pediatric Dentistry Program only.

PDED 5600 - Clinical Pediatric Dentistry I (1)

Supervised patient treatment in the Pediatric Dentistry Clinic and SSM Health Cardinal Glennon Children's Medical Center operating room. Offered in summer. Limited to Graduate Pediatric Dentistry Students only.

PDED 5910 - Pediatric Dentistry Seminar (0-1)

Comprehensive review of pediatric dentistry topics, including: prevention, behavior management, caries/restorative dentistry, specialized patient care, pharmacology, sedation, trauma, pathology, facial growth and development, and management of the developing occlusion. Residents will gain a solid foundation in the principles of pediatric dentistry for the board examination and the practice of pediatric dentistry. Offered each semester. Restricted to graduate students in the Pediatric Dentistry Program.

Periodontics (PERI)**PERI 5000 - Principles of Periodontics (1)**

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

PERI 5010 - Periodontal Lit Review I (1)

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

PERI 5100 - Conscious Sedation I (1)

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

PERI 5110 - Conscious Sedation II (1)

Continuation of PER-G510. Offered every year.

PERI 5200 - Intro to Grad Implant Dent I (1)

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

PERI 5210 - Intro to Grad Implant Dent II (1)

Continuation of PER-G520. Offered every year.

PERI 5220 - Advanced Implant Surgery I (1)

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

PERI 5230 - Advanced Implant Surgery II (1)

Continuation of PER-G522. Offered every year.

PERI 5300 - Clinical Teaching Practicum (0)

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

PERI 5400 - Perio Case Presentation Sem (0-1)

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

PERI 5600 - Clinical Periodontics I (1)

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

PERI 5700 - Perio Systematic Interrelation (0)

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

PERI 5800 - Ortho-Perio Interrelationships (0)

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

PERI 5910 - Current Lit in Periodontics (1)

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

African American Studies (AAM)

AAM 2000 - Introduction to African American Studies (3)

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

AAM 2010 - Contemporary Black America (3)

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

AAM 2120 - Survey of Art in Africa since Prehistory (3)

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

AAM 2200 - Blacks & the Mass Media (3)

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

AAM 2220 - Introduction to African-American Art (3)

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

AAM 2260 - African American Religious Traditions (3)

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

AAM 2320 - Art of the African Diaspora (3)

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

AAM 2500 - Intergroup Dialogue (3)

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

AAM 2520 - Intro to African Politics (3)

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

AAM 2550 - Political Systems of Sub-Saharan Africa (3)

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

AAM 2900 - Intergroup Dialogue: Black Male Identity (3)

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

AAM 2980 - Independent Study (1-3)

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

AAM 3200 - African American Culture (3)

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

AAM 3230 - History of Africa to 1884 (3)

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

AAM 3240 - History of Africa since 1884 (3)

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

AAM 3310 - 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 inter-cultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups.

AAM 3330 - African Diaspora Writing (3)

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

AAM 3350 - African American Religious Traditions (3)

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

AAM 3360 - Race & Ethnicity (3)

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

AAM 3370 - Spirituals, Motown & Hip Hop: African American Social History and Music (3)

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

AAM 3500 - Social Inequality (3)

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

AAM 3580 - American Slavery (3)

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

AAM 3730 - African Diaspora Writing (3)

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

AAM 3850 - Intro to Post Colonial Lit (3)

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

AAM 3860 - Human Sexuality in the Black Community (3)

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

AAM 4000 - Field Service - Community Activism in St. Louis High Schools (3)

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

AAM 4010 - Readings (3)

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

AAM 4200 - History of African American Cinema (3)

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

AAM 4270 - U.S. Anti-Black Racism (3)

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

AAM 4330 - Psychology of Oppression (3)

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

AAM 4340 - 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 4610 - 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 4800 - 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 4810 - Philosophy and Race (3)

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

AAM 4820 - 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 4830 - 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 Afro-centrism.

AAM 4900 - 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 4960 - 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 4970 - Research Methods in African American Studies (3)

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

AAM 4980 - Advanced Independent Study: Research (3)

Independent study is conducted in select topics that deal with the African, African American, or Caribbean experience.

AAM 5000 - Readings in African American Studies (3)

This course offers graduate students an advanced introduction to the interdisciplinary field of African American Studies. The scholarly treatment of African American history, literature, politics/policy, and culture has evolved greatly over the last century. AAM 5000 is designed to highlight those changes in the context of African American Studies as a discipline. The rise of African American Studies in the late 1960s made it possible for scholars and students at the university level to delve into the experience of people of African descent in this nation. Since then, students have had the opportunity to chart the evolution of the field by reading and analyzing major texts and documents concerning African Americans. This course introduces graduate students to the primary texts, methodologies, and approaches of the field.

AAM 5100 - Research and Writing in African American Studies (3)

African American Studies 5100 is designed as an intensive writing seminar for graduate students. The seminar will focus on the interdisciplinary research methods/theories of African American Studies and the students' ability to write in a scholarly manner. Early in the semester students will discuss specific forms of academic writing that they will be likely to perform at some point in their graduate career, such as portfolio papers, literature reviews, dissertation proposals, conference papers, academic articles, thesis and dissertation chapters. Students will spend the remainder of the semester engaged with their own and their colleagues' writing. Offered occasionally. Prerequisites: AAM 5000 and one elective course AAM 5001-6000.

Anthropology (ANTH)**ANTH 4710 - Archaeological Field School (4)**

Participate in an active archaeological dig at Cahokia Mounds (UNESCO World Historical Site). This course offers instruction in survey, excavation, artifact identification, mapping, sediment analysis and interpretive techniques. In addition, students will attend lectures and discussions on prehistoric archaeology and material culture in the American Bottom.

ANTH 4720 - Archaeological Lab Method (2)

This course introduces archaeology, a subfield of anthropology, and the scientific methods and procedures used to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and ecofacts. Students learn to process, inventory, analyze and interpret the archaeological record and write preliminary report on their findings.

Arabic (AR)

AR 1010 - 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 1020 - Communicating in Arabic II (0-3)

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

AR 2010 - Communicating in Arabic III (3)

AR-2010 is designed to continue building working knowledge of Modern Standard Arabic established up to a pre-intermediate stage in AR-1010 and AR-1020. Students continue developing vocabulary and are introduced to sentence structures of more complexity using intermediate grammar to increase reading and listening comprehension as well as written skills. Students also gain greater knowledge of the Middle Eastern Arab culture and customs.

Art (ART)

ART 2000 - 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 2100 - 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 2120 - 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 2150 - 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 2200 - 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 2300 - Printmaking I (3)

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

ART 2400 - Ceramics 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 2450 - Sculpture I (3)

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

ART 2480 - Fibers and Textiles (3)

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

ART 2490 - 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 2500 - 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 2600 - 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 2700 - 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 2800 - 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 2940 - Foundations Portfolio Review (0)

Required of all studio art majors. Completion of three studio art courses (studio art foundation classes and other 2000-level art classes) and concurrent registration in a fourth studio art course; review is conducted at the conclusion of the semester in which the student is enrolled in ART-2940.

Prerequisite(s): Completed three studio art courses or instructor approval

ART 2980 - Independent Study (1-6)

Permission of studio faculty required prior to registration.

ART 3000 - 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 3010 - Drawing Studio II (3)

A continuation of ART-3000 (Drawing II). A lab fee is required.

ART 3200 - 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 3210 - Painting Studio II (3)

A continuation of ART-3200 (Painting II). A lab fee is required.

ART 3300 - 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 3350 - Monoprints (3)

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

ART 3400 - Ceramics 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 3450 - Sculpture II (3)

A continued exploration of sculptural processes in various materials, including wood, plaster, and metal. A greater emphasis will be placed on the development of concept and content. Prerequisite(s): ART-2450 (Sculptural Materials I). A lab fee is required.

ART 3500 - 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 3510 - Computer Art II (3)

A continuation of ART-3500 (Computer Art II).

ART 3700 - Graphic Design II (3)

This course addresses the anatomy, history, basic principles and creative possibilities of typography. Students investigate how type functions as a system of communication and as an abstract visual element. Projects emphasize legibility, readability and expression. Experimentation with form and communication will be stressed. Lab fee is required. Prerequisite(s): ART-2700

ART 3750 - 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(s): ART-2500 or ART-2700.

ART 3910 - Studio Art Internship (1-6)

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

ART 3940 - Portfolio Review for the Visual Communication Certificate (0)

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

ART 4000 - Drawing Studio (3)

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

ART 4010 - Studio Project (3)

A continuation of ART-4000.

ART 4200 - Painting Studio (3)

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

ART 4300 - Printmaking Studio (3)

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

ART 4400 - Ceramics Studio (3)

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

ART 4500 - Computer Art Studio (3)

Computer Art Studio provides an opportunity for students to integrate skills gained in Computer Art I, Computer Art II, and other Studio Art classes. Students will work independently to create advanced projects that exhibit an individual aesthetic and reflect a sophisticated understanding of Photoshop and Illustrator. Prerequisite(s): ART-3500.

ART 4700 - 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.

Prerequisite(s): ART-3700

ART 4800 - Studio Senior Seminar (2)

Support for students about to graduate with a B.A. in Studio Art. Discussion topics cover optimizing their senior year and preparing for careers and graduate study. Course will be divided between discussions and group critiques of student artwork created independently. Prerequisite(s): ART-2940 and senior status.

ART 4940 - 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 for careers in Studio Art. Prerequisite(s): Satisfactory grade in ART-2940 and senior status.

ART 4980 - Advanced Independent Study (1-6)

Permission of studio faculty prior to registration.

Art History (ARTH)**ARTH 1000 - 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 1010 - History of Western 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 1020 - 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. Student will gain competence in analyzing architecture as well as familiarity with basic issues and concerns.

ARTH 1040 - 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 1080 - Masterpieces in Art (3)

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

ARTH 1090 - Global Masterpieces in Art (3)

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

ARTH 1110 - 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 1120 - History of Western Art II (1-3)

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 1500 - Life & Times of Michelangelo (3)

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

ARTH 1800 - 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 2020 - Sculpture in Saint Louis (3)

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

ARTH 2050 - 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 2060 - 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 2070 - Art and the Body (3)

This course examines the study and depiction of the divine and human body in art from medieval to modern times. It is a general introduction to art history with a focus on how art and science interact and on how the body has been perceived in art. No prereqs.

ARTH 2090 - 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 2100 - Art of Jerusalem and Three Faiths: Past and Present (3)

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

ARTH 2120 - Survey of Art in Africa since Prehistory (3)

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

ARTH 2130 - 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 2140 - Islamic Art and Society (3)

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

ARTH 2150 - 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. Saintly 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 2180 - History of Spanish Art (3)

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

ARTH 2190 - Art and History of Madrid (3)

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

ARTH 2220 - Introduction to African-American Art (3)

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

ARTH 2300 - 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 2320 - Art of the African Diaspora (3)

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

ARTH 2350 - Excavating Culture of 3 Faiths (3)

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

ARTH 2400 - 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 2500 - 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 2600 - Baroque & Rococo Art Survey (3)

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

ARTH 2700 - American Art: Colonial to WW II (3)

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

ARTH 2710 - 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 2750 - Nineteenth Century Art (3)

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

ARTH 2800 - 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 2820 - 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 2900 - The History of Art Media from Prehistory to the Digital Age (3)

This course will explore a wide range of materials used by artists throughout history, through lectures and hands-on demonstrations. Students will examine a wide variety of media, from cave drawings to computer art. No studio art experience required. No prerequisites. Fulfills the Fine Arts Core requirement.

ARTH 3010 - Women in Art (3)

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

ARTH 3020 - Christian Iconography (3)

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

ARTH 3140 - Islamic Art and Society: Advanced Studies (3)

Introduces the culture of the Islamic Middle East, North Africa, Spain, Turkey, Central Asia, and India from the 7th to 17th century. Students consider art and architecture of this region, analyzing aesthetic principles, themes, and motifs found in Islamic art. 3000 level students complete advanced assignments. No prerequisites, Global Citizenship

ARTH 3300 - 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 3400 - Art of Pilgrimage and Crusades (3)

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

ARTH 3410 - Art of Cathedrals and Kings (3)

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

ARTH 3500 - Early Renaissance Art and 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 3510 - High/Late Renaissance Art & Culture (3)

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

ARTH 3520 - 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 3600 - 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 artwork will be placed within the cultural framework of Counter-Reformation Rome and other important cities.

ARTH 3630 - Golden Age of Spanish Art (3)

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

ARTH 3650 - 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 3700 - American Art: Colonial to WWII: Advanced Studies (3)

This course examines American art from the colonial era through the nineteenth- and early twentieth centuries. Special emphasis is placed on how artists were affected by the unique sociocultural circumstances of the new nation. Fulfills the Fine Arts Core requirement

ARTH 3710 - 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 3720 - Modern Art in Spain and France (3)

Starting with romanticism (Goya) and ending with surrealism (Dali), and Arte Informal (Tapiés), this course covers some of the most important movements in modern art. Emphasis is given to context, and the historical and artistic ties between Spain and France during the 19th and 20th Centuries.

ARTH 3730 - 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, Renier, 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 3740 - American Art Between The World Wars (3)

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

ARTH 3750 - Nineteenth Century Art Survey (3)

ARTH-3750 is a survey of nineteenth-century European and American art, with a particular emphasis on several artists who had an especially powerful impact on the art and culture of this era. Students may not take both ARTH-2750 and ARTH-3750.

ARTH 3800 - 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 3820 - 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 3880 - History of Photography (3)

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

ARTH 4010 - Christian Iconography (3)

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

ARTH 4300 - 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 4400 - Illuminated Manuscripts (3)

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

ARTH 4520 - Renaissance Women and Art (3)

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

ARTH 4700 - 19th Century French Painting (2-3)

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

ARTH 4800 - Contemporary Art (3)

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

ARTH 4810 - Modern Art in Latin America (3)

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

ARTH 4850 - Religious Dimension in Mod Art (3)

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

ARTH 4900 - Research Methods (3)

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

Arts And Sciences (AS)**AS 1540 - The World of Work (1)**

This course is designed to introduce you to the working world. Individual and group projects will be used to help you learn about industries, the global economy, and how they affect one another. Various careers and self-reflective activities will assist you in your educational and career goals.

AS 1840 - 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.

American Studies (ASTD)**ASTD 1000 - Investigating America (3)**

What does it mean to be American? Is it citizenship or geographical location? Political ideals or shared culture? How does it change over time? This course introduces interdisciplinary methods to answer such questions, including analysis of images, literature, popular entertainment, and diverse experience of race, ethnicity, gender, sexuality, and nation.

ASTD 2000 - Memoir and Life-writing in American Culture (3)

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

ASTD 2100 - Studies in American Photography (3)

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

ASTD 2200 - American Homefronts, Global Wars (3)

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

ASTD 2300 - Americans Abroad (3)

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

ASTD 2600 - American Places (3)

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

ASTD 2700 - Gender, Race, Social Justice (3)

Examines the intersection of gender and race with other categories of analysis (class, religion, sexuality, nation) in historical and contemporary social justice movements in the United States. Topics include role of race in movements for gender equality, as well as the impact of gender on movements for racial justice.

ASTD 3000 - 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 3010 - 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 3020 - American Mosaic: Literature & Diversity (3)

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

ASTD 3030 - History and Fiction (3)

This course interrogates the boundary between history and fiction; it considers literary questions of 'historical' texts, and historical questions of 'literature' for the purpose of deepening our understanding of both history and fiction.

ASTD 3100 - Making the American City: Culture, Space, & 20th-century U.S. Urbanisms (3)

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

ASTD 3200 - The Urban Crisis (0-3)

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

ASTD 3300 - 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 3400 - 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 3500 - 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 3600 - American Food and Cultures (3)

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

ASTD 3700 - 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 3800 - 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 3900 - Mixed-Race America (3)

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

ASTD 3910 - Service Learning Internship (3)

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

ASTD 4000 - Introduction to Museum Studies (3)

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

ASTD 4960 - Senior Capstone (3)

This course brings the major to a coherent end, through which students gain 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 5000 - Perspectives in American Studies (3)

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

ASTD 5010 - African American Politics, Culture & Identity (3)

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

ASTD 5020 - Frontiers & Borderlands: Contact & Conquest in the American Imagination (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 5030 - 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 5100 - 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 5200 - Material Culture Studies (3)

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

ASTD 5300 - 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 5400 - 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 5500 - American Autobiographies (3)

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

ASTD 5600 - America: Readings of the Middle Passage (3)

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

ASTD 5700 - 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 5800 - 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 5900 - 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 5910 - 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 5950 - 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 5980 - Graduate Reading Course (1-3)

Graded as a seminar course

ASTD 5990 - 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 6000 - Mythbusting and Mythmaking in Recent American Studies Scholarship (3)

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

ASTD 6010 - 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 6020 - 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 6030 - 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 6100 - Dissertation Colloquium (3)

This course is designed to facilitate the dissertation-writing process. Seminars 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 6200 - 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 6300 - Jazz, Cities, and Social Movements (3)

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

ASTD 6400 - Transnational America (3)

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

ASTD 6500 - Visions of U.S. Empire (3)

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

ASTD 6600 - 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 6700 - From Satchmo to Strangelove: Cold War Cultural Politics and the 'American Century' (3)

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

ASTD 6800 - Edibles are Fun to Think With: American Food & Culture (3)

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

ASTD 6900 - Public Art & Memory (3)

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

ASTD 6910 - Graduate Internship (1-6)

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 6950 - 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 6980 - Graduate Reading Course (1-3)

Graded as a seminar course

ASTD 6990 - Dissertation Research (0-9)

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

Bioinformatics & Comp Biology (BCB)**BCB 5000 - Introduction to Computer Programming for Life Sciences (3)**

An accelerated introduction to programming, covering control structures, functions, and classes, as well as data structures including stacks, queues, linked lists, priority queues, dictionaries, trees, and binary search trees. When possible, programming projects will draw upon motivation from biological problems. Offered every Fall.

BCB 5100 - Advanced Scripting for Life Sciences (3)

This course explores intermediate programming techniques, with focus on combining use of various software packages and existing tools to facilitate the gathering, processing, and visualization of biological data sets. Offered periodically.

BCB 5200 - Introduction Bioinformatics I (3)

The course focuses on the study of nucleotide and peptide sequences and structures from a computational perspective. Topics including sequence alignment, detecting and understanding mutations, gene identification, and structural comparison and prediction. Student should have taken Cellular Biochemistry and Molecular (BIOL-3020) and Data Structures (CSCI-2100) or equivalent. (Offered every Fall)

BCB 5250 - Introduction Bioinformatics II (3)

This course focuses on the study of interaction and evolution of biological sequences and structures. Topics include interaction networks, clustering, phylogenetic trees and how biological systems change at the genomic. Offered every Spring.

BCB 5300 - Algorithms in Computational Biology (3)

This course introduces the foundations of algorithmic techniques and analysis as motivated by biological problems. Topics include dynamic programming, tree and graph algorithms, sequence analysis, hidden markov models. Motivations include sequence alignment, motif finding, gene prediction, and phylogeny.

BCB 5810 - Bioinformatics Colloquium (0-1)

The course provides students with current information about studies in bioinformatics and computational biology through presentations given by faculty members, students, and invited speakers. Students who enroll for credit must present a 20-30 minute talk as part of the seminar, demonstrating their oral communication skills while presenting technical content. Students must have graduate status or receive permission of the CAS Associate Dean for Grad Ed and the instructor to enroll for credit. Offered fall and spring.

BCB 5910 - Bioinformatics Internship (0-3)

Internships will include experiences in research and development laboratories of local biotechnology companies, as well as in research laboratories in SLU's departments of Biology, Chemistry, Computer Science, and Mathematics or departments in the School of Medicine. Prerequisites: BCB 5200 and 5250 courses in Introduction to Bioinformatics I and II. Students must have graduate status in any of the following programs: Bioinformatics and Computational Biology, Biology, Computer Science, Math, Chemistry or departments in the School of Medicine. Available every semester.

BCB 5970 - Research Topics (1-3)

This course will provide research experiences in SLU's departments of Biology, Chemistry, Computer Science, and Mathematics or departments in the School of Medicine. Offered each semester.

Biology (BIOL)**BIOL 1010 - Essentials of Biology (3)**

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

BIOL 1090 - 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 1100 - 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 1140 - Our Living Environment (3)

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

BIOL 1150 - Genetics and Human Diversity (3)

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

BIOL 1200 - Ecological Issues and Society (3)

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

BIOL 1240 - Principles of Biology I (3)

First semester of the two-semester Principles of Biology sequence. Students learn about chemical and molecular basis of living organisms, cell structure and function, gene structure, expression and heredity, animal anatomy and physiology, and animal development. In addition to learning concepts in biology, students practice critical thinking and problem-solving. No pre- or co-requisites.

BIOL 1245 - Principles of Biology I Laboratory (1)

BIOL 1245 covers experimental approaches used in molecular and cellular biology, genetics, and animal physiology. Students will learn to use scientific instruments and techniques implemented in these fields. Students will propose and test hypotheses, collect and analyze data, represent data visually, and practice written and oral scientific communication skills. Co- or pre-req BIOL 1240, Principles of Biology I

BIOL 1260 - Principles of Biology II (3)

Second semester of the two-semester Principles of Biology sequence. In BIOL 1260 students learn fundamental principles of evolution, the diversity of life, plant biology and ecology. In addition to learning scientific concepts in biology, students practice critical thinking and problem-solving. Pre-req BIOL 1240, Principles of Biology I

BIOL 1265 - Principles of Biology II Laboratory (1)

BIOL 1265 covers the basic experimental approaches used in studying evolution, ecology, and community biology. Students will be taught how to use scientific instruments and laboratory techniques implemented in these fields. Students will learn to propose and test hypotheses and to collect, analyze and present data. In addition, they will gain experience in written and oral scientific communication skills. Co- or Pre-requisite: BIOL 1260, Principles of Biology II

BIOL 1340 - Diversity of Life (3)

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

BIOL 1360 - Concepts of Biology (3)

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

BIOL 1400 - Biology of Health and Disease (3)

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

BIOL 1410 - Biological Basis of Health (3)

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

BIOL 1450 - Drugs We Use and Abuse (3)

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

BIOL 1460 - Exercise and Health (3)

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

BIOL 1500 - Plants and People (3)

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

BIOL 1510 - Exploring Animal Behavior (3)

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

BIOL 1640 - Microbes, History and Society (3)

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

BIOL 1700 - Plants and Cultural Diversity (3)

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

BIOL 1750 - Introduction to Evolutionary Process and Thought (3)

This course is an introduction for non-majors to life and its diversity from an evolutionary perspective. Students will learn fundamental concepts such as natural selection, genetic drift, phylogeny and co-evolution, and apply them to the relevance to societal issues ranging from conservation biology to medicine. No prerequisites. This course fulfills the science requirement of the core curriculum.

BIOL 1800 - 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 1950 - First-Year Mentoring (0)

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

BIOL 2560 - 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-2560 and THEO-2820. Prerequisite(s): 6 hours of theology.

BIOL 2800 - 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 2950 - Second-Year Mentoring (0)

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

BIOL 3010 - 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. Prerequisite(s): CHEM 1120; BIOL 1060 or BIOL 1260 & 1265

BIOL 3020 - Biochemistry&Molecular Biology (0-3)

This is a sophomore-level course on cellular/molecular biochemistry including the synthetic flow of genetic information from DNA to RNA to protein (replication, transcription and translation), RNA and protein structure and function, enzymology, and energy flow (metabolism). It is designed as a foundation course for subsequent upper division cellular/molecular biology courses, including Molecular Cell Biology II (BIOL-3040) and Genetics (BIOL-3030). Fall semester. Prerequisite(s): BIOL-1260 and BIOL-1265 and CHEM-1120 or 1140.

BIOL 3030 - 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.

Prerequisite(s): BIOL-3020 OR CHEM-4620.

BIOL 3040 - Cell Structure & Function (3)

Building on the principles introduced in BIOL-3020, 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. Prerequisite(s): BIOL-3020

BIOL 3060 - Cell Structure & Function Laboratory (1)

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

BIOL 3100 - Experiments in Genetics Lab (1)

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

BIOL 3220 - 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. Prerequisite: BIOL 1260

BIOL 3260 - 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 3280 - 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 3400 - Introduction to Neuroscience I: Cellular, Molecular and Systemic (3)

This course teaches the fundamental anatomy and physiology of the nervous system. Clinical cases and neuroscience technologies will be discussed. The course covers cellular, molecular and organ-systemic aspects of the nervous system and relevant neuronal disorders. The prerequisite is BIOL 3020.

BIOL 3410 - Concepts in Ecology (3)

This course will explore the fundamental concepts in ecology including organisms, populations, and ecosystems, adaptation and natural selection, changing environmental conditions, and the interactions among the myriad inhabitants of Earth. This course will strive to provide scientific insight into a variety of current issues and everyday decisions about ecological problems. The course will include discussions of the destruction of habitats by fire, pest outbreaks and control, habitat fragmentation, conservation, and global warming. Prerequisite(s): Any BIOL-1000/2000 Level Course. (Offered periodically)

BIOL 3420 - 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 3440 - Embryology (1-5)

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 3450 - Economic Botany (3)

Overview of plant form and function, followed by investigations into economic and social aspects of plants, including origin of important crops and health impacts. Learn how foods and spices drove world exploration, and develop your ability to critically assess modern agricultural practices, including ethics of bioprospecting and genetically modified foods. Satisfies upper-division plant biology requirement. Prerequisite(s): BIOL-1060

BIOL 3470 - 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-4540 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-4540

BIOL 3480 - Exercise Physiology (3)

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

BIOL 3490 - Plant Physiology (3)

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

BIOL 3500 - 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 3510 - 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 3950 - Transfer Student Mentoring (0)

The mentoring session covers material presented in BIOL-1950: First Year Mentoring and BIOL-2950: Second Year Mentoring and is designed for transfer students or students not in residence when the other mentoring sessions were held. (Offered every Fall, Spring and Summer)

BIOL 4010 - 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 4020 - 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 4030 - Introduction to Genomics (3)

This course introduces core concepts, techniques and analytical methods of genomics. The topics of this course include: genome projects; structure, components and evolutionary dynamics of genomes; sequencing, mapping and assembly techniques; online resources, databases and analytical methods for genomic studies. Prerequisite(s): BIOL-3020 and BIOL-3030.

BIOL 4040 - 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 4050 - 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, PCR, DNA sequencing, and bioinformatics. Prerequisite(s): BIOL-3020 and BIOL-3030.

BIOL 4060 - Structure and Function of Ecosystems (3)

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

BIOL 4070 - Advanced Biological Chemistry (3)

This course is designed to increase students' understanding of biochemical principles, current research questions, and biochemical strategies to answer these questions. Topics covered will include protein structure and function, enzymology, protein engineering, experimental design and interpretation of results. Prerequisite(s): BIOL-3020 and BIOL-3040. Restricted to Seniors.

BIOL 4080 - 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.

Prerequisite(s): BIOL-3020, BIOL-3040 and either BIOL-3010 or BIOL-3030.

BIOL 4090 - 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 4100 - 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 4110 - 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 4120 - Field Botany (5)

This field-based course introduces students to the diversity of plant communities in the Ozark Mountain region of Missouri and to the tools scientists use to quantify that diversity. Class and laboratory activities will be conducted at Reis Biological Field Station and at nearby parks and natural areas. Prerequisite(s): BIOL-1060.

BIOL 4130 - Field Mammalogy (5)

This course examines the evolution, physiology, ecology and behavior of mammals. Emphasis on field identification and field methods used to study the behavior and ecology of mammals. The course is taught at the Reis Biological Field station. Students cannot receive credit for this course and Biology of Mammals (BIOL-4380). Prerequisite(s): BIOL-1060.

BIOL 4140 - Field Ornithology (5)

This course examines the evolution, physiology, ecology and behavior of birds. Emphasis on field identification and field methods used to study bird behavior and ecology. The course is taught at the Reis Biological Field station. Students cannot receive credit for this course and Biology of Birds (BIOL-4310). Prerequisite(s): BIOL-1060.

BIOL 4150 - 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 4160 - Microbial Ecology and Molecular Evolution (4)

This course will actively engage students in the creative process of scientific inquiry, provide skills necessary for success in the modern research laboratory, and foster excitement about the discovery process central to research in microbial ecology and molecular evolution. Discussions will include critical evaluation of primary literature in the field. Prerequisite(s): BIOL-3020

BIOL 4170 - Introduction to GIS (3)

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

BIOL 4180 - Intermediate Geographic Information Systems (1-3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography. Each part is instructed by a professor specialized in the particular area. Students may on apply credits towards their graduation requirements from one of the following courses: EAS-4180, BIOL-4180, or SOC-4660.

BIOL 4190 - GIS in Biology (3)

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

BIOL 4200 - Aquatic Ecology (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 4210 - 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 4220 - Aquatic Biology Fieldtrip (3)

A companion course to BIOL-4200 (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 prosperities, water chemistry and biotic diversity.

BIOL 4240 - General and Medical Entomology (1-4)

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 4250 - Neurobiology of Disease (3)

This course takes a problem-based learning approach to study fundamental aspects of diseases affecting the nervous system. Students will gain an understanding of basic cellular and molecular concepts related to neurobiological disorders and the experimental approaches used to investigate them. Prerequisite: BIOL 3040 and one of the following three courses: NEUR 3400/BIOL 3400/BIOL 4150 or permission of instructor.

BIOL 4260 - Biology of Amphibians and Reptiles (1-4)

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 4270 - 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 4280 - 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 4290 - 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 4310 - Biology of Birds (1-4)

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. Students cannot receive credit for this course and Field Ornithology (BIOL-4140).

BIOL 4320 - 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 4330 - Spring Flora of the Ozarks (2)

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 4340 - Systematic Biology (3)

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

BIOL 4350 - 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 4360 - 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 4370 - 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 4380 - 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. Students cannot receive credit for this course and Field Mammalogy (BIOL-4130).

BIOL 4390 - Systematic Biology Lab (1)

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

BIOL 4400 - 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 4410 - Comparative Animal Physiology (3)

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

BIOL 4440 - Vertebrate Histology: Structure and Function of Tissues (0-4)

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

BIOL 4450 - 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 4470 - 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 4480 - 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 4500 - Introductory Endocrinology (3)

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

BIOL 4510 - 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 4540 - 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(s): BIOL-3040

BIOL 4550 - 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 animal and humans.

BIOL 4580 - Applied Population Genetics (3)

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

BIOL 4600 - 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(s): BIOL-3020 or BIOL-3040

BIOL 4610 - Developmental Biology Lab (2)

Laboratory six hours lab per week. This laboratory course is designed to supplement and reinforce material presented in BIOL-4600 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 Prerequisite(s): BIOL-4600.

BIOL 4620 - 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 4630 - Foundations of Immunobiology (3)

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

BIOL 4640 - 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 4650 - General Microbiology Laboratory (2)

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

BIOL 4670 - 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 4680 - 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 4700 - 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 bioinformatics approaches.

BIOL 4720 - Cancer Biology (3)

This course focuses on the molecular, cellular, and genetic characteristics of cancerous tissues; cancer epidemiology, diagnosis, and therapies will also be discussed. The course is in lecture format with some classes reserved for student presentations and discussion of primary research articles. Prerequisites are BIOL-3020 and BIOL-3040; BIOL-3030 is recommended.

BIOL 4750 - 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 4760 - 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 4790 - 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 4890 - Senior Inquiry: Comprehensive Examination (1)

Permission of department chairperson required.

BIOL 4890 - Senior Inquiry: Comprehensive Examination (0)

Permission of department chairperson required.

BIOL 4910 - Internship in Conservation (1-6)

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 4911 - Integrated Bioinformatics Int. (1-3)

Students will work with laboratories conducting molecular biology/bioinformatics 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 4912 - Internship in Plant Science (1-3)

Students work with professional plant scientists to gain practical experience. Students may work with scientists at botanical gardens or arboreta, the EPA Missouri Department of Conservation, the Donald Danforth Plant Sciences Center, Monsanto, or other biotech firms. Prerequisite(s): BIOL-1040/1060; CHEM-1110/1120.

BIOL 4950 - Senior Residency (0)

Required of all graduating seniors.

BIOL 4960 - Independent Research (1-3)

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

BIOL 4970 - Library Project (1-3)

Permission of Instructor required.

BIOL 4980 - Advanced Independent Study (1-4)

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

BIOL 5000 - Problems in Vertebrate Morphol (2-5)

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

BIOL 5010 - Ecology of Vertebrate Reproductn (3)

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

BIOL 5020 - Comparative Vertebrate Reproductn (3)

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

BIOL 5030 - Genomics (3)

This course introduces core concepts, techniques and analytical methods of genomics. The topics of this course include: genome projects; structure, components and evolutionary dynamics of genomes; sequencing, mapping and assembly techniques; online resources, databases and analytical methods for genomic studies. Prerequisite(s): BIOL-3030 (Principles of Genetics) or equivalent. (Offered every Fall)

BIOL 5040 - Prbm-Experimental Embryology (2-4)

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

BIOL 5050 - Molecular Techniques Lab (2)

2 credits Prerequisite(s): An undergraduate course in molecular biology (equivalent to BIOL-3020 and 3040) 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 5060 - Adv. Topics in Molecular Biol (1-4)

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 5070 - 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 5080 - 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 5090 - 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 5100 - 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 5120 - 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 5170 - Intro to GIS (3)

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

BIOL 5180 - Intermediate GIS (3)

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

BIOL 5300 - Prblms/Vertebrate Physiology (2-4)

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

BIOL 5330 - 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 5340 - 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 5400 - Problems in Genetics (1-4)

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

BIOL 5410 - 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 5420 - Problems in Evol Biology (1-4)

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

BIOL 5450 - 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 5460 - 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 5480 - Conservation Biology (3)

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

BIOL 5500 - Problems in Ecology (2-4)

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

BIOL 5510 - 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 5550 - 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 5560 - Advanced Evolution (3)

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

BIOL 5580 - Applied Population Genetics (3)

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

BIOL 5600 - 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 interaction: 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 5610 - 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 5630 - Concepts of Immunobiology (3)

Cellular and molecular basis of immune function. Topics include receptors of 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 5640 - Advanced Microbiology (3)

The course reviews the diversity, bioenergetics, growth, genetics and ecology of microorganisms. Special emphasis will be placed on contemporary issues and techniques used in the field of microbiology. Offered every fall.

BIOL 5670 - 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 5700 - Advanced Molecular Biology (3)

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

BIOL 5760 - Problems in Botany (3)

Offered Occasionally

BIOL 5770 - 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 5780 - 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 5800 - Research Colloquium (0-1)

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

BIOL 5810 - 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 5820 - 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 5840 - Graduate Seminar in Ecology, Evolution and Systematics (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 5850 - Floristic Taxonomy (1)

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

BIOL 5860 - Scientific Communication Practicum (1)

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

BIOL 5870 - Advanced Biometry (3)

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

BIOL 5970 - Research Topics (1-3)

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

BIOL 5980 - Graduate Reading Course (1-3)

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

BIOL 6040 - 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 6150 - 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 6300 - Spec Std:Comprrv Physiology (1-4)

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

BIOL 6310 - Comparative Immunobiology (3)

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

BIOL 6320 - Comparative Endocrinology (3)

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

BIOL 6330 - Spc std:Insect Physiology (1-4)

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

BIOL 6460 - 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 6510 - Plant-Water Relationships (3)

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

BIOL 6810 - Departmental Seminar (0-1)

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

BIOL 6970 - Research Topics (1-3)

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

BIOL 6980 - Graduate Reading Course (1-3)

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

Catholic Studies (CATH)**CATH 2000 - 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.

CATH 4960 - Catholic Studies Capstone (3)

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

Chemistry (CHEM)**CHEM 0930 - Special Topics (3)**

For experimental courses of variable subjects. Requires permission of the department. Offered occasionally.

CHEM 1000 - Chemistry and the Environment (3)

This course presents an introduction to the basic principles of chemistry and the role they play in important environmental issues. Topics include energy use and sustainability, elemental cycles, atmospheric chemistry and pollution, the hydrosphere and water pollution, and the biosphere and persistent organic compounds. Lecture: 3 hours/week. Offered annually.

CHEM 1050 - Basic Chemistry (3)

Designed for students who intend to take CHEM-1110 but do not have the background or mathematical skills required to enter directly into CHEM-1110. 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 1060 - Intensive Basic Chemistry (0)

This course is a condensed version of CHEM-1050. This course is offered for the second half of the fall semester only. Registration is by invitation only. Students who start the fall term in CHEM-1110, and make C-, D, or F at mid-term, are invited to drop CHEM-163 and enroll in CHEM-1060. These students will learn some basic skills that will improve their foundation in chemistry and allow them to move on to CHEM-1110 the next semester.

CHEM 1070 - Engineering Chemistry (3)

Fundamental concepts including atomic theory; stoichiometry; thermodynamics, phase diagrams, solutions; equilibrium; polymers, materials; kinetics. For Parks students. Prerequisite(s): CHEM-0930 or CHEM-1050 (C- minimum grade) or CHEM-1060 (C- minimum grade) and MATH-1200 or Math index minimum score of 930 and CHEM 1075 (may be taken concurrently). Lecture: 3 hours/week. Fall semester.

CHEM 1075 - Engineering Chemistry Laboratory (1)

For Parks College students, others need special permission. Laboratory experiments to illustrate and supplement material in CHEM-1070. Fall semester.

CHEM 1083 - Principles of Chemistry 1 with Laboratory (0-4)

Fundamental concepts and principles of inorganic chemistry. Intended for students in the Schools of Nursing and Allied Health Professions. Lecture: 3 hours/week; Laboratory: 2 hours/week. Fall semester only. No pre-requisites.

CHEM 1110 - General Chemistry 1 (3)

Introduction to chemistry: periodic table, elements, nomenclature, atomic structure, chemical bonding, gas laws, chemical reactions. Prerequisite(s): CHEM-0930 or CHEM-1050 (C- minimum grade) or CHEM-1060 (C- minimum grade) and MATH-1200 or Math index minimum score of 950 and one year high school chemistry. Lecture 3 hours/week. Offered Fall, Spring, and Summer.

CHEM 1115 - General Chemistry 1 Laboratory (1)

The laboratory course to complement the first semester of General Chemistry. Laboratory: 3 hours/week. Pre- or co-requisite: CHEM 1110 or CHEM 1130. Fall, Spring, and Summer semesters.

CHEM 1120 - General Chemistry 2 (3)

Continuation of Chemistry 1110 covering redox reactions and electrochemistry, chemical kinetics and thermodynamics, nuclear chemistry, transition metal chemistry, and descriptive chemistry of the elements. Prerequisites: CHEM 1110 or CHEM 1130 with grade of C- or better. Lecture 3 hours/week. Spring and Summer only.

CHEM 1125 - General Chemistry II Laboratory (1)

The lab course to complement CHEM 1120 and CHEM 1140. Students must have completed CHEM 1115 (or its equivalent) with C- or better. Offered spring and summer.

CHEM 1130 - General Chemistry 1 for Majors (3)

Majors only. Introduction to chemistry: periodic table, elements, nomenclature, atomic structure, chemical bonding, gas laws, chemical reactions. Prerequisite(s): CHEM-0930 or CHEM-1050 (C- minimum grade) or CHEM-1060 (C- minimum grade) and MATH-1400 or Math index minimum score of 950 and one year high school chemistry. Lecture 3 hours/week. Offered Fall

CHEM 1140 - General Chemistry 2 for Majors (3)

Continuation of Chemistry 1130 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. Lecture 3 hours/week. Spring semester only.

CHEM 1483 - Principles of Chemistry 2 with Laboratory (0-4)

This course covers fundamentals of organic chemistry with an introduction to biomolecules and biochemistry. Intended for students in Allied Health and Nursing. Lecture: 3 hours/week; Laboratory: 2 hours/week. Prerequisite: CHEM 1083. Spring semester only.

CHEM 1930 - Special Topics (3)

For experimental courses of variable subjects. Requires permission of the department. Offered occasionally.

CHEM 1950 - First Year Mentoring (0)

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

CHEM 2200 - Analytical Chemistry 1 (2)

Introductory gravimetric and volumetric analysis, Calibration and use of quantitative apparatus, theories underlying analytical procedures, calculation involved with analysis. Fall and Spring semester. Prerequisite: CHEM 1120 or 1140 with a grade of C- or better. Lecture: 2 hours/week. Offered Fall and Spring semesters.

CHEM 2205 - Analytical Chemistry 1 Laboratory (2)

Calibration and use of quantitative apparatus including analytical balances, spectrophotometers, potentiostats, and chromatographic instrumentation. Corequisite: CHEM 2200. Laboratory: 6 hours/week. Offered Fall and Spring semesters.

CHEM 2410 - Organic Chemistry 1 (3)

Modern organic chemistry of aliphatic and aromatic compounds. Offered for students in the biological sciences and preprofessional health studies. Fall and Summer semesters. Prerequisites: CHEM 1120 or 1140 and CHEM 1125 with a minimum grade of C- Lecture: 3 hours/week. Offered Fall and Summer semesters.

CHEM 2415 - Organic Chemistry 1 Laboratory (1)

An introduction to organic laboratory techniques. Laboratory three hours per week. Fall and Summer semesters. Prerequisites: CHEM 1120 or 1140 and CHEM 1125 with a minimum grade of C-. Co-requisites: CHEM 2410 or 2430 must be taken concurrently.

CHEM 2420 - Organic Chemistry 2 (3)

Continuation of CHEM 2410. Prerequisite: CHEM 2410 with a grade of 'C-' or better. Lecture: 3 hours/week. Offered Spring and Summer semesters.

CHEM 2425 - Organic Chemistry 2 Laboratory (1)

Laboratory to accompany CHEM 2420 with an emphasis on the synthesis and reactions of organic compounds. Laboratory 3 hours/week. Pre-requisite CHEM 2415 with C- or better. CHEM 2420 must be taken concurrently. Spring and Summer semesters.

CHEM 2430 - Organic Chemistry 1 for Majors (3)

Modern organic chemistry of aliphatic and aromatic compounds. Limited to Chemistry and Biochemistry majors. Prerequisite: CHEM 1120 or 1140 with grade of 'C-' or better. Lecture: 3 hours/week. Offered Fall semester only.

CHEM 2435 - Organic Chemistry 1 Laboratory for Majors (1)

Laboratory to accompany CHEM 2430. Limited to Chemistry and Biochemistry majors. Prerequisites: CHEM 1120 or 1140 and CHEM 1125 with a minimum grade of C-. Co-requisite: CHEM 2430. Laboratory: 3 hours/week. Offered Fall semester only.

CHEM 2440 - Organic Chemistry 2 for Majors (3)

Continuation of CHEM 2430. Limited to Chemistry and Biochemistry majors. Prerequisite: CHEM 2430 with a grade of 'C-' or better. Lecture: 3 hours/week. Offered Spring semester only.

CHEM 2445 - Organic Chemistry 2 Laboratory for Majors (1)

Laboratory to accompany CHEM 2440. Chemistry and Biochemistry majors only. Pre-requisite: CHEM 2435 with C- or better. Laboratory 3 hours/week. Spring semester.

CHEM 2930 - Special Topics (1-3)

For experimental courses of variable subjects. Requires permission of the department. Offered occasionally.

CHEM 2950 - Second-Year Mentoring (0)

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

CHEM 3100 - The Chemical Literature (1)

Introduction to chemical literature and related informational retrieval techniques; students utilize available resources to prepare one or more oral seminar presentations. Lecture one hour/week. Fall and Spring semesters. Pre-requisites: CHEM 2440 or 2420 and CHEM 2200.

CHEM 3330 - Physical Chemistry 1 (3)

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

CHEM 3340 - Physical Chemistry 2 (3)

Topics include chemical kinetics, quantum chemistry and spectroscopy. Spring semester. Prerequisites: CHEM 2200 with C- minimum grade and MATH 1520.

CHEM 3345 - Physical Chemistry Laboratory (1-6)

Laboratory, three hours per week. Experiments included from topics in CHEM 3330 and 3340. Spring Semester. Prerequisites: CHEM 3330 & Co-requisites: CHEM3340.

CHEM 3600 - Principles of 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. Lecture 3 hours/week. Spring semester only. Pre-requisites: CHEM 2410 or 2430.

CHEM 3890 - Introduction to Chemical Literature (1)

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

CHEM 3930 - Special Topics (3)

For upper-level experimental courses of variable subjects. Requires permission of the department. Offered occasionally.

CHEM 3950 - Transfer Student Mentoring (0)

The mentoring session covers material presented in CHEM 1950: First Year Mentoring and CHEM 2950: Second Year Mentoring and is designed for transfer students or students not in residence when the other mentoring sessions were held. This course will be offered each semester and there are no prerequisites.

CHEM 3970 - Undergraduate Research (0-3)

Chemical research under the direction of a faculty member of the department.

CHEM 4200 - Analytical Chemistry 2 (3)

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. Lecture 3 hours/ week. Fall semester. Pre-requisites: CHEM 2200 and 2205; CHEM 2420 or 2440; PHYS 1330 or 1630.

CHEM 4205 - Analytical Chemistry 2 Laboratory (1)

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. Lab: 3 hours/week. Fall Semester. Prerequisites: CHEM 2200, 2205, 2420 or 2440, & 2445 Co-requisites: CHEM 4200.

CHEM 4300 - Mathematical Techniques in Chemistry (3)

Includes introduction to differential equations, group theory, matrix algebra and vector analysis as applied to chemistry. Lecture 3 hours/week. Spring semester. Pre-requisite: MATH 1520.

CHEM 4400 - Organic Spectroscopy (3)

This lecture/laboratory course meets for two hours of lecture and three hours of lab per week. The course looks at the principles of spectroscopic techniques used in organic/bioorganic chemistry. The course teaches practical, approaches to the use of various spectroscopic techniques for structure determination of organic molecules. Spring semester. Pre-requisite: CHEM 2420 or 2440; CHEM 2425 or 2445.

CHEM 4470 - Medicinal Chemistry (3)

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

CHEM 4500 - 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. Lecture 3 hours/week. Fall semester.

CHEM 4505 - Inorganic Chemistry Laboratory (1)

Inorganic Chemistry Laboratory Arranged laboratory, three hours per week. Experiments include Inorganic preparations, advanced laboratory methods, chemical characterization. Spring Semester. Prerequisites: CHEM 4500.

CHEM 4610 - Biochemistry 1 (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. Lecture 3 hours/week. Fall semester. Pre-requisites: CHEM 2420 or 2440; CHEM 2200 with C- or better.

CHEM 4615 - Biochemistry 1 Laboratory (1)

This laboratory is intended to introduce the students to many of the important techniques employed by biochemists including but not limited to buffers, titrations, spectrophotometry, ion exchange chromatography, thin layer chromatography, quantification of protein concentration, electrophoresis, and enzyme kinetics. Lab 3 hours/week. Fall semester. Pre-requisites: CHEM 2425 or 2445 with C- or better; CHEM 2205 with C- or better; and CHEM 4610 which may be taken concurrently.

CHEM 4620 - Biochemistry 2 (3)

An upper-level, one semester, undergraduate course focusing on metabolism and information transfer. Topics to be covered include glycolysis, citric acid cycle, electron transport, oxidative phosphorylation, photosynthesis, synthesis and degradation of biomolecules, transcription, replication, and translation. Lecture 3 hours/week. Spring semester. Pre-requisite: CHEM 4610 with C- or better.

CHEM 4625 - Biochemistry 2 Laboratory (1)

An upper level undergraduate laboratory surveying advanced components of biochemistry. This laboratory introduces 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. Lab 3 hours/week. Spring semester. Pre-requisite: CHEM 4615 with C- or better. Co-requisite: CHEM 4620.

CHEM 4700 - 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. Lecture 3 hours/week. Offered occasionally. Prerequisite: CHEM 2440 or 2420.

CHEM 4950 - Senior Residency (0)

Required for students who plan to graduate with a B.A. or B.S. degree in Chemistry or Biochemistry at the end of the current semester. Offered Fall, Spring, and Summer semesters.

CHEM 4980 - Advanced Independent Study (0-3)

Prior permission of sponsoring professor and chairperson required.

CHEM 5000 - Intro to Chemical Research (1)

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

CHEM 5150 - 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. Student should have taken Instrumental Analysis or equivalent

CHEM 5200 - Analytical Chemistry II (3)

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

CHEM 5230 - Mass Spectrometry (3)

This is a graduate level course focused on the theory and application of mass spectrometry. There will be a special emphasis on biological analyses using mass spectrometry. This course will focus on a general theory and instrumentation of moving ions in the gas phase; quantitation and applications of mass spectrometry. Student should have taken Instrumental Analysis or equivalent. Offered in the fall of even years.

CHEM 5250 - 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. Student should have taken Instrumental Analysis or equivalent. Offered every other Fall semester.

CHEM 5260 - 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.) Student should have taken Instrumental Analysis or equivalent.

CHEM 5270 - 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 5290 - Special Topics (3)

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

CHEM 5299 - 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 5340 - Advanced Thermodynamics (3)

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

CHEM 5350 - 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. Prerequisite(s): CHEM-3330 and CHEM-3340 or the equivalent. (Offered periodically)

CHEM 5370 - 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 5390 - Spec Top-Physical Chemistry (3)

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

CHEM 5399 - 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 5400 - Organic Spectroscopy (3)

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

CHEM 5440 - Bioorganic Chemistry (3)

This course examines organic chemistry pertinent to molecules and reaction found in biology. The course material is arranged by major classes of biomolecules: peptides/proteins/enzymes/cofactors, carbohydrates, nucleic acids, fatty acids and polyketides, terpenes, catalytic antibodies, etc.

Prerequisite(s): one year of undergraduate organic chemistry (CHEM-2420 or CHEM-2440 or equivalent). (Offered every Spring in even years)

CHEM 5450 - 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 5460 - Synthetic Organic Chemistry (3)

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

CHEM 5470 - 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 5480 - Heterocyclic Chemistry (3)

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

CHEM 5499 - 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 5500 - 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 5550 - Organometallic Chemistry (3)

Key aspects of organometallic and metal cluster chemistry: rationalization of organometallic complexes using the eighteen-electron rule; metal carbonyl complexes and their analogs; commonly encountered carbon- and heteroatom-based ligands; isolobal theory; mechanisms of organometallic reactions; organometallic chemistry in catalysis with a focus on some key industrial homogenous catalytic processes. Prerequisite(s): CHEM-2420, CHEM-2440, and CHEM-4500

CHEM 5570 - 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 5590 - Spec Top-Inorganic Chemistry (3)

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

CHEM 5599 - 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 5620 - Biophysical Chemistry (3)

Chemistry 5620 is a one semester, graduate course that presents a comprehensive account of the structures and physical/chemical properties of biomolecules. The first part deals with the structure of biological macromolecules and the forces that determine this structure. The second part summarizes some of the techniques used in studying biological structure and function. The third part demonstrates how techniques and principles are used in concert to gain an understanding of the behavior and properties of biological macromolecules. Offered periodically.

CHEM 5630 - Introduction to Chemical Biology and Biotechnology (3)

This course will serve as an introduction to topics related to the fields of chemical biology and biotechnology. Offered in fall.

CHEM 5700 - 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. Student should have taken two semesters of Organic Chemistry.

CHEM 5800 - Fundamentals and Design of Nanomaterials (3)

This course addresses the development and application of nanomaterial. 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 5850 - 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 5920 - 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 5970 - Research Topics (1-3)

Prior permission of guiding professor required.

CHEM 5980 - Graduate Reading Course (1-3)

Prior permission of guiding professor and department chairperson required.

CHEM 6900 - Introduction to Proposal Writing and Oral Presentations (3)

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

CHEM 6990 - 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 1010 - 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 1020 - Communicating In Chinese II (0-3)

Development of Chinese vocabulary, oral comprehension, fundamentals of Chinese grammar, reading, writing and speaking capabilities. Introduction to Chinese culture. Prerequisite(s): CHIN-1010-01 Communication in Chinese I or Instructor's permission.

CHIN 2010 - Intermediate Chinese I (0-6)

Development and refinement of Chinese vocabulary, oral comprehension, fundamentals of Chinese grammar, reading, writing and speaking capabilities. Introduction to Chinese culture and business protocols. Prerequisite(s): CHIN-1020-01 or Instructor's permission.

CHIN 2020 - Intermediate Chinese II (0-3)

Development and refinement of Chinese language skills by introducing Chinese culture through extensive readings of Chinese literature and history

Prerequisite(s): CHIN-2010.

CHIN 3010 - Oral and Written Proficiency in Chinese I (0-3)

Builds on acquired knowledge of Chinese language and culture. Review and refinement of grammar skills, development of written and oral communication skills. Reading and discussion of authentic language materials (articles, videos, recordings, etc.). Prerequisite(s): CHIN-2020

CHIN 3020 - Oral and Written Proficiency in Chinese II (0-3)

Continuation of CHIN-3010. Further development of oral and written expression leading to the ability to handle with confidence a wide variety of social situations and writing needs.

CHIN 3250 - Cultural Comparison: China & U.S. (3)

Through a flexible and open dialogue in Chinese, students will learn to discuss and analyze social, interpersonal, business and cultural situations and subjects, and gain deeper insights into cross-cultural elements. This course aims to increase students' intercultural sensitivity and competence. The course will be taught in Chinese. Prerequisite: Oral and Written Proficiency in Chinese (CHIN 3020) or equivalent level of Chinese proficiency as determined by the Instructor

Classical Humanities (CLH)**CLH 1200 - Greek Lit in Translation (3)**

Fall semester.

CLH 1210 - Latin Lit in Translation (3)

Spring semester.

CLH 4290 - Intro to Classical Mythology (3)

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

Communication (CMM)

CMM 1000 - Human Communication and Culture (3)

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

CMM 1200 - 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 use in evaluating their own and other's public speaking performances.

CMM 1300 - First Year Dialogue (3)

First-Year Dialogue is a discussion-based course designed to merge elements of first-year experience, college student transitions, and intergroup dialogue pedagogy. Using communication theory, the course engages students in dialogue processes to explore personal and social identities and determine how the identities impact the experience as a SLU student. No prerequisites.

CMM 1400 - Film Criticism (3)

Viewing and discussion of some short and several feature films; terminology discussion and exams; written reviews and responses to film discussion; defining of film as an art. Prerequisite(s): ENGL-1900 or ESL-1900

CMM 2000 - Communication Theory (3)

Examines the problems that communication researchers attempt to solve by theorizing effectively. Topics include the relation of theory to research and practice, and different ways of theorizing, such as covering laws, systems, and social constructionist approaches. Prerequisite(s): CMM-1000

CMM 2100 - Journalism: News Writing (3)

Introduces basic techniques of gathering, writing, and editing news; discusses newsroom operations, decision making, and ethics; includes frequent in-class and out-of-class writing assignments. Prerequisite(s): ENGL-1900 or ESL-1900.

CMM 2120 - Message Design (3)

Message Design explores the process of analyzing audiences, needs, and situations to construct strategically appropriate messages. This course emphasizes writing skills and the process of analyzing messages. This course draws upon rhetorical theories and their practical applications.

Prerequisite(s): ENGL-1900 or ESL-1900

CMM 2200 - Small Group Presentation (1)

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

CMM 2300 - Intergroup Dialogue (3)

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

CMM 2400 - Media and Society (3)

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

CMM 2500 - Media and Society Lab (1)

Introduces students to the technical and creative aspects of media production using the tools (hardware and software) of photography, video, audio, graphic design, and participatory media.

CMM 2510 - Video Production and Design (3)

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

CMM 2550 - Photojournalism (3)

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

CMM 2560 - Graphic Design Production (3)

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

CMM 2800 - Communication Research (3)

Introduces principles of empirical research in communication and trains students to become critical consumers of research used and produced by communication professionals. Topics covered include formulating research questions; conducting literature reviews; understanding problems of observation, measurement, validity, and reliability; and critiquing research designs. Satisfies social science requirement for A&S. Prerequisite(s): CMM-1000

CMM 3000 - Interpersonal Communication (3)

Theory, research, and practical exercises in dyadic interaction. Examines mutual influence, communication patterns, relationship characteristics, interaction goals, and contextual factors. Prerequisite(s): CMM-1000

CMM 3050 - Argumentation and Debate (3)

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

CMM 3060 - Political Communication (3)

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

CMM 3070 - Communication and Public Life (3)

Introduces the foundational texts, methods, and terminology of the study of rhetoric. Develops the skills of writing rhetorical criticism, critical thinking, and engaging in public dialogue and decision-making.

CMM 3080 - Sport Communication (3)

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

CMM 3090 - Health Communication (3)

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

CMM 3110 - Feature Writing (3)

Analysis of contemporary newspaper and magazine feature writing techniques. Required assignments in common feature genres, such as seasonal stories, profiles, and how-to and travel articles. Prerequisite(s): CMM-2100

CMM 3120 - Media Scriptwriting (3)

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

Prerequisite(s): CMM-2100 or CMM-2120

CMM 3130 - Editorial and Opinion Writing (3)

Problems of writing editorials, news analyses, and opinion pieces. Course includes reading and writing about topical and controversial national and international issues. Prerequisite(s): CMM-2100

CMM 3140 - Essay Writing (3)

Reading and analysis of work by a wide range of essayists, and regular practice in writing formal and informal essays. Emphasis on finding a personal voice, polishing ones writing style, learning to describe scenes and characters, and creating eloquent literary effects. Prerequisite(s): CMM-2100

CMM 3200 - Organizational Communication (3)

Discusses basic theories and concepts related to the study of communication in organizations. Considers a variety of theoretical approaches to the study of organizational settings, as well as specific organizational communication issues such as decision-making, feedback, conflict management, diversity, and technology in light of those theoretical approaches. Prerequisite: CMM 1000

CMM 3230 - Business and Professional Communication (3)

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

CMM 3300 - 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 inter-cultural encounters. Develops a better understanding of culture and the many ways in which it influences interaction between individuals and groups. Prerequisite: CMM 1000

CMM 3420 - Literary Journalism (3)

Analyzes recent trends in American magazine and longform journalism. Discusses stylistic strategies of writers such as Tom Wolfe, Joan Didion, Hunter Thompson, and E.B White, and explores recent debates about journalism as a cultural practice. Prerequisite: CMM 2100

CMM 3440 - Media Ethics (3)

This course introduces students to a range of ethical issues facing media and their practitioners in an increasingly globalized, mediated world. Students explore what constitutes ethical media practices and what interferes with those ethical practices in a variety of media professions.

CMM 3460 - International Cinema (3)

The course explores cinema across a vast swath of the Earth's surface as well as film practices that cut across genres and artistic movements (e.g., Dogme95, *New Waves*). We place auteurs, national industries and production histories in close-up, while embedding each film's within its contemporaneous political and social currents. Prerequisites: CMM 2000 and CMM 2800, or instructor's permission.

CMM 3510 - Studio Production (3)

The course creates a season of television shows, each produced in various professional formats. Students perform one of the following roles for each new show: producer, director, on-camera talent, technical director, or audio operator. Prerequisite: CMM 2500

CMM 3520 - Sports Documentary (3)

The Sports Documentary class covers the ins and outs of documentary filmmaking. Students will produce a sports documentary using voice-overs, interviews, visuals and music. Coming into the class, students should have the basic skills necessary to digitize and do basic edits in a digital video editor. Prerequisite: CMM 2500

CMM 3530 - Documentary Production (3)

Documentary Production covers the practice of audio and video documentary production. Students will learn to appreciate and critique different documentary genres; choose and research a topic, engage in fieldwork, and edit audio and still and moving images. Students will produce several types of documentary projects. Prerequisite: CMM 2500.

CMM 3560 - Publication Design (3)

Principles of effective visual communication applied to the planning, design, production, and distribution of digital and print publications. Prerequisite: CMM 2500

CMM 3600 - Public Relations Principles and Practices (3)

Introduces basic public relations concepts. Examines the relationship between clients, practitioners, and the news media. Includes a variety of public relations activities designed to give students a working understanding of how public relations functions. Prerequisite: CMM 1000

CMM 3610 - Writing for Public Relations (3)

Covers forms of professional writing practiced in corporate, nonprofit, and government public relations. Requires writing of informative and persuasive messages, press releases, PSAs, feature profiles, and backgrounders, and preparation of press kits. Prerequisites: CMM 2100 and either CMM 3600 or CMM 3700

CMM 3700 - Advertising Principles and Practices (3)

This course is designed to provide a foundation to prepare students for the advanced advertising courses in areas such as research, media strategy, creative development, and management. Examines a variety of topics, including introduction to advertising theory, planning, and practice. Course maintains a balance of persuasive theory and technique. Prerequisite: CMM 1000

CMM 3710 - Advertising Writing and Production (3)

Teaches students to use their creative skills to write and produce effective ads, commercials, and advertising campaigns. Students learn to think strategically as well as imaginatively, working in small groups to brainstorm and think 'outside the lines.' Students also start preparing portfolios for presentation. Prerequisites: CMM 2100 and either CMM 3600 or CMM 3700

CMM 3770 - Advertising Media Strategy (3)

Students will develop an understanding of media strategy and grasp the key issues that determine media strategy, including definition of consumer group, the nature of message dispersion and identification of qualitative values to be acquired from the advertising. Students use actual reference sources in their evaluation of media. Prerequisites: CMM 2800 and 3700

CMM 3800 - Interviewing and Listening (3)

Prerequisite: CMM 2800

CMM 3820 - Communication in Third Places (3)

Introduces students to naturalistic/interpretive research as a way to examine one aspect of contemporary public life in America - communication in 'third places.' Explores issues regarding the role public life plays in societies. Students learn about naturalistic research methods and conduct a study of a third place. Prerequisite: CMM 2800

CMM 3830 - Methods Rhetorical Analysis (3)

Discusses the rhetorical methods used in the critical analysis of public communication. Course offers practice in the application of a variety of rhetorical methods. Prerequisite: CMM 2100 or CMM 2120

CMM 3840 - Analysis of Popular Culture (3)

Discusses methodologies used to study popular symbols, rituals, and artifacts in everyday culture, such as those in television, radio, film, print, and sport, and the social practices by which such artifacts are produced and consumed. Readings draw on literature in rhetorical criticism, critical studies, and cultural studies. Prerequisite: CMM 2400

CMM 3850 - Quality Research Methods in Communication (3)

Introduces students to the methods used by qualitative/naturalistic researchers. Topics covered include strengths and limitations of qualitative research; problems of studying interaction in public settings; procedures for collecting, analyzing, and writing up qualitative data; and techniques for managing relationships between subjects and researcher. Prerequisite: CMM 2800

CMM 4000 - Family Communication (3)

Examines the family as a communication system through which patterns of interaction develop, maintain, and enhance/disturb relationships. Explores theory and research on topics such as family culture and identity, conflict, and decision-making. Emphasizes critical analysis and development of effective verbal/nonverbal skills to promote healthy family communication. Prerequisite: CMM 1000

CMM 4010 - 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. Prerequisite: ENGL 1900.

CMM 4050 - Theories of Persuasion (3)

Focuses on contemporary persuasion theory and research. Covers a variety of perspectives on the subject, such as motivation theory, social judgment, social movements, and advertising campaigns. The approach demonstrates how theories of persuasion can help guide the practice of human communication. Prerequisite: CMM 1000

CMM 4060 - Seminar: Politics, Rhetoric, and Culture (3)

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

CMM 4070 - Social Justice Communication (3)

This course focuses on how communication can address real-world social justice issues. Students will develop critical attention to and deeper imagination of social justice issues, creative strategies for responding to those issues, and practical communication skills for participating in and promoting a more socially just world.

CMM 4100 - Multiplatform Journalism (3)

This course fosters students' journalism skills across platforms; students will learn how to combine audio, video, and photos with text to tell stories and how to evaluate when it is appropriate to use these tools. CMM 210 is a prerequisite for the course. Prerequisite: CMM 2100

CMM 4160 - Editing (3)

Teaches skills 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. Prerequisite: CMM 2100

CMM 4200 - Leadership and Teams (3)

Examines formal and emergent leadership principles as they relate to productive teams. Focuses leadership communication, conflict management, team/group communication, techniques for analyzing and improving team communication skills, and technologies for connecting virtual team members. Prepares students to be effective and ethical team leaders/communicators in organizational contexts. Prerequisite: CMM 1000

CMM 4210 - Organizational Culture (3)

Introduces the theory and philosophy of cultural approaches to organizational communication. Topics covered include the nature and significance of sense-making activities in a modern organization, the interplay of organizational structure and culture, the methods researchers use to investigate and write about issues of organizational culture. Prerequisite: CMM 3200

CMM 4220 - Conflict Mediation and Negotiation (3)

Examines the communication patterns people use in conflicts. Discusses the positive uses of conflict in relationships 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. Prerequisite: CMM 1000

CMM 4240 - Training and Development (3)

Focuses on processes of training and development in organizations. This includes assessing communication goals and practices, designing training or consulting programs that enhance interactions in organizational contexts, and evaluating these programs. Students will conduct a needs assessment of an organization and design and present a training proposal. Prerequisite: CMM 1000

CMM 4300 - Gender and Communication (3)

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

CMM 4320 - Communicating Across Racial Divisions (3)

Focuses on the communication process in interactions between races in the United States, with emphasis on the relationship between Blacks and White. 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. Prerequisite: CMM 1000

CMM 4350 - Stereotyping and Bias in the Mass Media (3)

Examines debates over stereotyping and bias in the mass media. Considers the types of materials that have aroused charges of bias, and surveys the historical, economic, political, and sociological perspectives that help explain stereotyping as a cultural practice. Prerequisite: CMM 2400

CMM 4410 - Crit Perspectives: Journalism (3)

This course provides students with a critical understanding of journalism and how it functions within a democratic society. Students will learn about the development of journalism, contemporary issues, and major theoretical concepts in journalism studies. The assignments will allow students to apply critical perspectives to news content. Prerequisite: CMM 2400

CMM 4420 - Theory of Free Expression (3)

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

CMM 4430 - Culture, Technology and Communication (3)

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

CMM 4440 - History of Journalism (3)

Traces the history of journalism in the United States as a literary, political, social, economic, and cultural institution. Prerequisite: CMM 2400

CMM 4460 - Global Media (3)

Comparative analysis of media systems, and the impact of market pressure and professional traditions on media form and content, with attention to the pushes and pulls of regionalization/globalization. Critical analysis of a variety of media (newspapers, films, television, advertisements, entertainment, internet) and their impact on audiences, subjectivities, societies and audiences.

CMM 4470 - Media and Politics (3)

This upper level course provides students with theoretical, critical, and historical perspectives for analyzing how political campaigns communicate with the public and how the news media cover politics. Topics include political conventions, debates, candidate speeches, political advertising, opinion poll news reports, news commentary, political humor, and new media uses. No prerequisites.

CMM 4590 - Advanced Media Practicum (3)

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

CMM 4600 - Integrated Communications Campaigns (3)

Explores techniques for researching, designing, presenting, and evaluating communication campaigns. Course emphasizes integration of public relations and advertising strategies in a comprehensive plan. Prerequisite(s): CMM-2800 and CMM-3600 or CMM-3700 or MKT-3000

CMM 4610 - Social Media & Strategic Comm (3)

This course teaches the principles of social media and how they should be utilized in strategic communication contexts, mainly in public relations. This is a semi-lecture course, combining discussions, case studies, and hands-on tasks. Students will create a social media campaign as a final project. Prerequisite: CMM 3600 or CMM 3700

CMM 4640 - Public Relations Case Studies (3)

Analyzes a wide range of public relations situations that actual organizations have confronted. Students read about and critique real-life cases, devise alternative strategies, and compare solutions. Course emphasizes strategic thinking and problem solving. Prerequisite: CMM 3600

CMM 4650 - International Public Relations (3)

Explores the effect of cultural differences on the practice of international public relations. Readings discuss the significance, for public relations practitioners, of differences in language, gender roles, time and space orientations, ethical norms, symbolic rituals, and institutional structures. Prerequisite: CMM 3600

CMM 4700 - Advertising Research and Strategic Planning (3)

Discusses use of primary and secondary research to develop objectives and strategies for an integrated advertising and promotion plan. Research methods used may include focus groups, observation, structured interviews, mall intercepts, and tested questionnaires. Prerequisite(s): CMM-2800 and CMM-3600 or CMM-3700 or MKT-3400

CMM 4720 - NSAC Advertising Competition (3)

Students participate in annual American Advertising Federation competition. They work as an advertising agency preparing research, media, creative, public relations and event marketing plans, and preparing plans book and making client presentation for national competition. Prerequisite: CMM 4700

CMM 4800 - Introduction to the Ethnography of Communication (3)

This course will cover the ethnography of communication as a method (data collection and data analysis techniques) and methodology (the theoretical tenets that will guide the study of cultural communication). Students will learn how to use ethnographic research methods and write up their own ethnographic report. Pre-requisites: CMM 2000 & CMM 2800 or instructor's permission.

CMM 4810 - Digital Storytelling (3)

As a cultural practice digital storytelling is a way to learn about and represent the narratives existing within communities. This course teaches the theoretical and practical skills needed to create a digital story: (1) qualitative research methods, (2) narrative writing, and (3) digital production. Prerequisites: CMM 2500 and CMM 2800

CMM 4910 - Internship (1-6)

Work experience with local business or non-profit organizations in the student's area of communication interest. Instructor permission required. Prerequisites: CMM 1000, CMM 1200, and either CMM 2100 or CMM 2120

CMM 4960 - Senior Capstone (3)

Students will engage in a culminating project synthesizing the theories, research methods, and applications of Communication major coursework. Projects will showcase creativity, creative thinking, and the ability to solve a problem and/or address an important and significant issue in a way that demonstrates knowledge/skill mastery. Prerequisite(s): CMM-2800

CMM 5000 - 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 5010 - 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 5020 - 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 5050 - Rhetorical Theory & Criticism (3)

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

CMM 5060 - Contmptry Rhetorical Theory (3)

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

CMM 5070 - 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 5080 - 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 5200 - 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 5300 - 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, analyze actual attempts at dialogic communication in special difficult contexts involving conflict, prejudice, and political ideologies.

CMM 5340 - 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 cultural 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 5410 - 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 5440 - Communication Ethics (3)

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

CMM 5450 - 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 5800 - 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 5810 - Digital Storytelling (3)

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

CMM 5820 - Advanced Research Methods (3)

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

CMM 5890 - Applied Project (3)

Credits taken by students completing an Applied Project.

CMM 5980 - Graduate Reading Course (1-3)

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

Computer Science (CSCI)**CSCI 1010 - Introduction to Computer Science: Principles (3)**

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

CSCI 1020 - Introduction to Computer Science: Bioinformatics (3)

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

CSCI 1030 - Introduction to Computer Science: Game Design (3)

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

CSCI 1040 - Introduction to Computer Science: Mobile Computing (3)

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

CSCI 1050 - Introduction to Computer Science: Multimedia (3)

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

CSCI 1060 - Introduction to Computer Science: 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. Prerequisite: Calculus I (or concurrent enrollment).

CSCI 1070 - Introduction to Computer Science: Taming Big Data (3)

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

CSCI 1080 - Introduction to Computer Science: Web Development (3)

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

CSCI 1300 - Introduction to Object-Oriented Programming (4)

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(s): MATH-120 or equivalent, and C- or better in one of CSCI-1000 through CSCI-1090 or equivalent programming experience with permission.

CSCI 1890 - Object Oriented Practicum (1)

Labs and lectures in object-oriented programming to supplement knowledge gained in CSCI-1060 for students wishing to continue on to CSCI-180, who have not taken CSCI-1300. Offered on an as-needed basis.

CSCI 2050 - Computer Ethics (3)

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

Prerequisite(s): PHIL-2050.

CSCI 2100 - 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. Prerequisite(s): A 'C-' or better in CSCI-1300; passing grade or concurrent enrollment in MATH-1660.

CSCI 2190 - Computational Problem Solving (1)

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

Prerequisite(s): CSCI-2100 or equivalent.

CSCI 2300 - 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(s): At least a 'C-' in CSCI-2100.

CSCI 2400 - 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.

Prerequisite(s): CSCI-1300 and MATH-1660

CSCI 2980 - Independent Study (0-4)

Prior approval of sponsoring professor and chair required.

CSCI 3100 - Algorithms (3)

Introduction to analysis and complexity of algorithms. Big-O notation. Runtime analysis of algorithms for traversing graphs and trees, searching and sorting. Recursive versus iterative algorithms. Complexity, completeness, computability. Prerequisites CSCI-2100, MATH-1660, and MATH-1510.

CSCI 3200 - 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(s): CSCI-2300.

CSCI 3250 - 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.

Prerequisite(s): CSCI-2100 and either CSCI-2400 or ECE-3217.

CSCI 3300 - Software Engineering (3)

Theory and practice of software engineering. Design and implementation of software systems. Levels of abstraction as a technique in program design. Organized around major group programming projects. Prerequisite(s): CSCI-2300.

CSCI 3450 - Microprocessors (3)

Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition.

Prerequisite(s): CSCI-1300 or CSCI-1060. Co-requisite: CSCI-3451.

CSCI 3451 - Microprocessor Lab (1)

Laboratory experiments to emphasize material covered in CSCI-3450. Co-requisite: CSCI-3450

CSCI 3500 - 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.

Prerequisite(s): CSCI-210 and either CSCI-2400 or ECE-3217.

CSCI 3650 - 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(s): CSCI-3500.

CSCI 3710 - 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(s): CSCI-

CSCI 3760 - Artificial Intelligence (3)

Fundamental introduction to the broad area of artificial intelligence and its applications. Topics include knowledge representation, logic, search spaces, reasoning with uncertainty, and machine learning. Prerequisite(s): CSCI-2100.

CSCI 3820 - Computer Graphics I (3)

Applications and implementation of computer graphics. Algorithms and mathematics for creating two and three dimensional figures. Animation and two and three dimensional transformations. Interaction, windowing, and perspective techniques. Coding using the graphics library OpenGL.

Prerequisite(s): CSCI-2100, MATH-2530, and (MATH-3110 or MATH-3120)

CSCI 3910 - Internship with Industry (0-3)

Department permission required.

CSCI 3980 - Independent Study (0-3)

Prior approval of sponsoring professor and chairperson required.

CSCI 4130 - Automata (3)

The theory of automata and finite state machines. Regular languages and automata. Algebraic coding theory and shift registers. Algebraic matching theory. Prerequisite(s): CSCI-2100.

CSCI 4550 - 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(s): CSCI-3500.

CSCI 4650 - Computer Security (3)

Fundamental introduction to the broad area of computer security. Topics include access control, security policy design, network security, cryptography, ethics, securing systems, and common vulnerabilities in computer systems.

Prerequisite(s): CSCI-2100. CSCI-3500 and CSCI-2050 / PHIL-3410 are recommended but not required.

CSCI 4850 - High-Performance Computing (3)

Use processor features, multiple cores, memory, graphics cards and cluster to maximize efficiency of computer software. Topics include vectorizing code cache and memory efficiency, multithreaded programming, GPU programming and distributed programming. Prerequisite(s): CSCI-2100 (required); CSCI-3100 and CSCI-3500 recommended.

CSCI 4910 - Internship with Industry (0-3)

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

CSCI 4915 - 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 4950 - Senior Residency (0)

Required for graduation seniors.

CSCI 4961 - Capstone Project I (2)

The first part of a two-course sequence serving as a concluding achievement for graduating students. In this course, students develop a proposal, collect and formalize specifications, become acquainted with necessary technologies and create and present a detailed design for completing the project. Prerequisite: Completion of all 2000-level CSCI requirements and at least 7½ credit hours toward graduation (i.e., second-semester junior standing or beyond).

CSCI 4962 - Capstone Project II (2)

The continuation of CSCI-4961. In the second part of the sequence, student complete their project based upon the design that was developed during the first part of the sequence. Students must demonstrate continued progress throughout the semester and make a preliminary and final presentation of the results. Prerequisite(s): CSCI-4961.

CSCI 4980 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chairperson required.

CSCI 5150 - Computational Geometry (3)

The goal of computational geometry is to find efficient algorithms for solving geometric problems. Topics include convex hulls, Voronoi diagrams, Delaunay triangulations, geometric search and geometric data structures. (Offered: As needed/Periodically)

CSCI 5710 - Databases (3)

This course introduces the foundations of database systems: the relational model, file organization and indexes, relational algebra, structured query language, the entity model, normalization, object databases. (Offered: As needed/Periodically)

CSCI 5750 - Machine Learning (3)

This course introduces students to the field of machine learning with emphasis on the probabilistic models that dominate contemporary applications. Students will discover how computers can learn from examples and extract salient patterns hidden in large data sets. The course will introduce classification algorithms that predict discrete states for variables as well as regression algorithms that predict continuous values for variables. Attention will be given to both supervised and unsupervised settings in which (respectively) labeled training data is or is not available. Emphasis is placed on both the conceptual relationships between these different learning problems as well as the statistical models and computational methods used to employ those models (Offered: As needed/Periodically)

CSCI 5830 - Image Processing (3)

This course will introduce the fundamentals of image processing and computer vision, including image models and representation, image analysis methods such as feature extraction (color, texture, edges, shape, skeletons, etc.), image transformations, image segmentation, image understanding, motion and video analysis, and application-specific methods such as medical imaging, facial recognition, and content-based image retrieval. (Offered: As needed/ Periodically)

CSCI 5850 - High-Performance Computing (3)

Use processor features, multiple cores, memory, graphics cards and cluster to maximize efficiency of computer software. Topics include vectorizing code cache and memory efficiency, multithreaded programming, gpu programming and distributed programming. (Offered: As needed/Periodically)

Dance (DANC)

DANC 2590 - Jazz Dance (2)

Special notes: This class is repeatable once for credit. Objectives: To guide students in studio experience in Jazz Dance. All class activities are practical. Some in-class performance and accompanying critique will be used in determining grades.

DANC 2600 - Modern Dance (2)

Special Notes: This class is repeatable once for credit. Objectives: to guide students in studio experience in Modern Dance. All class activities are practical. Some in-class performance and accompanying critique will be used in determining grades.

DANC 2610 - Intermediate Jazz Dance (2)

This course is intended to continue the students exploration and practice of jazz dance building on the skills developed in the beginning jazz dance. Students will develop short and long movement phrases continuing their skills in composition and choreography based on material covered in class.

DANC 2620 - Intermediate Modern Dance (2)

This course is intended to further develop the students ability in physical movement in terms of space, time and dynamics as begun in the beginning modern class. This course will focus on somatic intelligence and the development of this non-stylized aesthetic movement skills as introduced on world stages in this century.

DANC 2630 - 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. Offered on the Madrid Campus only.

DANC 2640 - Dance: Ballet, Modern, & Jazz (3)

Students are introduced to the movement philosophies and techniques used in ballet, modern, and jazz dance. Students will be able to analyze, appreciate, and perform each dance form. Students will learn to regard their bodies as expressive, intelligent instruments that are capable of adapting to different styles of movement performance.

DANC 2670 - The New Flamenco Experience (2)

Traditional Spanish dance with a contemporary flair. Learn rumbas, tangos and bulerías, and then show them off at modern flamenco clubs around the city. The perfect choice for a student interested in mastering Spanish dance in only one semester!

DANC 2800 - Ballet Technique I (2)

This class will introduce students to beginning classical ballet dance technique and classroom etiquette. In addition, students will be introduced to basic ballet terminology, history, choreographers, dancers, theater traditions and stage performances. Students will also hone body awareness, alignment, strength, flexibility, stamina and artistry through consistent, focused class participation.

DANC 2850 - Musical Theatre Dance (2)

This course will introduce students to a variety of dance styles created for the American Musical Theater stage. Students will learn about individual choreographers, history, movement vocabulary and dance scenes from different musicals. Course work will include daily warm-ups, rehearsal, as well as film viewings and attendance of live performances.

Earth & Atmospheric Sciences (EAS)

EAS 1010 - Earth Systems I-The Solid Earth (1-3)

This course covers the interactions between land, water, air, and life with special emphasis on humans and the environment. EAS-1010 focuses on the solid earth and surface environments; EAS-1030 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 1020 - 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-1010 focuses on the solid earth and surface environments; EAS-1030 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 1030 - 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-1010 focuses on the solid earth and surface environments; EAS-1030 focuses on the oceans and atmosphere. Either course can be taken independently. Satisfies Science Core requirement.

EAS 1040 - Earth's Environment II Lab (1)

Two hour laboratory per week. Illustrates and supplements the material covered in lectures of EAS-1030 Earth's Dynamic Environment II. Several short field trips are taken during the semester. Not required for students enrolled in EAS-1030, though EAS-1030 is a Prerequisite or co-requisite for the lab.

EAS 1050 - Introduction to Oceanography (1-3)

Lecture three hours per week. Provides an introduction to ocean basin formation, chemical and physical properties of sea water, waves, currents, tidal forces and tides, interaction of land and ocean in coastal environments, marine biology and ocean resources. Fulfills three hours of science requirement. Spring semester, alternate years.

EAS 1070 - 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, air climate. Fulfills three hours of science requirement. Fall and Spring semester.

EAS 1080 - Introduction to Environmental Science (3)

This course is a first introduction to the main topics of environmental science with emphasis on human interactions with the environment. Sustainability is unifying theme throughout the course. The knowledge and skills learned in this course will inform and guide students' life-decisions and their impacts on the environment. Topics covered include the scientific process and critical thinking, matter and energy, ecosystem ecology and biomes, evolution, biodiversity, community ecology, human population growth, geologic processes, land resources and agriculture, nonrenewable and renewable energy, water resources and water pollution, air pollution, solid waste generation and disposal, human health risk, conservation of biodiversity, climate alteration and global warming.

EAS 1081 - Introduction to Environmental Science Laboratory (1)

This is a laboratory to complement EAS 1080, Introduction to Environmental Science. The lab is intended primarily for science, engineering, and other majors with a strong interest in Environmental Science. Topics covered include: matter and energy, evolution, biodiversity, community ecology, human population growth, geologic processes, land resources, agriculture, energy, water, air, solid waste, human health, and climate change.

EAS 1090 - Climate Change (3)

Introduction to climate change. Understand what is happening to the climate system, what evidence there is and what has happened in the past. We will study the reasons for the societal debate and evaluate proposals for international action on climate change. Lecture course, satisfies 3 hours of Science requirement and 3 hours of Global Citizenship requirement.

EAS 1140 - 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 1170 - Physical Geography (3)

Lecture three hours per week. Provides an introduction to the origin of land forms, earth resources, climate and weather, implications of human use of natural resources. (Satisfies Missouri Teaching Certification Requirement.) Fulfills three hours of science requirement. Fall semester.

EAS 1180 - 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 1300 - Seismology of Nuclear Explosions (3)

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

EAS 1310 - Water-Our Precious Resource (3)

This course is focused on freshwater, which is one of most important and vulnerable resources on Earth. Availability of freshwater for human consumption, animal husbandry, and crop irrigation will become a major focus of national and international relations in the years to come. In this course, we will be learning the basics about freshwater resources, drinking-water and waste-water treatments, water-borne disease, water pollution, river dynamics and flooding, land use in flood plains, and national and international conflicts related to water resources. Each class session will be comprised of lecture (~2hours), water laboratory simulation (~2hours), and field trip (~3hours). Transportation is provided for the field trips. Fulfills 3 hours of science requirement.

EAS 1320 - 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 an 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 1330 - 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 1350 - 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 1360 - Beauty of Atmosphere (3)

The student understands the physical processes responsible for severe local storms, hurricanes, and winter storms. In addition to understanding the power behind these phenomena, the student marvels at the beauty of optical phenomena such as rainbows, halos, mirages, coronas and sundogs and inquiries about the mechanism. Fulfills 3 hours of science requirement.

EAS 1370 - Meteorological Aspects of Emergency Response (3)

Two 75 minute periods per week. The first period and 25 minutes of the second period will be devoted to lecture topics. The last 50 minutes of the second period will involve a case study. Field trips to the St. Louis Forecast Office of the National Weather Service and to an Emergency Operations Center are required. 75% of situations involving federal, state and local emergency responders and agencies are directly caused by weather phenomena. Some of these are obvious, such as tornadoes, hurricanes and flooding; while others, like a heat wave or extreme winter weather may not be obvious. In addition, conflagrations, chemical spills and releases, and air pollution incidents require weather information and forecasts.

EAS 1380 - Missouri Climate (3)

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

EAS 1400 - Energy Resources for a Sustainable Future (3)

Analysis of the emerging crisis in fossil fuels as the cheap energy source for the future. Is limitless petroleum, gas, or coal available, accessible, and at what cost? Are there miracle cures from fundamental physics, biology? How much energy can be supplied by solar, wind, and other sources?

EAS 1420 - 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-1400 or better, meteorology major or permission of the instructor.

EAS 1530 - Aviation Meteorology (3)

This course will present the fundamentals of meteorological theory with a specific application to aviation and flight. The course will examine standard meteorological fields along with their roles in generating sensible weather. In addition, the course will study weather hazards specific to aviation including wind shear, turbulence, icing, visibility and fog.

EAS 1600 - Sustainable Energy (3)

Scientific and economic impacts of the crisis in waning fossil fuels as the world's cheap energy source. Future petroleum, gas, and coal recovery will likely be either environmentally unacceptable or too costly. The challenges of supplying energy from solar, wind, and other renewable sources will be highlighted.

EAS 1800 - Introduction to Earthquakes (1-3)

Lecture three hours per week. Provides an introduction to the science of earthquakes. Discussions include the general character of science, plate tectonics, geologic time, seismic hazards, faults and faulting, earthquake prediction, seismic waves, and Earth structure and composition. Fulfills three hours of science requirement. Fall semester.

EAS 2110 - 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. Prerequisite(s): MATH-1510, EAS-2530, or permission of the instructor. Must be taken concurrently with EAS-2440.

EAS 2170 - Geographic Information System in Civil Engineering (3)

This course discusses the fundamental concepts of GIS, the methods and software used to solve civil engineering problems. The course also covers skills to deal with remote sensing data, basic and differential GPS surveying prepare students for today's growing business needs in civil engineering companies and government agencies. Students may only apply credits towards their graduation requirements from one of the following courses: EA 2170, BIOL-4170, EAS-4170, or SOC-465.

EAS 2200 - Mineralogy (3)

Lecture three hours per week. Crystallography, physical, chemical, and descriptive mineralogy.

EAS 2210 - 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 2300 - Geology for Engineers (3)

Engineering projects deal with surface materials and landforms on a daily basis. A proper understanding of material properties and processes that lead to their formation is critical to understand their behavior. This course introduces students to the basic principles of earth science, the composition of earth materials and processes that shape the Earth and how these relate to human modifications.

EAS 2400 - 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 geological features, keep a field notebook and map simple geologic structures. Most of the course will be conducted in the field. Fall semester.

EAS 2420 - 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 2440 - 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(s): MATH-1510, Co-requisite: PHYS-161/162, or permission of the instructor. Must be taken concurrently with EAS-2110.

EAS 2450 - Communicating in Science (3)

Lecture three hours per week. Critical reading of and oral and written presentations about scientific articles. Emphasis will be on the examination of different types of sources and the synthesis of the content for different audiences. Spring Semester.

EAS 2530 - 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(s): EAS-1420, co-requisite: MATH-1510 or better math course, or permission of the instructor.

EAS 2600 - 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 2700 - Sustainable Development in Latin America (3)

Provides an introduction to the analysis of Latin American environmental problems linked to the sustainable development possibilities of the region.

EAS 3050 - 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 3100 - 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. Prerequisite(s): EAS-1010/1020 or EAS-1030/1040; BIOL-1040 or BIOL-1060; CHEM-1110; or consent of instructor.

EAS 3150 - 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. Prerequisite(s): EAS-2440, EAS-2110, or permission of the instructor.

EAS 3160 - 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(s): EAS-3150, or permission of the instructor.

EAS 3250 - 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 3310 - Paleontology (3)

Lecture three hours, laboratory two hours per week. Classification, anatomic structure and geological history of invertebrate fossils.

EAS 3330 - Physical Meteorology I (3)

The study of the physical principles underlying atmospheric processes of dry and moist air. Additional topics include the analysis of atmospheric stability and thermodynamic diagrams. Prerequisite(s): MATH-1520, PHYS-1610/PHYS-1620, EAS-2440, or permission of the instructor.

EAS 3340 - Physical Meteorology II (3)

The study of cloud microphysics and radiative transfer in the atmosphere. Topics include absorption and emission of radiation, solar and terrestrial radiation, cloud formation, heat and energy transfer, and optical phenomena.

Prerequisite(s): PHYS-1630/PHYS-1640, a 'C' or better in EAS-3330, or permission of the instructor. Co-requisite: MATH-2530.

EAS 3350 - 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. Prerequisite(s): EAS-1010 and EAS-1030.

EAS 3400 - Soils- Formation, Properties, Identification, and Current Issues (3)

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

EAS 3500 - NUMERICAL MODELING APPLICATIONS (3)

The input data and procedures for running numerical weather prediction models as well as the analysis of model output. Topics include: Numerical model components, model input requirements, cluster computing, analysis procedures, numerical model data formats, and analysis and display software.

Prerequisite(s): MATH-1520, PHYS-1630/PHYS-1640, EAS-3330, or permission of the instructor.

EAS 3600 - A Future Based on Sustainable Energy (3)

Assuming available fossil fuels will soon be exhausted, we examine alternative renewable resources and nuclear energy to sustain current US consumption. Mid-Western States will be highlighted for their wind, solar, and geothermal potential. Implications for new transportation systems, power generation, and community development will be quantitatively examined. Prerequisite(s): MATH-1400, EAS-1400 or equivalent.

EAS 3700 - Mesoanalysis and Severe Storms (3)

The study of the structure, dynamics and climatology of severe local storms. Topics include: severe local storm climatology, the severe storm environment, mesoscale convective systems, supercells, tornados and tropical cyclones. Forecasting techniques for assessing the severe weather morphology and potential will also be covered. Prerequisite: EAS-333, or permission of the instructor.

EAS 4030 - Elements of Air Pollution (3)

Meteorological aspects of air pollution. Topics include atmospheric transport, turbulence models, geochemical cycles, stratospheric ozone, oxidation, ozone, aerosols, and acid rain. Current topics in air pollution along with health effects and policy implications will also be addressed. Prerequisite(s): MATH-1510, EAS-2530 or EAS-1030, or permission of the instructor.

EAS 4050 - Petrology (3)

Origin, occurrence, classification and characteristics of igneous and metamorphic rocks. Lecture three hours per week. Spring or Fall semester.

EAS 4060 - 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 4070 - Coastal Processes & Morphology (3)

The origin/evolution of coastal landforms and the physical processes responsible for their creation and modification, including the following topics: geomorphic classification of coasts, sediment characteristics, sea level, tides, waves, nearshore currents, longshore and cross-shore sediment transport, beach and nearshore morphology, barrier island systems, salt marshes, cliffed coasts, and the effects of climate change on coastal environments.

EAS 4100 - Surface Processes (3)

Overview of physical and chemical processes and landform development in modern and ancient surface environments. Field trip required. Prerequisites are EAS-1010 and EAS-1020. Co-enrollment in EAS-4110 is strongly encouraged.

EAS 4110 - Surface Processes Laboratory (1)

This laboratory illustrates and supplements the material covered in lectures of EAS-4100 Surface Processes. Several field trips are taken during the semester. Prerequisites are EAS 101, 102, and 240. EAS-4100 is a Prerequisite or co-requisite.

EAS 4130 - Geotechnics (3)

Geologists and Environmental Scientists are faced with slope stability, rock and soil loss problems at one point or another in the professional work. These issues directly affect population and infrastructure, as well impacts negatively household, state and federal budgets. It is of paramount importance to understand not only the behavior natural material under critical equilibrium or unstable conditions, and how they will react to induced disturbances, but also, the mechanisms to improve and resolve such conditions. This course presents the properties of geologic materials and general principles that govern the stability of rock and soil masses. In addition, it provides students with tools to characterize, assess and analyze unstable masses, and to provide solutions for their improvement, containment and stabilization.

EAS 4150 - 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.

Prerequisite(s): MATH-162, PHYS-1630/PHYS-1640, or permission of the instructor. Must take EAS-3340 concurrently.

EAS 4170 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-4170, BIOL-4170, or SOC-465.

EAS 4180 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography.

Prerequisite(s): one of the courses EAS-4170, BIOL-4170, or SOC-465. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-4180, BIOL-4180, or SOC-4660.

EAS 4190 - Geospatial Methods in Environmental Studies (1-3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment.

EAS 4200 - Synoptic Meteorology I (3)

Extratropical cyclones, polar and tropical jet streams, synoptic climatology, teleconnections and quasi-geostrophic theory as it applies to weather forecasting. Prerequisite(s): EAS-3340 or permission of the instructor. Must take EAS-4440 concurrently.

EAS 4220 - Synoptic Meteorology II (3)

Continuation of the laboratory study began in EAS-4220. Topics include thermodynamic diagrams, sounding analysis, stability indices, isentropic analysis, severe local storms and numerical weather prediction as a forecasting tool. Prerequisite(s): MATH-2530, a 'C' or better in EAS-4200, or permission of the instructor. Students in the B.S. program must take EAS 4450 concurrently.

EAS 4230 - 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 4250 - Project in Environmental Science (1-6)

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 4260 - 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 4280 - 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. Prerequisite(s): CHEM 1110, EAS 1010, and EAS 1030. (Offered every Spring in even years)

EAS 4300 - 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 4310 - Structural Geology Laboratory (1)

Laboratory focuses on map interpretation, collection of structural data, and geometrical techniques for solving structural problems. Half-day and weeker field trips are an integral part of the laboratory.

EAS 4330 - Climate Change and Variability (3)

The analysis of the fundamental principles and techniques used for climate change detection, attribution, and projection. Topics include: climate system interplay, natural variability and likely anthropogenic influences of the climate system, and climate change scenarios and modeling. Prerequisite(s): MATH-351, EAS-4440, or permission of the instructor.

EAS 4350 - 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 4370 - Earth Dynamics (3)

Lecture three hours per week. The relation between plate tectonics and properties of Earth's interior inferred from geological and geophysical observations. Emphasis will be on the relation of Earth's surface features to processes at depth. Alternate Fall semesters. Prerequisite(s): EAS-1010 and MATH-1510.

EAS 4400 - 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 4440 - Principles of Dynamic Meteorology I (3)

Dynamic principles underlying large-scale atmospheric motion. Topics include the development of the primitive equations, horizontal wind approximations, thermal wind, vertical coordinate transformations, kinematics, circulation theorem and the flow in the planetary boundary layer. Prerequisite(s): MATH-2530, EAS-3340 or permission of the instructor. Must take EAS-4200 concurrently.

EAS 4450 - Principles of Dynamic Meteorology II (3)

Analytical investigation of atmospheric motions. Topics include: wave dynamics, sound waves, gravity waves, Rossby waves, geostrophic adjustment, baroclinic instability and isentropic potential vorticity.

Prerequisite(s): MATH-3550, a C or better in EAS-4440, or permission of the instructor. Students in the B.S. program must take EAS-4220 concurrently.

EAS 4470 - Elementary Tropical Meteorology (3)

The study of the structure, dynamics and climatology of tropical weather. Topics include: the trade winds, intertropical convergence zone, Hadley and Walker circulations, El-Nino/Southern Oscillation, the Madden-Julian oscillation, and tropical cyclones. Prerequisite(s): EAS-3330 or permission of the instructor.

EAS 4480 - Introduction to Remote Sensing (3)

Fundamental knowledge on the physics of remote sensing, photogrammetry, multispectral, hyperspectral, thermal imaging and RADAR and LIDAR principles are reviewed in lectures while lab assignments cover image processing, environmental modeling & analysis. Course objective is to demonstrate present applications of RS in environmental sciences with software training in ENVI+IDL, SARscape.

EAS 4490 - Microwave Remote Sensing: SAR Principles, Data Processing and Applications (3)

This course introduces SAR principles, data sources, data processing chain, and SAR applications in measuring earthquake deformation, land subsidence and building sinking, and tree height estimation, DEM generation, and monitoring environmental issues. These different topics will be covered through a series of stepwise exercises involving different kinds of SAR data.

EAS 4500 - Scientific Communications (3)

Lecture two hours per week. Principles of effective writing for a scientific audience; the structure of reports, papers and communications; techniques for the organization and delivery of results for oral, written and poster presentations. Spring or Fall semester.

EAS 4510 - Principles of Seismic Exploration (2)

It is also recommended that EAS-4520 be taken concurrently. Exploration for natural resources using seismic waves; refraction and reflection methods and interpretation; elementary seismic data processing. Spring or Fall semester.

EAS 4520 - Seismic Exploration Lab (1)

Laboratory and field problems, two hours per week. Collection and interpretation of seismic data; applications of the computer to data interpretation. Fall or Spring semester.

EAS 4530 - Principles of Electrical Exploration (3)

Electrical properties of earth materials, natural electrical fields, electrical fields in layered media, electrical methods of exploration. Spring or Fall semester.

EAS 4550 - 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 4560 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

EAS 4600 - 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 4620 - 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 4650 - Weather Forecasting (3)

The development of skills to assess the current and future states of the atmosphere. Efforts are focused on proper weather briefing techniques and producing forecasts for short term, extended, fire, and aviation weather. The will also be post-evaluation of forecasts. Prerequisite(s): EAS-4220 or permission of the instructor.

EAS 4680 - Mesoscale Meteorology (3)

Theoretical examination of the dynamical and thermodynamical processes associated with mesoscale meteorological phenomena. Topics include vorticity and divergence tendencies, supercell thunderstorms, quasi-linear convective systems, mesoscale convective vortexes, and downbursts.

Prerequisite(s): MATH-351, EAS-4450, or permission of the instructor.

EAS 4700 - 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 4720 - 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 4780 - 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 5010 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-5010, BIOL 5170, IAS 5170 or SOC-5650

EAS 5020 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS biogeography. Each part is instructed by a professor specialized in the particular area. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-5020, IAS-5180, BIOL-5180 or SOC-5660

EAS 5030 - Geospatial Methods in Environmental Studies (3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment.

EAS 5040 - 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 5060 - Physics of Solid Earth (3)

Structure and processes in the earth's interior; composition, heat flow, rheology, and geomagnetism. Offer as needed.

EAS 5070 - Advanced Coastal Processes (3)

Origin and evolution of coastal landforms and the physical processes responsible for their creation and modification, including: geomorphic classification of coasts, sediment characteristics, sea level, tides, waves, nearshore currents, longshore and cross-shore sediment transport, beach and nearshore morphology, barrier island systems, salt marshes, cliffed coasts, and effects of climate change on coastal environments.

EAS 5080 - Dynamics of the Atmosphere (3)

Dynamic core course of the graduate program. Comprehensive treatments of dynamic processes of the atmosphere on all spatial-temporal scales. Integrates dynamic aspects of atmosphere ranging from storm movement to general circulation. Topics include cloud-storm dynamics, mesoscale processes, large-scale dynamics, and global circulation.

EAS 5090 - Physics of the Atmosphere (3)

Physics core course of the graduate program. Comprehensive treatment of physical processes of the atmosphere on all spatial-temporal scales. Covers atmospheric processes ranging from eddy turbulence to general circulation. Topics include boundary layer turbulence, atmospheric radiation, cloud physics, numerical modeling.

EAS 5110 - Computing in Atmospheric Science (2-3)

EAS 5110 - Computing in Atmospheric Science This course includes practical experience carrying out numerical weather prediction and re-analysis; pre-processing of meteorological data to run computer models; and post-processing of model output for data visualization and analysis. During the course, students will develop skills with different computer languages and software packages for accomplishing these tasks. 2.000 or 3.000 Credit hours

EAS 5120 - Time Series Analysis in Geophy (3)

Fourier transform, Fourier series, discrete Fourier transform, fast Fourier transform, digital filtering. Applications to Geophysics. Offered occasionally.

EAS 5130 - Geotechnics (3)

Geologists and Environmental Scientists are faced with slope stability, rock and soil loss problems at one point or another in the professional work. These issues directly affect population and infrastructure, as well impacts negatively household, state and federal budgets. It is of paramount importance to understand not only the behavior natural material under critical equilibrium or unstable conditions, and how they will react to induced disturbances, but also, the mechanisms to improve and resolve such conditions. This course presents the properties of geologic materials and general principles that govern the stability of rock and soil masses. In addition, it provides students with tools to characterize, assess and analyze unstable masses, and to provide solutions for their improvement, containment and stabilization.

EAS 5150 - 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 5170 - 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 5180 - 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 5190 - Seminar in Geoscience (2)

In-depth study of recent research developments in geophysics. This seminar or EAS-5390 is offered every semester.

EAS 5200 - 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 5220 - 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 5230 - 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 5240 - 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 5250 - 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 5260 - 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 5270 - 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 5280 - Environmental Geochemistry (3)

Introduction to the geochemistry of natural waters and the processes that alter their composition. Key principles of aqueous geochemistry are introduced and then used to describe the main controls on pristine and polluted soil, surface water, and groundwater environments. Topics include acids and bases, mineral solubility, carbonate chemistry, chemical speciation, redox reactions, adsorption and ion exchange, and global geochemical cycles. Offered in spring. Prerequisites: Introductory geoscience and chemistry courses equivalent to EAS 1010, EAS 1030, CHEM 1110, and CHEM 1120 or permission of instructor.

EAS 5290 - Mesometeorology (3)

Comprehensive synoptic and theoretical discussion of mesoscale meteorological events, thermally induced circulations and nonconsecutive circulations. Offered occasionally.

EAS 5300 - Seminar in Atmospheric Science (0-1)

Student will choose paper(s) from recent literature related to a topic assigned. After thorough study of the papers, students present their findings around the papers in the class. Peers, students, instructor, and participating professor provide written critical comments. Presenting students respond to the comments and indicate how he/she would improve their presentation based on the feedback.

EAS 5330 - Communicating in Research (2)

Students will enroll in EAS-5300 and EAS-5330 and meet concurrently. In common with EAS 5300, students and faculty will choose papers from recent literature relevant to research topics in the department. Individual students will be assigned to present the papers to the group and lead group discussions. A Computer Supported Peer Review in Education (CSPRE) will be used to collect feedback and grades from the entire class. The presenters will evaluate the feedback received (CSPRE-back-evaluations). This will provide a mechanism for enhanced critical evaluation with a view to improving students' communication and review skills. (Offered every Fall)

EAS 5340 - Cloud Physics (3)

Microphysics of warm and cold clouds, including diffusion, collision-coalescence, riming and aggregate processes. Offered occasionally.

EAS 5360 - 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 5380 - 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 5390 - Seminar in Seismology (2)

In depth study of recent research developments or specific topics not covered in formal courses. This seminar or EAS-5190 is offered every semester.

EAS 5400 - Continuum Mechs in Wave Propag (3)

Concepts of continua, tensor analysis, stress deformation, and elasticity will be covered in detail. Other constitutive relations used to describe deformation in real materials such as plasticity, viscoelasticity, materials testing, thermoelasticity, and several classical boundary value problems relevant to the geosciences will be presented. Offered every Spring semester.

EAS 5420 - 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 5430 - 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 5440 - 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 5450 - Advanced Petrology (2)

An introduction to modern geochemical theory and methods and their application to the igneous and metamorphic rocks. Emphasis will be on the major and trace element geochemistry of crust and mantle rocks, and the use of geothermometers and geobarometers in deciphering the pressure-temperature histories of rocks. Offered every other year.

EAS 5460 - 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 5470 - 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 5490 - Microwave Remote Sensing: SAR principles, data processing and Applications (3)

This course introduces SAR principles, data sources, data processing chain, and SAR applications in measuring earthquake deformation, land subsidence and building sinking, and tree height estimation, DEM generation, and monitoring environmental issues. These different topics will be covered through a series of stepwise exercises involving different kinds of SAR data.

EAS 5500 - Scientific Communication (3)

Principles of effective writing for a scientific audience; the structure of report papers and communications; techniques for the organization and delivery of results for written, oral, and poster presentations.

EAS 5510 - 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 5520 - 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 5540 - Poten & Elect Explorln 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 5560 - InSAR (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timesAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

EAS 5600 - Atmospheric Chemistry (3)

Focuses on chemical and physical processes that determine the composition of the troposphere and stratosphere. Emphasis is on regional and global-scale processes and the impact of global warming and climate change on these processes. Prerequisite(s): MATH-253. (Calculus III) or equivalent and CHEM-1125 (General Chemistry II) or equivalent, or permission of instructor

EAS 5610 - 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 5650 - Radar Meteorology (3)

Fundamentals of a pulsed Doppler and non-Doppler radar. Velocity and range folding. Doppler radar display and signature interpretation. Characteristics of convective storms and severe weather signatures. Offered every other Spring semester.

EAS 5700 - 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 5720 - 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 5750 - 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 temporal-spatial scales.

EAS 5800 - 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 5900 - Geoscience Journal Club (0-1)

Registration in Journal Club is required every semester.

EAS 5920 - Geoscience Journal Club (1)

Registration in Journal Club is required every semester.

EAS 5980 - Graduate Reading Course (1-3)

A critical evaluation of literature concerning a specific problem.

EAS 5981 - 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 6100 - 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 6190 - Adv Seminar in Geophysics (2)

In-depth analysis of topics for Ph.D. students. Offered occasionally.

EAS 6200 - 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 6310 - Advanced Seismology I (3)

Students will enroll in EAS-5300 and EAS-5310 and meet concurrently. In common with EAS-5300, students and faculty will choose papers from recent literature relevant to research topics in the department. Individual students will be assigned to present the papers to the group and lead group discussions. ¿Computer Supported Peer Review in Education¿ will be used to collect feedback and grades from entire class. The presenters will evaluate the feedback received (¿back-evaluations¿). This will provide a mechanism for enhanced critical evaluation with a view to improving student's communication and review skills.

EAS 6320 - 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 6480 - Gen Circulation of Atmosphere (3)

The nature and theories of the atmospheric general circulation, the energy and momentum budget of the atmosphere and the numerical simulation of the atmospheric general circulation. Offered occasionally.

EAS 6590 - Numer Mthds of Atmos Sciences (3)

Topics include the solution of linear algebraic systems, generalized Fourier Series methods of boundary-initial-value problems, finite difference solutions of partial differential equations and statistical techniques of geophysical data processing. Applications to problems of interest in the atmospheric sciences. Offered occasionally.

EAS 6900 - Geoscience Journal Club (1)

Registration in Journal Club is required every semester.

EAS 6920 - Geoscience Journal Club (1)

Registration in Journal Club is required every semester.

EAS 6981 - Independent Study (1-3)

The student undertakes an independent study of a chosen topic with the approval of a sponsoring professor and the Program Director.

Electrical & Computer Engr (ECE)**ECE 4245 - Computer Networks Design (3)**

Introduction to modern computer communication networks. Topics include point to point communication links and transmission of digital information; packet switching; multiplexing and concentrator design; multi-access and broadcasting; Local Area Networks; Wide Area Networks; ATM Networks; and ISDN; architectures and protocols for computer networks; the concept of OS reference mode; discussion of the OSI seven layers; physical interfaces and protocols; data link control layer; network layer; design issues and modeling techniques; case studies. Co-requisite or Prerequisite: ECE 3215 and ECE 3216.

English (ENGL)**ENGL 0900 - Introduction to Writing (3)**

Assists in the development of the basics of written expression and reading, including grammar, sentence and paragraph structure, thesis formulation, complexities of expository works. Pass/No Pass only.

ENGL 1500 - The Process of Composition (3)

Develops effective personal and expository prose writing skills, including methods of invention, organization, audience analysis, and style. Focuses on the compositional process.

ENGL 1900 - Advanced Strategies Of Rhetoric and Research (3)

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

ENGL 1920 - Advanced Writing for Professionals (3)

Advanced instruction in expository and argumentative writing with issues relevant to engineers. Not equivalent to ENGL-190. Restricted to students at Parks. Prerequisite: ENGL-150, or equivalent.

ENGL 1940 - Advanced Writing (3)

[Equivalent to ENGL 1900.] 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 3750, and 4940. Pre-requisite: ENGL 1500 or equivalent. Offered regularly.

ENGL 1950 - Advanced Writing about Urban and Social Problems (3)

ENGL 195 Advanced Strategies of Rhetoric and Research (3). The Micah section of this course engages students in writing about urban problems and about the stages by which ordinary people come to participate in, or to resist, social injustice. Emphasizes skills in analytical reading, critical thinking, persuasive argumentation, and research. Fulfills the English 190 Writing corequisite. No prerequisite.

ENGL 2020 - Introduction to Literary Study (3)

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

ENGL 2250 - Conflict, Social Justice and Literature (3)

This course introduces literary study within the context and theme of Cultural Conflict and Social Justice. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis and argumentative writing.

ENGL 2350 - Faith, Doubt and Literature (3)

This course introduces literary study within the context and theme of Faith and Doubt. Through the reading of a wide variety of genres - including drama, poetry, and fiction - this course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2400 - Introduction to Drama (3)

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

ENGL 2450 - Nature, Ecology & Literature (3)

This course introduces literary study within the context and theme of Nature and Ecology. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2550 - Gender, Identity & Literature (3)

This course introduces literary study within the context and theme of Gender and Identity. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2600 - Introduction to Short Fiction (3)

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

ENGL 2650 - Technology, Media & Literature (3)

This course introduces literary study within the context and theme of Technology and Media. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2750 - Film, Culture and Literature (3)

This course introduces literary study within the context and theme of Film and Culture. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

ENGL 2850 - Nation, Identity & Literature (3)

This course introduces literary study within the context and theme of nation and identity. Through reading a wide variety of genres - including drama, fiction, and poetry - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative and reflective writing. Prerequisite: ENGL 1900 or equivalent.

ENGL 3030 - The Writer as Reader (3)

In this course, we'll consider what it means to read like a writer (vs. a scholar) and practice doing this kind of reading ourselves on a range of short fiction. Students will complete weekly assignments that will be alternately critical (craft-oriented) or creative in nature and write a craft-oriented paper. Prerequisite: ENGL 2xxx

ENGL 3040 - Writing Literacy Narratives (3)

Enables students to understand what reading and writing mean to them, and to appreciate why cultures struggle for literacy. Students will write several essays/narratives. Offered regularly.

ENGL 3050 - Creative Writing: Poetry (3)

An introduction through reading and writing to common poetic forms. Offered regularly. Prerequisite: One ENGL 2000 Level Course.

ENGL 3060 - Creative Writing: Fiction (3)

An introduction through reading and writing to the fundamentals of short story writing, with some attention to the problems of longer narrative forms. Offered regularly. Prerequisite: ENGL 2xxx

ENGL 3070 - Creative Writing: Drama (3)

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

ENGL 3080 - Creative Writing: Non-Fiction (3)

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

ENGL 3090 - Creative Writing: Poetry and Translation (3)

A study through reading and writing of the problems involved in literature and translation. Specific techniques will be introduced through translation exercises. Emphasis may be on poetry, fiction or drama. Prerequisite: ENGL 2xxx

ENGL 3110 - American Short Story (3)

Studies short stories by nineteenth and twentieth-century American authors, show the unity and diversity of the form from the beginning to the present. Offered regularly.

ENGL 3130 - American Fiction (3)

Examines American fiction from the 19th century to the present, including cultural trends and historical contexts. Offered occasionally.

ENGL 3140 - Poetry (3)

Studies poetry to show the unity and diversity of the form from the beginning to the present. Offered occasionally.

ENGL 3180 - Film (1-3)

A study of selected films to show the diversity of films from the beginning to the present.

ENGL 3190 - Literature of Ridicule and Satire (3)

Examines satiric literature from Aristophanes to the contemporary American novel. Offered occasionally.

ENGL 3200 - Detective Fiction (3)

Examines detective and international spy literature. Offered occasionally.

ENGL 3210 - Fantasy and Literature (3)

Examines literature about imaginary beings and worlds, including chivalric romance, fairy tales, and ghost stories. Offered occasionally.

ENGL 3220 - Film and Literature (3)

Examines works of literature and film. Offered regularly.

ENGL 3230 - Journalism and Literature (3)

Examines works of literature and journalism. Offered occasionally.

ENGL 3240 - Reading the Female Bildungsroman (3)

Although as a genre the Bildungsroman has traditionally focused on the intellectual, social, and moral education of a male hero, women have variously employed this genre to tell alternate stories focused upon female intellectual, social, and sexual development. This course provides a critical examination of the American Female Bildungsroman. Students will consider American novels, films and television shows that depict a girl's emergence into an often hostile national and social order to consider how gender affects selfhood, citizenship, and authorship.

ENGL 3241 - Young Adult Literature (3)

Exploration of trends and issues in young adult literature, from its modern origins in the 1960s to its most recent thematic and literary innovations. Designed with beginning teachers in mind but also intended to meet the need of English majors and others with a general interest in the topic.

ENGL 3250 - British Literary Traditions to 1800 (3)

Examines representative works of medieval, renaissance, restoration, and eighteenth century British literature in light of historical and cultural developments. Strongly recommended for majors. Fall semester.

ENGL 3260 - British Literary Traditions after 1800 (3)

Examines representative works of nineteenth and twentieth century British literature in light of major historical and cultural developments. Strongly recommended for majors. Spring semester.

ENGL 3270 - American Literary Traditions to 1865 (3)

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

ENGL 3280 - American Literatures after 1865 (3)

Examines representative works in American literature after 1865 in light of major historical and cultural developments. Includes coverage of issues of cultural diversity (e.g. race, class, gender) in relation to American literary culture during the period. Strongly recommended for majors.

ENGL 3290 - American Literary Traditions: Special Topics (3)

Special topics in American literary traditions: content varies.

ENGL 3300 - Eastern European Literature (3)

Studies literary reactions to and treatments of some of the most sweeping changes in Europe. Offered frequently.

ENGL 3310 - World Literary Traditions I (3)

Studies selected literary works from the ancient world through the Renaissance. Offered occasionally.

ENGL 3320 - World Literary Traditions II (3)

Intended as a continuation of ENGL 340, studies selected works of literature from the seventeenth-century to the present. Offered occasionally.

ENGL 3330 - World Literary Traditions III (3)

Studies selected fiction, drama or other topics from a diverse range of authors. Offered occasionally.

ENGL 3340 - Modern Literature (3)

Studies the variety and range of modern contemporary literature. Offered occasionally.

ENGL 3350 - Selected Major British Authors (3)

A study of several major British writers. Offered occasionally.

ENGL 3353 - Scottish Literature: Rediscovering the Voices (3)

Review of key events and connections in Scottish history, politics and society, and their effects on Scottish literature. Close readings of texts from the Highlands, the East Coast, Edinburgh, Clydeside, and Orkney. Development of literary analysis and critical thinking skills, as well as effective response through discussion and written essays.

ENGL 3360 - Contemporary Irish Writing (3)

Examines the genres and themes in contemporary Irish literature and culture, including modernist literary texts, and aspects of Irish culture. Offered occasionally.

ENGL 3370 - The Oxford Christians: Tolkien, Lewis and Williams (3)

Introduces students to the works of Tolkien, Lewis, and Williams, examining their popularity, and their place in history. Offered occasionally.

ENGL 3380 - The Classics and Literature (3)

Examines classical epics, tragedies, comedies, lyrics and myths and their adaptations in English literature from the sixteenth to the nineteenth centuries. Offered occasionally.

ENGL 3390 - Literature and Film of World War II (3)

Examines the rhetoric of American representation of its experience of World War II, and how the war shaped the American experience. Offered frequently.

ENGL 3400 - War in Literature (3)

Examines how literature and film have represented war. Students will read literary, historical and journalistic texts, and will view films. Offered occasionally.

ENGL 3470 - Introduction to Shakespeare (3)

Examines a selection of Shakespeare's major works with a focus on his appeal as a popular author as well as his achievement as a major poet and craftsman. Offered every semester.

ENGL 3490 - 19th Century British Literature (3)

Examines the development of British literature from 1800-1899, including the various genres and forms, cultural trends and historical contexts. Offered occasionally.

ENGL 3491 - Public Health and the Victorian Home (3)

This course will focus on nineteenth-century homes and other aspects of the built environment, as depicted in poetry, short stories, and novels by George Eliot, Charles Dickens, Emily Brontë, and other major authors of the period.

ENGL 3492 - The Golden Age of Children's Literature (3)

The Victorian and Edwardian eras have often been considered the "golden age" of children's literature, thanks to classics like Lewis Carroll's *Through the Looking Glass* (1871), Robert Louis Stevenson's *Treasure Island* (1883), and Frances Hodgson Burnett's *The Secret Garden* (1911). This class juxtaposes works like these with Victorian-era child psychology.

ENGL 3500 - Literature of the Postcolonial World (3)

Examines representative works and major literary, historical, and cultural developments in the postcolonial literatures of Asia, Africa, and the Caribbean. Strongly recommended for majors. Offered regularly.

ENGL 3510 - African American Literary Traditions I: Before 1900 (3)

Examines African American literature prior to 1900 including works of literature, essays, poems and short stories.

ENGL 3520 - African American Literary Traditions II: After 1900 (3)

Examines African American literature of the 20th and 21st centuries including works of literature, essays, poems and short stories. Offered regularly.

ENGL 3530 - African American Literary Tradition: Special Topics (3)

Special topics in African American literary traditions: content varies.

ENGL 3540 - Literature of the African Diaspora (3)

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

ENGL 3550 - Native American Literature (3)

Examines the ways in which Native American writers struggle to maintain their cultural identities and how they tell stories. Offered regularly.

ENGL 3560 - Ethnic American Literature (3)

Examines the ways in which ethnic American writers tell and write stories, and what "ethnic" and "American" mean as concepts. Offered occasionally.

ENGL 3570 - Writing Sex in the Middle Ages (3)

Examines medieval texts in various genres that represent sexuality and gender. Offered frequently.

ENGL 3580 - Literature of the Natural World (3)

Studies modern and contemporary literary texts as social, aesthetic, and humanistic foundations for environmental and ecological perspectives. Offered occasionally.

ENGL 3590 - Nature and Literature (3)

Examines literary works reflective of the world of nature and the environment. Offered occasionally.

ENGL 3600 - Women in Literature (3)

Analyzes works authored by and about women; studied from a feminist perspective.

ENGL 3610 - The City and Literature (3)

Examines representations of the city in literature and film including how Americans use the city as fundamental cultural space. Offered regularly.

ENGL 3620 - Special Topics in Spirituality and Literature (3)

Studies literature that considers the nature of God and of spirituality, broadly defined.

ENGL 3630 - Disaster Narratives (3)

This course reflects on the nature and implications of selected disasters by considering their real-life effects, both on innocent victims caught by forces beyond their control and on perpetrators. Prerequisites: PHIL 105 or 205 or equivalent; and ENGL 190.

ENGL 3640 - British Culture and Travel (3)

Combines the study of literary works, along with travel to London (during Spring break). Spring semester and requires a \$1500 travel fee.

ENGL 3650 - Science Fiction (3)

A survey of futuristic fantasies that emphasize science and technology.

ENGL 3660 - LGBTQ Literature and Culture (3)

Introduces twentieth- and twenty-first century LGBTQ culture through literature, film and television. Examines key late 19th and early 20th century literary texts key to the emergence of an LGBTQ literary tradition; also surveys the emergence of LGBTQ film and television culture, with examples drawn from early Hollywood through the present.

ENGL 3700 - The Bible & Literature (3)

Studies poems and narratives from scripture, e.g., Genesis, the Psalms, and the Gospels, with attention to literary works based on the Bible.

ENGL 3730 - Introduction to Medical Humanities, Literature (3)

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

ENGL 3740 - Medicine and Literature (3)

Examines literature dealing with medicine, medical issues, and the relationship between medicine and literature. Offered occasionally.

ENGL 3750 - Writing about Literature (3)

Explores ways to write effectively about literature, stressing skills in analysis and theories and methods of reading. Recommended for English majors. The third in a sequence of four courses (ENGL 194, 294, 394 & 494). Pre-requisites: ENGL 194 & 294 (or equivalent) and permission of the department. Offered each spring.

ENGL 3760 - Topics in Rhetorical Analysis (3)

Introduces students to advanced methods of argument, persuasion, and deliberation through the study of practices of ancient rhetoric (Aristotle; Cicero). Literary texts include Sophocles' *Antigone* and *Philoctetes*. Recommended for students pursuing the Secondary Major in Legal Studies, and for students with interests in professional writing, communication, political science, and philosophy.

ENGL 3850 - Foundations Rhetoric & Writing (3)

English 300 introduces students to the field of rhetoric and writing through a sustained engagement with its practices and principles. Work in the course stresses the importance of primary research, document design, effective writing, and audience awareness, considerations that will shape the professional lives of students.

ENGL 3854 - Teaching the Writing Life (3)

Examines the basic issues in rhetorical theory and writing pedagogy as they apply to secondary education in English. No prerequisites.

ENGL 3860 - Public Rhetoric (3)

Introduces students to advanced methods of rhetoric, persuasion, and deliberation in both print and digital formats. Recommended particularly for students pursuing the English department concentration in Rhetoric, Writing, and Technology.

ENGL 3870 - Technical Writing (3)

English 3870 is designed to introduce students to the principles of technical writing. Technical writing is the presentation of technical material in written and visual formats that are user-centered and context-specific. The course and its principles are grounded in rhetorical theory, which students are introduced to throughout the semester.

ENGL 3880 - Writing Personal Narratives and Memoirs (3)

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

ENGL 3890 - Writing Consulting: Forms, Theories, Practice (3)

This hands-on, discussion-oriented course trains students to become staff writing consultants in University Writing Services. Coursework includes weekly writing, assigned reading, participating in projects, and engaging the diverse community of SLU. Students will learn to guide a writing consultation, work within various genres, and respond to writing at various stages.

ENGL 4000 - Business and Professional Writing (3)

Teaches business and professional writing from a rhetorical perspective. Involves case studies based on research in actual professional settings, with special attention to strategic planning and rigorous revision and editing. Offered every semester

ENGL 4010 - New Media Writing (3)

New Media Writing explores such questions as: what is the impact of new media technologies on the composition and distribution of texts, on the work of persuasion and identification, and on the cultivation of ethos and identity? This exploration takes place across multiple, short writing assignments, podcasts, and multimedia projects.

ENGL 4020 - History of Rhetoric I (3)

Introduces students to the history of rhetorical theory in the West and center on the long-standing debate between rhetoric and philosophy concerning the nature of persuasion. Focuses on major thinkers, including Socrates, Plato, Aristotle, Cicero, and Quintilian, and studies their influence on both medieval and renaissance rhetoric.

ENGL 4030 - History of Rhetoric II (3)

ENGL 403 traces the development of rhetorical theory and practice from the dawn of the Enlightenment up to the present. The course's attends to how 20th century thinker Kenneth Burke saw rhetoric: the work of bringing people together. The course focuses particular attention on technology's role in this rhetorical work.

ENGL 4040 - Special Topics in Rhetoric (3)

An examination of various aspects of language literature, culture and communication, through the use of rhetorical theory as a critical apparatus.

ENGL 4050 - Advanced Creative Writing: Poetry (3)

Weekly poetry writing assignments based on weekly poetry reading assignments. Offered regularly. Prerequisite: ENGL 3050 or ENGL 3090

ENGL 4060 - Advanced Creative Writing: Fiction (3)

Reading and writing of fiction in a workshop setting in which one's own writing and the writing of other participants are shared and discussed. Offered regularly. Prerequisite: ENGL 3030 or ENGL 3060

ENGL 4070 - 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 4080 - Advanced Creative Writing: Non-Fiction (3)

An attempt to define the essay operationally and performatively, by writing it. Essays will be read by established authors; class work will be shared through group editing. Offered regularly.

ENGL 4090 - Advanced Creative Writing: Time in Fiction (3)

This is an upper-level creative writing workshop focusing on the craft of time fiction writing. Over the course of the semester, students will be expected to write and workshop two short stories, engage in revision, and complete a number of weekly assignments built around craft-based readings and exercises. Prerequisite: ENGL 3030 or ENGL 3060

ENGL 4091 - Advanced Creative Writing: Poetry and Translation (3)

An advanced study through reading and writing of the problems involved in literature and translation. Specific techniques will be introduced through advanced translation exercises. Emphasis may be on poetry, fiction or drama. Prerequisites: ENGL 3050 or ENGL 3090 or ENGL 3140 or CHIN 2xxx or CHIN 3xxx or FREN 2xxx or FREN 3xxx or GR 2xxx or GR 3xxx or G 2xxx or GK 3xxx or ITAL 2xxx or ITAL 3xxx or LATIN 2xxx or LATN 3xxx or RUSS 2xxx or RUSS 3xxx or SPAN 2xxx or SPAN 3xxx

ENGL 4100 - History of the English Language (3)

A survey of the main features of Old, Middle and Modern English. Offered regularly.

ENGL 4110 - Introduction to Linguistics (3)

A survey of how the nature and structure of human language, focusing on English, are studied. Offered regularly.

ENGL 4130 - Literary Theory (3)

Explores theories and movements of/about literature, with special emphasis on twentieth century literary theory. Offered regularly.

ENGL 4150 - Ethnic and Race Studies (3)

Explores the ways in which individuals reflect on their ethnic and racial experience through language and how the terms "race" and "ethnicity" are dynamic, and changing. Offered regularly.

ENGL 4170 - American Film History (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 4173 - Irish Cinema (3)

Students will focus on how Irish film engages with and complicates familiar Irish cultural issues, including nationalism and postcoloniality; the Catholic / Protestant divide; gender and sexuality; nostalgia and landscape; exile and emigration. In addition to exploring modern Irish history and culture, students study Irish cinema in terms of genre and aesthetics.

ENGL 4176 - Queer Cinema: History, Aesthetics and Activism (3)

This course traces the history of Queer cinema from the mid-20th into the 21st century. Students will study the interlocked histories of Queer film and Queer activism to consider how Queer film aesthetics are embedded within and help shape the complex, contested, and politically-volatile history of homosexuality in America and abroad.

ENGL 4180 - Film Theory (3)

Explores theories and movements of/about film, with special attention to twentieth century film theory. Offered occasionally.

ENGL 4190 - Topics in Religion & Culture (3)

Studies the influence of religion on literature and culture.

ENGL 4200 - Introduction to Old English (3)

Enables students to read Old English works in the original. At the end students will be prepared to read Beowulf. Offered regularly.

ENGL 4210 - Beowulf (3)

Enables students to read and translate Beowulf. It will explore comparisons to works in both Old English and Old Norse. Offered regularly.

ENGL 4220 - Intro to Old Norse (3)

Enables students to read Old Norse works in the original, thereby providing access to the myths and sagas of the Viking age. Offered regularly.

ENGL 4230 - Literature of the Vikings (3)

Explores the myths, legends and sagas of the Viking era, including heroic poems. Examines their impact on European culture. Offered regularly.

ENGL 4240 - Chaucer: The Canterbury Tales (3)

Introduces students to the characters, narratives, and genres in The Canterbury Tales, and explores their socio-cultural contexts. The tales will be read in the original Middle English. Offered frequently.

ENGL 4250 - Chaucer: Troilus and Shorter Works (3)

Explores the poems Chaucer wrote outside The Canterbury Tales, including the "dream poems", short lyrics, addresses and begging poems, and Troilus. Offered frequently.

ENGL 4290 - Topics in Medieval Literature (3)

Topics in Medieval Literature: content varies.

ENGL 4300 - Age of Elizabeth (3)

Examines non-dramatic poetry and prose from 1558 to 1603, including works by Marlowe, Spenser, Shakespeare, the Sidneys, and Donne. Offered regularly.

ENGL 4310 - Early Shakespeare (3)

Examines Shakespeare's plays written during the 16th century, with attention to their variety and development. Fall semester.

ENGL 4320 - Shakespeare: Special Topics (3)

Examines selected topics and areas in Shakespeare's work. Content varies. Offered regularly.

ENGL 4330 - Renaissance Drama (3)

Examines plays written during the 16th and 17th centuries by Shakespeare and his contemporaries, including Kyd, Marlowe, Jonson, Webster, Middleton, and Ford. Offered regularly.

ENGL 4340 - Falling in Love in Renaissance (3)

Explores selected issues, writers, and writing, exemplifying the literary concerns of the Renaissance. Offered frequently.

ENGL 4350 - 17th Century Literature (3)

Examines selected writers and writing from the early 17th century to the Restoration, with particular attention to literary development and historical context. Offered regularly.

ENGL 4360 - Milton (3)

Examines Milton's major poems and selected prose, with special attention to Paradise Lost. Offered regularly.

ENGL 4370 - Renaissance Literature and Rhetoric (3)

Familiarizes students with the oral-rhetorical tradition in Renaissance England focusing mainly on the early Tudor humanist program of rhetoric. Offered regularly.

ENGL 4380 - Early Women Writers (3)

Examines the writings of English women in the period from 1600 to 1700, including autobiographies, tracts, letters, fiction, poetry and plays. Offered regularly.

ENGL 4390 - Special Topics in 16th and 17th Century Literature (3)

Courses that focuses on selected topics and areas in the period.

ENGL 4450 - 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 form stylists of the late century.

ENGL 4490 - 18th & 19th Century Women Writers (3)

Examines women writers and literary traditions in the 18th and 19th centuries including Eliza Haywood, Fanny Burney, Jane Austen, Charlotte Brontë and Christina Rossetti. Offered regularly.

ENGL 4500 - The Age of Romanticism (3)

Studies the thought and character of the Romantic Movement in England in the early part of the 19th century, through the examination of representative authors and works. Offered regularly.

ENGL 4530 - Medicine, Mind, and Victorian Fiction (3)

This course will examine Victorian novels, poetry, and short stories from the perspective of nineteenth-century developments in psychology and related mental sciences.

ENGL 4531 - Mental Illness in Victorian Literature (3)

This course examines depictions of mental illness in Victorian literature alongside secondary readings by prominent literary scholars and historians of science.

ENGL 4550 - Victorian Poetry (3)

Surveys the panorama of poetry in the Victorian era in an effort to understand the vast changes brought about by this rapidly changing modernizing civilization. Offered regularly.

ENGL 4580 - Major Victorian Authors and Movements (3)

Surveys major Victorian authors and/or movements including Tennyson, Brontë, Browning, Dickens, Eliot and Wilde; the crisis of faith, the emergence of women writers, and social critique. Offered occasionally.

ENGL 4590 - Special Topics: 19th Century Literature (3)

Courses that focus on special topics and areas in the period.

ENGL 4600 - Topics in British Literature 1900 - 1945 (3)

Studies the fiction, drama and poetry of the first half of the 20th century with special attention to Conrad, Woolf, Joyce and Eliot, in an effort to assess the modernism of the period. Offered regularly.

ENGL 4605 - Major Modernist Writers and Movements (3)

This seminar offers a focused, single- or two-author study of writers central to literary modernism. Courses may focus on such writers as Oscar Wilde, James Joyce, W.B. Yeats, George Bernard Shaw, E.M. Forster, Virginia Woolf and others. Major cultural movements may include Aestheticism / Decadence, the New Woman, Avant-Garde movements, and formal experimentation as response to political and social upheaval.

ENGL 4608 - 20th-Century British Poetry (3)

Poetry by a range of authors, such as Hopkins, Mew, Yeats, Smith, Eliot, Auden, Nichols, Hughes, Hill, and Duffy in order to explore the development from Modern to Postmodern poetries. No Prerequisites.

ENGL 4610 - Female/Expatriate Modernism (3)

Addresses the concept of a "female modernism" expounded by such texts as No Man's Land and Gynesis. Readings include early 20th century men's and women's literature that stresses gender ideologies. Offered regularly.

ENGL 4615 - Queer Modernism (3)

Considers formal experimentation in the arts circa 1890-1930 as informed by concurrent advancements in Queer cultural visibility. Focusing on writers who approached literary form as an extension of sexual experimentation, this course considers the term ¿queer¿ broadly¿ illuminating both non-normative desire and non-normative textual practice. Authors include Oscar Wilde, Thomas Mann, Virginia Woolf, Radclyffe Hall, Quentin Crisp, Sylvia Townshend Warner, E.M. Foster and Christopher Isherwood.

ENGL 4620 - British Postmodernism (3)

Studies contemporary British fiction, drama, and poetry through appropriate readings in postmodern theory. Offered regularly.

ENGL 4630 - Nationalism and Irish Cultural Revival (3)

Explores the conjunction of politics and aesthetics in the art of the Irish Literary Revival. Examines visions of the nation, cultural nationalism and Yeats' influence. Offered regularly.

ENGL 4640 - Irish Modernism (3)

Examines the development of Irish literature in English from 1890-1920. Places Irish writing within a wide range of cultural contexts, including revolutionary politics, aestheticism and decadence, and the rise of the 'national' theatre. Authors include Oscar Wilde, W.B. Yeats, Lady Gregory, J. M. Synge, James Joyce, Sean O¿Casey and Elizabeth Bowen.

ENGL 4650 - Contemporary Irish Literature (3)

Analyzes the nexus of aesthetics and politics in contemporary Irish culture, including texts written by playwrights, poets, fiction writers, directors, cultural critics and historians. Offered regularly.

ENGL 4670 - Contemporary Postcolonial Literature and Culture (3)

Examines literary representations of social upheavals, post-independence disillusionment, violence, and globalization in Africa, Asia and the Caribbean from the 1970s to the present. Offered regularly.

ENGL 4680 - Major Post-Colonial Writers (3)

Examines major postcolonial writers like Achebe, Rushdie, Desai, Gordimer, Soyinka, and Walcott, including their attitudes to race, politics, language, gender and history. Offered regularly.

ENGL 4690 - Special Topics in 20th/21st Century British, Irish, & Postcolonial Literature & Culture (3)

Topics in 20th and 21st Century British, Irish and Postcolonial Literature and culture, content varies.

ENGL 4700 - American Literary Tradition to 1865 (3)

Identifies and explores emerging themes and methods in American literature in the Puritan, Enlightenment, and Romantic periods. Offered regularly.

ENGL 4715 - American Postmodernisms (3)

Avant garde and emerging ethnic literature inspired by the Holocaust, the atomic bomb, 1960s social revolution, the Vietnam War, increasingly global consciousness, and ghetto, suburban, and mass culture. Authors include Flannery O¿Connor, Thomas Pynchon, Don DeLillo, Toni Morrison, John Edgar Wideman, Jessica Hagedorn, Margaret Atwood, Chang-Rae Lee.

ENGL 4720 - Contemporary American Literature (3)

Studies significant figures and trends that have shaped contemporary American literature. Offered regularly.

ENGL 4740 - 19th Century American Literature (3)

Studies major American literature of the 19th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.

ENGL 4760 - 20th Century American Literature (3)

Studies the major American literature of the 20th century, keeping in mind the historical and cultural forces that influenced the writers. Offered regularly.

ENGL 4770 - 20th Century American Poetry (3)

Surveys major trends and developments from the Imagists and the 20th century traditionalists to the major modernists (e.g. Pound, Williams), to the beats and confessionals of the later century. Offered regularly.

ENGL 4780 - Recent American Poetry (3)

Explores American poetry in its varied forms. Surveys the current state of poetry and maps some possible directions for the future. Offered regularly.

ENGL 4790 - American Drama (3)

Examines major American playwrights of the 20th century, the socio-cultural contexts out of which they worked, and the aesthetic canons which their play helped to form. Offered regularly.

ENGL 4800 - American Short Story (3)

Surveys representative examples and major practitioners of the short story form from the 19th and 20th centuries. Offered regularly.

ENGL 4810 - Major American Authors (3)

Examines some of the major American writers of the modern period focusing on their influences and their historical and literary contexts. Offered regularly.

ENGL 4830 - Post-1900 African American Literature (3)

Explores African American writings from the beginnings of the 20th century to the present, through a reading of a variety of literary, critical and historical texts from the Harlem Renaissance to Afro-Centrism. Offered regularly.

ENGL 4840 - Native American Literature (3)

Explores how Native American authors read and write a "different" history, including how storytelling helps create community and a sense of home. Offered regularly.

ENGL 4880 - Tha Machine Age in American Literature (3)

An analysis of the relationship of industrial and post industrial technologies to the literature and culture of America from the later Nineteenth century to the present.

ENGL 4890 - Spc Topics: Amer Lit & Culture (3)

Topics in American literary and cultural studies, content varies.

ENGL 4900 - Interdisciplinary Studies (3)

Studies pertinent writings from an interdisciplinary focus relating literature to other media and other literature. Offered occasionally.

ENGL 4940 - Senior Inquiry Seminar (3)

Requires intensive reading and research on a variety of topics and issues, as the writing of short reports and long reports. Required for all English majors. Prerequisite: Senior standing.

ENGL 4980 - Advanced Independent Study (1-3)

May vary from 1 to 3 hours. Prerequisite: Permission of Department Chair.

ENGL 5000 - Methods of Literary Resrch (3)

Introduction to resources and methods of research central to the scholarly study of literature.

ENGL 5010 - Teaching Writing (3)

Introduction to traditional and contemporary theories of rhetoric and composition, with special attention to their application in classroom practice.

ENGL 5020 - History of Rhetoric I (3)

English 5020 offers an overview of rhetorical history in the West, starting in Ancient Athens and ending in Renaissance Europe. The course focuses on the rhetorical theory of major thinkers in the tradition, including Aristotle, Platon, Isocrates, Cicero, Quintilian, Augustine, Boethius, and many others.

ENGL 5030 - History of Rhetoric II (3)

The course begins with the Rhetoric Q&A essay, which has students draft a working definition of rhetoric. Next, the Rhetorical Object Analysis has students investigate the role played by a particular technology in the history of rhetoric. Students also complete a variety of in-class exercises and participate in online discussions.

ENGL 5040 - Problems in Rhetoric (3)

Focused examination of a specific historical, theoretical, or practical issues in rhetoric and composition.

ENGL 5100 - Literary Criticism: Aristotle (3)

Historical introduction to the significant epochs in the development of literary criticism from ancient to modern times.

ENGL 5110 - Literary Theory (3)

Introduction to the conceptions of the literary text that have influenced the reception and criticism of literature, with special attention to the development of theory through the twentieth century.

ENGL 5120 - Perspectives in Medieval Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5130 - Perspectivs in Renaissance Lit (3)

Serves to introduce students to literary theory through a examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5140 - Perspctivs in Restoration/Brit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5150 - Perspctvs: 19th Cent Brtsh Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5160 - Perspctvs: 20th Cent Brtsh Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5170 - Perspectives in American Lit (3)

Serves to introduce students to literary theory through an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5180 - Perspctivs in Contemporary Lit (3)

Serves to introduce students to literary theory throuh an examination of theoretical approaches to writings drawn from particular periods or epochs.

ENGL 5190 - History of the English Language (3)

A survey of the main features of Old, Middle and Modern English. Offered regularly.

ENGL 5200 - Intro to Old English (3)

Introduction to the Anglo-Saxon language, its grammar and vocabulary, with particular application to a selection of the most prominent works of Old English Literature.

ENGL 5260 - Intro to Old Norse (3)

Introduction to the Old Norse language, its grammar and vocabulary. Select readings in Old Norse mythology and Viking sagas.

ENGL 5270 - Arthurian Literature (3)

This course covers the development of the Arthurian legend from medieval times to the present day, taking in material from Celtic, French, English, and American cultural traditions, but centered on Sir Thomas Malory's *Morte Darthur*.

ENGL 5340 - Anglo-Saxon/Old English Lit (3)

Introduction to the Anglo-Saxon language, its grammar and vocabulary, with particular application to a selection of the most prominent works of Old English literature.

ENGL 5710 - American Fiction 1900-1950 (3)

The transformation of American fiction that occurred during the first half of the 20th century, placing emphasis more or less equally upon thematic and aesthetic considerations. The writings of approximately eight authors, including Faulkner, Hemingway, and Dos Passos.

ENGL 5800 - Studies in Contemp Culture (3)

Media such as film, photography, television, and periodical journalism which supply an indispensable context for study of modern literature. Designed around various themes, styles, and movements.

ENGL 5899 - Professionalization Practicum (0)

This practicum carves out an official time in an advanced doctoral student's schedule to prepare documents for the job market. By the end of the semester, each student enrolled will either have submitted job applications or have a set of job materials with which to work at a later date.

ENGL 6040 - Rhet Thry Dscourse Pedagogy (3)

Major rhetorical theories underlying discourse pedagogy, with special attention to the ways in which specific theoretical positions inform curricular practices.

ENGL 6100 - Studies in Literary Theory (3)

Selected issues, developments, or schools in literary theory.

ENGL 6150 - Genre Studies (3)

Selected writings and issues integral or peculiar to the definition of particular genres or subgenres.

ENGL 6170 - Literary Themes (3)

Exploration of selected writers, writings, and issues associated by common themes.

ENGL 6190 - Interdisciplinary Studies (3)

Selected figures, works, and issues studied from the perspective afforded by specific disciplines or media.

ENGL 6250 - Chaucer: Canterbury Tales (3)

A study of Chaucer's writings with special attention to *The Canterbury Tales*.

ENGL 6260 - Studies in Chaucer (3)

Selected issues in and portions of Chaucer's writings with speical attention to *Troilus and Crisseyde* and other major works by Chaucer apart from *The Canterbury Tales*.

ENGL 6270 - Middle English Literature (3)

Selected issues or representative figures in Middle English literature.

ENGL 6300 - 16th Cent Non-Dramatic Lit (3)

Non-dramatic figures or currents in the literature of Tudor England.

ENGL 6310 - Renaissance Drama (3)

Renaissance dramatists other than Shakespeare.

ENGL 6320 - Shakespeare (3)

Selected groupings of Shakespeare's works.

ENGL 6350 - 17th Century Literature (3)

Figures or developments in English literature of the seventeenth century.

ENGL 6360 - 17th Century Prose (3)

Groups or movements in English poetry of the seventeenth century.

ENGL 6390 - Topics: Renaissance Literature (3)

Particular issues and developments in the literature and culture of the English Renaissance.

ENGL 6400 - Restoration Literature (3)

Represtativ figures, issues, and developments in English writing of the late seventeenth century.

ENGL 6410 - Restoration & 18th Cent Poetry (3)

Significant figures and developments in English poetry of the Restoration and the eighteenth-century English literature.

ENGL 6420 - Rstratn & 18th Cent Prose Fict (3)

The novel and prose fiction writing in Restoration and eighteenth-century English Literature.

ENGL 6430 - Restoration & 18th Cent Drama (3)

Selected playwrights, plays, and issues in the English theater of the Restoration and eighteenth century.

ENGL 6490 - Special Topics (3)

Particular issues and developments in Restoration and eighteenth-century English literature.

ENGL 6500 - Romanticism (3)

Selected writers and works of the Romantic period in British literature.

ENGL 6510 - 19th Century Prose Non-Fiction (3)

Selected writers and works of prose non-fiction in nineteenth-century England.

ENGL 6520 - Victorian Poetry (3)

Selected figures, works, and issues in nineteenth-century British poetry.

ENGL 6530 - Nineteenth-Century Novel (3)

Selected writers, works, and issues in nineteenth-century British fiction.

ENGL 6590 - Topcs in 19th Cent Engl Lit (3)

Studies in particular issues and developments in British literature of the nineteenth century.

ENGL 6600 - Studies in Modernism (3)

Selected figures, movements, and developments representative of modernisms in English in the first half of the twentieth century.

ENGL 6610 - Twentieth-Century Fiction (3)

Selected writers and works of fiction of the twentieth century.

ENGL 6620 - Twentieth-Century Poetry (3)

Selected figures, movements, and developments in poetry of the twentieth century.

ENGL 6630 - Twentieth-Century Drama (3)

Selected figures, epochs, and developments in literatures in drama of the twentieth century.

ENGL 6650 - Twentieth Century Postcolonial Literature (3)

This course will focus on postcolonial literature and film with attention to current critical theories and approaches. We will examine how novels, poetry, drama and films from Africa, Asia, and the Caribbean have impacted postmodern culture as a whole. We will look at the various approaches that have been used to study postcolonial literature and film, including Marxist, feminist and poststructuralist. We will discuss such questions as: how have postcolonial writers and filmmakers used literature and film as tools for social change? How have they chosen to represent their identities?

ENGL 6690 - Topics in Litere of the 20th Century (3)

Particular issues and developments in literatures in English of the twentieth century.

ENGL 6700 - Early American Literature (3)

Significant figures, writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 6710 - 19th Century American Literature (3)

Representative writers, works, and epochs central to the development of American literature in the nineteenth century.

ENGL 6720 - Nineteenth-Century Amer Poetry (3)

Central figures, works, and issues in American poetry in the nineteenth and early twentieth centuries.

ENGL 6730 - 19th Century Amer Modernism (3)

Writers, works, and issues in american fiction writing, with special attention to developments in the nineteenth and early twentieth centuries.

ENGL 6740 - Studies in Amer Modernism (3)

Significant figures, groupings, and developments that shaped American modernist writing.

ENGL 6760 - Twentieth Cent Amer Fiction (3)

Writers and works of prose fiction of the twentieth century America.

ENGL 6770 - Twentieth Cent Amer Poetry (3)

Writers and developments in American poetry of the twentieth century.

ENGL 6780 - Twentieth Century Amer Drama (3)

Playwrights, plays and issues in the theater of the twentieth century America.

ENGL 6790 - Topcs: 20th Cent Amer Lit (3)

Particular issues and developments in American literature of the twentieth century.

ENGL 6850 - Studies in Comparative Lit (3)

Writers, works, genres, and issues from a comparative focus that situates literature of the English language in the context of developments in world literature.

Fine And Performing Arts (FPA)**FPA 1000 - Intro to the Arts (3)**

INTRO TO THE ARTS is designed to explore the world of arts -- visual arts/music/theatre/film and poetry. It is designed to give students the critical thinking skills of visual and audial literacy that can be applied to arts. Many theories will be explained that help to explore formalism/content and context.

FPA 1100 - The Arts and Social Change (3)

This course will explore the relationships between political art, community art, social practice art, and social change. Students will be introduced to theories and to artistic practices. Material will include artists working in all disciplines: dance, music, text-based, theatre and visual arts.

FPA 2000 - Social Practice in the Arts (3)

SOCIAL PRACTICE IN THE ARTS is a theoretical, art historical and studio introduction to socially engaged arts. Students will be introduced to the work artists working in social practices, the ideas behind those practices and will have the opportunity to create their own social practice engagement.

French (FREN)**FREN 1010 - 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 1020 - 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 2010 - Interm. French Lang & Culture (0-3)

Continued practice in and development of all language skills, enabling the student to function in an increased number of areas. Materials and discussion relating to French culture.

FREN 2250 - Lit Frch-Spk Africa & Cribbean (3)

An overview of the literature of different French-speaking African and Caribbean nations. A focus on the effects of colonization on creating an African or Caribbean identity. Taught in English.

FREN 2930 - Special Topics (1-3)

Fall and Spring semesters.

FREN 2980 - Independent Study (3)

Fall and Spring semesters.

FREN 3010 - Discovering the Frnch-Spk Wrld (0-3)

Students discover varied aspects of the French-speaking world, both locally and internationally, while raising their proficiency in French to a level at which they can communicate with increasing ease and accuracy. Emphasis on oral expression and listening comprehension, reinforced by writing skills.

FREN 3020 - 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 3030 - 21st-Century France (0-3)

Students extend their knowledge of contemporary French and Francophone cultures, while strengthening their communication skills and ability to talk about unfamiliar and abstract topics. Special focus on current issues. Emphasis on oral expression and listening comprehension. Prerequisite (FREN-3010 & FREN-3020) may be taken concurrently with permission of the instructor.

FREN 3040 - Soc, Natn & Art in Pre-Rev Fra (0-3)

Through studying important historical figures, concepts, and literary movements of French civilization from the Middle Ages to the French Revolution, students learn to write extended analyses on abstract topics. Emphasis on mastering various writing styles. Prerequisite (FREN-3010 & FREN-3020) may be taken concurrently with permission of the instructor.

FREN 3250 - 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. Study Abroad Only.

FREN 4010 - French Culture and Civilizatio (3)

Study Abroad Only.

FREN 4070 - Oral Fluency in French I (3)

Study Abroad Only.

FREN 4080 - Oral Fluency in French II (3)

Study Abroad Only.

FREN 4110 - 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 4120 - French Phonetics (1-3)

Students will learn how to correct and enhance their oral production. Classes will focus on listening and repeating sounds (phonemes) and intonation patterns. In addition, students will learn the workings of the International Phonetic Alphabet. The course will be taught in French. Prerequisite: FREN 3010 or FREN 3020.

FREN 4140 - French Syntax/Semantics (3)

Study Abroad Only.

FREN 4160 - French for the Professional (0-3)

For students interested in developing the proficiency needed in business-oriented activities.

FREN 4170 - French and the Sciences (3)

Students in this course will extend their knowledge of scientific advances and issues in contemporary French and Francophone cultures, while strengthening their communication skills and ability to talk and write about unfamiliar and abstract topics. In 'French and the Sciences' we will study current issues in science and technology, including scientific, medical, and technological research being done in France and other Francophone countries. We will also discuss health issues, particularly in French-speaking Africa, as well as other global issues. Taught in French. Prerequisite(s): FREN-3040 or the equivalent.

FREN 4180 - French and International Relations: Global Simulation (3)

This performance-based course culminates in a global simulation project of international conferences. First, you will immerse yourself in the world of International Relations through the Francophone world's lens; become familiar with key events, institutions and actors of International Relations; acquire cultural/linguistic skills to function effectively in international settings.

FREN 4200 - Perceiving Others: 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 4220 - French and Francophone Media : Qu'est-ce qui se passe ? (3)

This course will introduce students to a variety of French and Francophone media with an emphasis on national and regional variations. It will expand students' knowledge and understanding of Francophone societies and cultures throughout the world through analysis of media coverage of current and recent events. Conducted in French.

FREN 4230 - French Masterpieces: Survey of French Literature (3)

A basic study of France's rich literary tradition from the Middle Ages to the present time and an introduction to the vocabulary of literary analysis (irony, metaphor, etc.). Special attention devoted to the improvement of French language skills. Prerequisite(s): FREN-3030 and FREN-3040.

FREN 4290 - Women and Global Issues (3)

In this course, we explore globalization from various theoretical perspectives (historical, cultural, literary and economic). Through literary and visual narratives, we examine how the increased interconnectedness that comes with globalization affects feminist discourses and how global culture shapes women, their experiences, their lives and their bodies within the public/cultural spheres.

FREN 4300 - Masculin/Feminin (3)

This course examines the themes of love and marriage in 18th and 19th century French literature, through developing a critical approach to the concept of gender - the social construction of male and female social roles and 'natures.' Authors studied may include: Montesquieu, Graffigny, Balzac, Sand.

FREN 4310 - Contemporary Women Writers: France & Quebec (3)

20th-Century Feminine fiction in French examined in light of French and QuCbCcois feminist theory. De Beauvoir, Duras, Sarraute, Brossard, Maillet Cixous, Irigaray, Redonnet. Taught in French.

FREN 4320 - French Short Story (3)

The study of themes, techniques and perspectives as seen in a diversity of French short stories. Texts may include selections from as early as the Medieval fabliaux through contemporary writings by Michel Tournier and J.M.G. Le Clézio.

FREN 4330 - French Prose: Rabelais -17th C (3)

Humanism, preciousness, classicism, Rabelais, Marguerite de Navarre, Montaigne, Descartes, Pascal, LaFontaine, and LaFayette. Taught in French Study Abroad Only.

FREN 4340 - 18th-Century French Prose (3)

A course on society, literature, art and revolution in 18th-century France. A focus on how the concepts of society and social change are articulated in the novels and essays of writers such as Montesquieu, Voltaire, Rousseau, Diderot, Olympe de Gouges, Condorcet.

FREN 4350 - Studies in 19th-Century Novel (3)

The development of the novel in 19th-century France, as seen in representative works of the period from Romanticism to Naturalism. Authors studied may include: Chateaubriand, Hugo, Stendhal, Balzac, Flaubert, Zola

FREN 4360 - Paris in 19th-Century Lit (3)

Paris in the 19th century was a city in transition - politically, economically, culturally. This course deals with some of the great writers of the period who as visionaries of their time, were able to grasp the true meaning underlying the ever-changing Parisian panorama. Texts include works by Hugo, Balzac, Gautier, Murger.

FREN 4370 - Literature of the Fantastic (3)

This course examines a literary genre known as the conte fantastique (fantastic short story) that emerged in 19th-century France and whose legacy is still seen in today's literature, cinema, and art. Fantastic tales by well-known authors such as Balzac, Gautier, Maupassant, Merimee and German writer Hoffmann are analyzed from a theoretic perspective and for the underlying questions of identity, universal values and the unconscious that they contain

FREN 4380 - Hugo and the Misérables (3)

Victor Hugo, celebrated poet, playwright, novelist, was also one of the most socially and politically engaged writers of his time. This course examines Hugo's deep commitment to society's misérables and the global implications of his monumental undertaking to sensitize readers to problems of misery, poverty, and social justice in our own time. Prerequisite: FREN 3040 or the equivalent or by special permission of the instructor.

FREN 4390 - Studies in 20th Century Prose (3)

Examines the new directions taken by French fiction in the 20th century. Beginning with Proust, through the Existentialists and the post-war nouveau roman, ending with an evaluation of recent literary trends in the light of the concepts of modernity and post-modernity.

FREN 4410 - French Poetry: Origins to 18th C (3)

Marie de France, Fabliaux, Christine de Pizan, DuBellay, Ronsard, Malherbe, LaFontaine, and Moliere. Taught in French.

FREN 4420 - French Poetry: Romantic to Baudelaire (3)

An examination of the Romantic period as a moment of explosive creative activity in poetry and art during a time of profound social and economic change. Selections may include works by Lamartine, Vigny, Hugo, Musset, Gautier, Nerval, Baudelaire.

FREN 4440 - French Poetry: Symbolism to Present (3)

Analysis of Symbolism and subsequent schools (from Symbolism to Simultaneism). Apollinaire, Aragon, Breton, Cendrars, Char, Saint John Perse, Senghor, Supervielle, Toulet. Taught in French.

FREN 4510 - Early Modern French Theatre: Comedy, Tragedy and Mystery (3)

Students in this course will explore the nature of tragedy and comedy and will acquire a critical awareness of the representation of dramatic personages through the study of French theatre from the Middle Ages through the seventeenth century.

FREN 4520 - French Drama: 18th Century to Romanticism (3)

A course on theater and theatricality for Neo-Classicism to the Romanticism, focusing both on the themes of the family romance and on the creation of the Artist. Texts include works by Marivaux, Beaumarchais, Hugo, Musset, Vigny.

FREN 4540 - French Drama: 20th-Century (3)

Theatre of commitment, art, the absurd, cruelty and alienation. Taught in French.

FREN 4610 - French Cinema (3)

A history of French Cinema by movements and authors. MClas, Bunuel, Vigo, Gance, Renoir, Clouzot, Cocteau, Tati, Truffaut, Godard, Rohmer, Kurys, Berri, Chatiliez, Tavernier. Taught in French.

FREN 4620 - Prose Literature of Quebec (3)

Examines 20th century QuCbCcois Literature, focusing on the genres of the tale, the short story and the novel. Brulotte, Ducharme, HCbert, Godbout, Ferron. Taught in French.

FREN 4640 - Studies in Francophone Lit (3)

An overview of Francophone literature of Africa and the Caribbean, focusing on themes of imperialism, de-colonization, and Cgritude as seen in the works of authors such as CCsaire, Senghor, BE, Schwarz-Bart.

FREN 4650 - French Cinema II 80's-90's (3)

A look at French cinema since 1980 as indicative of a French identity and value crisis. Examines new genres: Cinema du look, Memory films, heritage films, postmodern parody and satire. Directors studied include young directors (Besson, Crax), older directors (Truffaut, Malle), women (Varda, Kurys), minority (Kassowitz) and foreign directors (Kiesllowski).

FREN 4660 - Nation, Identity, Culture (3)

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

FREN 4670 - Postcolonialism and Violence, Issues of Representation in Francophone Culture, Literature and Film (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. Prerequisite courses: FREN-3030 and FREN-3040 or their equivalents.

FREN 4700 - Love and Honor in Early Modern France (3)

This course explores 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. The heroic figure is examined, as well as amorous relationships, particularly in terms of gender and power.

FREN 4710 - Women and Writing in Early Modern France (3)

An examination of the role of women in early modern French literature through a study of French literary works by and about women from the 15th through the 17th century. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Labé, Racine, and Molière. Taught in French.

FREN 4850 - Seminar on Molière (3)

In this course students study several of Molière's plays, focusing on his great comedies of character in which he ridiculed vice or intemperance through his caricature of the personage who is its incarnation. Students analyze Molière's comic theatre as a form of ethical inquiry that entertains and instructs its audience.

FREN 4870 - 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.

FREN 5000 - Teaching College French (0)

Practice-centered teaching training for college-level French courses. Discussion and application of course development, of current approaches to teaching and of evaluation techniques. Systematic incorporation of technology in the learning process. Offered every semester.

FREN 5030 - Advanced Oral Proficiency (3)

This course aims at upgrading oral proficiency in spoken French to a level at which advanced/superior level functions (on the ACTFL scale) can be handled successfully and with a high level of accuracy. Use of multi-media equipment serves to develop comprehension and the ability to communicate in extended discourse. Offered occasionally.

FREN 5040 - Mthd & Tech for Teaching Frnch (3)

A practical approach to teaching methods and technologies, focusing on how different strategies can serve to increase students' skills in French. Principle of language acquisition, a history of foreign language methodologies, current approaches to language learning and evaluation of language performance with respect to the 'Proficiency' movement are some of the topics studied. Offered occasionally.

FREN 5060 - Studies in Contemp French Cltr (3)

An update on France and France's place in the greater European Community as seen from a diversity of perspectives. This course will examine current trends in society, politics, economy, education, cultural values and their impact on the way of life in France today. Offered every other year.

FREN 5070 - Studies in Francophone Culture (3)

An analysis of the culture, history and cultural content of selected literary texts of a French-speaking country (such as Canada) or a group of French-speaking countries (such as Francophone West Africa). The 'politics' of writing and identity are discussed. Offered occasionally.

FREN 5100 - Critical Writing, Oral Expression & Research (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 5200 - Perceiving Others: US & France (3)

This course examines how the French are perceived by Americans, and how Americans are perceived by the French. Its focus is on points at which observation, on one hand, and imagination and/or value judgment, on the other, meet, in such perceptions. These meeting points are called stereotypes and are projected, generalizing reading of one culture onto another.

FREN 5220 - French and Francophone Media (3)

This course will introduce students to a variety of French and Francophone media with an emphasis on national and regional variations. It will expand students' knowledge and understanding of Francophone societies and cultures throughout the world through analysis of media coverage of current and recent events. Conducted in French.

FREN 5290 - Women and Global Issues (3)

In this class, we will explore how globalization is bringing to the fore issues that are affecting and shaping women's lives throughout the world. Through essays, various literary pieces and films, we will examine how dichotomies that are usually identified in feminist discourse take on a renewed life as increased interconnectedness that comes with globalization shapes religious, economic, cultural and political issues.

FREN 5330 - French "Moralists" (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 Bruyère and Madame de Lafayette. Offered occasionally.

FREN 5340 - 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 5350 - Studies in 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 5370 - Literature of the Fantastic (3)

This course examines a literary genre known as the conte fantastique (fantastic short story) that emerged in 19th century France and whose legacy is still seen in today's literature, cinema and art. Fantastic tales by well-known authors such as Balzac, Gautier, Maupassant, Merimee and German writer Hoffmann are analyzed from a theoretic perspective and for the underlying questions of identity, universal values and the unconscious that they contain.

FREN 5380 - Hugo and the Misérables (3)

Victor Hugo, celebrated poet, playwright, novelist, was also one of the most socially and politically engaged writers of his time. This course examines Hugo's deep commitment to society's misérables and the global implications of his monumental undertaking to sensitize readers to problems of misery, poverty, and social justice in our own time. At the same time, students develop a critical eye for identifying what kind of critical strategies enable Hugo to inspire audiences throughout the world to identify with his ideas and to appropriate the spirit of his work for the development of their own initiatives, from art and film production to causes involving political reform and social justice.

FREN 5390 - Studies in 20th Century French Prose (3)

An examination of the new directions taken by French fiction in light of the development of the notions of modernism and post-modernism. Representative texts ranging from the narrative innovations of Proust through the Existential writing of Camus and Sartre, to the rise of the 'Nouveau roman' of Duras and Robbe-Grillet, to recent contributions by Perec and Toussaint. Offered occasionally.

FREN 5410 - Early Modern French Poetry (3)

Eustache Deschamps described poetry as 'natural music.' This course will explore the ways in which the 'music' of poetry intensifies its meaning. We will trace the evolution of French poetry from its medieval origins through the seventeenth century. We will explore poetic techniques, devices, and forms.

FREN 5420 - Studies in 19th Century French Poetry (3)

A study of poetic expression in France during the 'Romantic' period and its aftermath. Representative works are examined from the point of view of theme and poetic technique, but also from the perspective of the greater artistic and historical context of the time. Examples from Lamartine, Hugo, Vigny, Musset, Gautier, Baudelaire. Offered occasionally.

FREN 5510 - Early Modern 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 5540 - Studies in 20th Century French Theatre (3)

A study of the major trends in 20th-century French theater, from the influence of the Surrealist movement and Existentialism to the Theater of the Absurd of the Post-War period and its Kafkaian undertones. Offered occasionally.

FREN 5550 - Writers of Memory (3)

Personal memory, family memory, cultural memory, Holocaust memory, colonial memory, anthropological memory, genetic memory, etc. What surfaces today in French literature (as well as in other domains, such as cinema and art) is a resurgence of multiple forms of memory, often read as challenging the longstanding predominance of historical memory. This course explores the reasons for the surge of memory narratives, as well the various kinds of memory that they conjure up and the various forms that they take in current French literature. Offered periodically.

FREN 5600 - Contemporary Women Writers: France & 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 5610 - 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 5630 - Studies in Francophone Lit (3)

An over-view of Francophone literature of Africa and the Caribbean, focusing on imperialism, de-colonization and 'negritude' as seen in the works of Césaire, Senghor, Ba, Schwartz-Bart. Offered occasionally.

FREN 5660 - Nation, Identity and Culture (3)

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

FREN 5670 - 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 5700 - Love & Honor Early Mod France (3)

This course explores 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. The heroic figure is examined, as well as amorous relationships, particularly in terms of gender and power.

FREN 5710 - Women and Writing in Early Modern France (3)

This course introduces students to the role of women in early modern French literature as symbol/image and as writer, through a study of French literary works by and about women. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Lave, Racine, and Moliere. Taught in French.

FREN 5850 - 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 5860 - 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 5870 - 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 5930 - Special Topics (3)

In this course, we will examine how the city functions as a catalyst in the artistic and literary creation of some of the most well-known French authors of the 19th century. In studying the dynamics at play in the creative process, we will be linking texts by Victor Hugo, Balzac and selected poets (Hugo, Vigny, Gautier, Baudelaire and Apollinaire) to the actual areas of the city which inspired their work.

FREN 5995 - Thesis Research Poitiers (1-6)

Restricted to Poitiers MA students participating in the Poitiers/SLU dual degree program.

Forensic Science (FRSC)**FRSC 4615 - Advanced Death Investigation (2)**

This workshop is designed for the instruction of experienced medicolegal death investigators, forensic pathologists, law enforcement officers, forensic scientists, physicians, attorneys, and investigative personnel who have previously been trained in a basic death investigation program. e.g. SOC 4610

Film Studies (FSTD)

FSTD 1040 - Approaching the Arts: Art&Film (3)

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

FSTD 1400 - Film Criticism (3)

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

FSTD 2060 - Media and Society (3)

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

FSTD 2700 - Introduction to Film (3)

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

FSTD 3120 - Media Scriptwriting (3)

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

Prerequisite(s): CMM-2100 or CMM-2120

FSTD 3180 - Film (3)

A study of selected films to show the diversity of films from the beginning to the present.

FSTD 3780 - Lit and Film of WWII (3)

Examines the rhetoric of American representation of its experience of World War II, and how the war shaped the American experience. Offered frequently.

FSTD 3790 - War in Literature (3)

Examines how literature and film have represented war. Students will read literary, historical and journalistic texts, and will view films. Offered occasionally.

FSTD 3820 - The City and Literature (3)

Examines representations of the city in literature and film including how Americans use the city as fundamental cultural space. Offered regularly.

FSTD 3840 - Analysis of Popular Culture (3)

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

FSTD 4150 - Berlin (3)

Excursions into the cultural development of Berlin from its very beginnings in the 13th century up to the present day. Focus on the period after 1871. Berlin as a microcosm for the cultural, socio-historical and ideological development of Germany as a whole. Taught in German.

FSTD 4170 - American Film History (3)

Explores the issues and development that characterized the development of film and film traditions in America from the beginning to the present.

FSTD 4180 - Film Theory (3)

Explores theories and movements of/about film, with special attention to twentieth century film theory. Offered occasionally.

FSTD 4200 - African American Cinema (3)

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

FSTD 4430 - Fulture, Technology & Comm (3)

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

FSTD 4610 - French Cinema (3)

A history of French Cinema by movements and authors. MCliias, Bunuel, Vig Gance, Renoir, Clouzot, Cocteau, Tati, Truffaut, Godard, Rohmer, Kurys, Berri, Chatiliez, Tavernier. Taught in French.

FSTD 4620 - Adv. Acting: Special Topics (3)

This course is structured around various topics which introduce advanced level students to particular performance techniques. Topics might include auditioning, acting for the camera, voice acting, creative dramatics, stage combat, etc.

FSTD 4910 - Film Studies Internship (3)

This course may be used as a substitute for the FSTD-4850 Capstone upon approval of the Film Studies Director.

Greek (GK)**GK 1010 - Reading Greek I (3)**

Pronunciation, vocabulary, morphology, syntax, and practice in reading.

GK 1020 - Reading Greek II (3)

Vocabulary, morphology, syntax, and practice in reading. Easier Greek authors introduced.

GK 1200 - Greek Literature Translation (3)

Vocabulary; intermediate grammar; more extensive reading in easier author: selections from more difficult ancient authors.

GK 2010 - Intermediate Greek Lang & Lit (3)

Vocabulary; intermediate grammar; more extensive reading in easier author: selections from more difficult ancient authors.

GK 2980 - Independent Study (1-3)

Prior approval required of sponsoring professor and department chairperson

German (GR)**GR 1010 - Communicating in German I (0-3)**

Introduction to German language and culture: speaking, listening, reading and writing. Emphasis on the acquisition of communicative skills.

GR 1020 - Communicating in German II (0-3)

Continuation of GR-1010. Expansion of all language skills, enabling the student to function in simple situations related to immediate needs, personal interests and daily life.

GR 2010 - Interm. German: Lang & Cltre (0-3)

Continued practice in and development of all language skills, enabling the student to function in an increased number of areas. Materials and discussion relating to German culture.

GR 3010 - Oral & Written Proficiency I (0-3)

Builds on acquired knowledge of German language and culture. Review and refinement of grammar skills, development of written and oral communication skills and strategies. Reading and discussion of authentic language material (articles, videos, recordings, etc.)

GR 3020 - Oral & Written Proficiency II (0-3)

Continuation of GR-3010. 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 3200 - 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.

Prerequisite(s): GR-3020

GR 3250 - German Culture Studies II (3)

A survey of German cultural history from Romanticism through the present day as reflected in German literature and other cultural artifacts. Prerequisite(s): GR-3020

GR 4010 - Fluency in German (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. Prerequisite(s): GR-3020

GR 4110 - Language and Linguistics (3)

Cross-listed with FREN-4110, RUSS-4110 and SPAN-4110. Introduction to the basic concepts and application of linguistic studies. Presentation and discussion of three main aspects of language: linguistic structures, language as a social dimension, and language as a mirror of cognitive processes. Taught in English.

GR 4150 - Berlin (3)

Excursions into the cultural development of Berlin from its very beginnings in the 13th century up to the present day. Focus on the period after 1871. Berlin as a microcosm for the cultural, socio-historical and ideological development of Germany as a whole. Taught in German. Prerequisite(s): GR-3250

GR 4200 - Modern German Prose (3)

Analysis and discussion of modern German prose by such authors as Max Frisch, Heinrich Boll, Gunter Grass, Martin Walser, Christa Wolf among others. Taught in German. Prerequisite(s): GR-3250

GR 4250 - Business German (3)

Development of advanced language skills (reading, writing, listening comprehension and speaking) pertaining to business and economy. Taught in German. Prerequisite(s): GR-3020

GR 4350 - German Film (3)

An introduction to film theory, film analysis and cinema history within the German cultural context. Taught in German. Prerequisite(s): GR-3250

GR 4500 - Courtly Love and Life Portrayed Through Medieval German Literature (3)

As an introduction to medieval life and its literature, this course takes a brief look at political, social and religious structures that shaped medieval 'Germany.' This course studies several classics from medieval German literature that are representative for aspects of medieval life: e.g. Hartmann Der arme Heinrich, the Nibelungenlied, Eschenbach's Parzival, Straßburg's Tristan, and courtly love lyrics. The course will be taught in German. Prerequisite(s): GR-3200

GR 4550 - History of German Language (3)

History of the German language will study the development of German from its earliest forms to contemporary German. Students will become familiar with linguistic terminology along with major linguistic and cultural changes that happened from Indo-European to Germanic to Old and Middle High German to contemporary German. This course will be taught in German.

Prerequisite(s): GR-3200

GR 4600 - Beginning Middle High German Language (3)

Students will become proficient in Middle High German grammar and pronunciation, as well as learn to translate Middle High German texts into English in addition to an introduction to manuscript studies and discussion of the role of memory in oral culture, the use of standardized-edited vs. authentic manuscript language. This course is taught in English, but knowledge of German required. Prerequisite(s): GR-3200

GR 4650 - Wolfram von Eschenbach's Parzival: Gender, Race, and Otherness (3)

In this course, student will read and critically reflect on Wolfram von Eschenbach's Parzival (ca. 1220). They will read the text in modern German. While this text is fictional, it is grounded in 'reality' and reflects upon its times and its discourses on politics, religion, race, gender, and otherness, the focus of this course. This course is taught in German, therefore knowledge of German required. Prerequisite(s): GR-3200

GR 4700 - The Culture of The Weimar Republic (3)

This course examines the various forms of rich artistic production that emerged in Germany during the 1920s. Topics covered include literary, film and visual representations of war, urban landscape, the modern woman, as well as influential artistic movements such as German Expressionism, cabaret, Dada, New Objectivity, Bauhaus, and Ausdruckstanz. Taught in German. Prerequisite(s): GR-3250

GR 4750 - The German Press: Creating a Foreign Language Newspaper (3)

Students produce a print and online German newspaper focusing on current events in German-speaking countries as well as German-American communities and cultural sites in and around St. Louis. They collaborate to produce video documentaries thematically connected with topics featured in the publication. Taught in German. Prerequisite(s): GR-3020

GR 4930 - Special Topics (1-4)

Special topics might include: The German Experience of the New World, Introduction to the Literature of the German Democratic Republic, Translation of Technical German, German Phonetics, German Drama. All taught in German.

GR 4950 - Senior Residency (0)

Required for graduating senior.

GR 5010 - German for Reading & Translation (3)

This course develops reading proficiency in German. It focuses on grammatical skills, works on vocabulary and primarily reading comprehension and translation skills in selected German academic texts and discipline specific academic writing. It prepares students to satisfy the foreign language translation exams required in respective Ph.D. programs.

Hindi (HIND)**HIND 1010 - Communicating in Hindi I (1-3)**

Prerequisites: None Introduction to reading, writing (Devnagari script), oral comprehension and speaking of Hindi, and to Indian culture. Elements of Hindi grammar. Simple sentence construction. Vocabulary and phrases used in daily life and while traveling in India.

HIND 1020 - Communicating in Hindi II (1-3)

Prerequisites: Hindi I or instructor's permission. Development of Hindi vocabulary, oral comprehension, fundamentals of Hindi grammar, reading, writing and speaking capabilities. Introduction of Indian Culture.

HIND 2010 - Intermediate Hindi (1-3)

Prerequisites: Hindi II or Instructor's permission. Development and refinement of Hindi vocabulary, oral comprehension, fundamentals of Hindi grammar, reading, writing and speaking capabilities. Introduction to Hindi literature.

History (HIST)**HIST 1110 - Origins of the Modern World to 1500 (0-3)**

An historical approach to understanding the development of the modern world to 1500. The course will examine ancient civilizations, the Hebrews, Greece, Rome, Christianity, Islam, Byzantium, the Middle Ages, The Renaissance, and encounters between cultures and regions of the globe.

HIST 1120 - Origins of the Modern World, 1500 to Present (0-3)

An historical approach to understanding the development of the modern world from 1500 to the present. The course will examine the cross-cultural impact of European expansion, the Protestant and Catholic Reformations, the Scientific Revolution, absolutism, the Enlightenment, the French and Industrial Revolutions, nineteenth and twentieth century thought, the World Wars, totalitarian and liberation movements, and the challenges of the new global age.

HIST 2600 - History of the United States to 1865 (3)

This survey course examines the development of the United States from its pre-Columbian origins through the Civil War. Required for majors.

HIST 2610 - History of the United States Since 1865 (3)

This survey course examines the U.S. from Reconstruction through the present. Required for majors.

HIST 2700 - China and Japan To 1600 (3)

Introduction to the history and culture of China and Japan from ancient times to the early seventeenth century. Readings designed to introduce students to sections of classic works and to give a sense of the culture and society of the various periods that we will examine.

HIST 2710 - China and Japan since 1600 (3)

Survey of Chinese and Japanese history since 1600.

HIST 2800 - Historian's Craft: Methods Proseminar (3)

Historian's Craft provides research and writing training to prepare students for successful careers as History majors and minors and a vocation after college. The Historian's Craft Proseminar is required for majors and minors in the revised major and minor program and restricted to students who have declared their major or minor within History.

HIST 3000 - Ancient Greece (3)

The history of the Greek people from the Mycenaean period to the Hellenistic Age.

HIST 3010 - Roman Republic (3)

The political, social, and cultural history of Rome from the beginning to the time of Julius Caesar.

HIST 3020 - The Roman Empire (3)

The political, social, and cultural history of Rome from Augustus to Odovacar.

HIST 3030 - The Byzantine Empire (3)

This course examines the waning years of the Roman Empire in the West and the subsequent millennium of its history of the East. We will examine Byzantine politics, culture, and society as well as Byzantine interactions with the Islamic East and Catholic West.

HIST 3040 - The Middle Ages to 1100 (3)

Political, ecclesiastical, and cultural developments in Europe from the collapse of Rome in the West to the struggle of empire and papacy.

HIST 3050 - The Middle Ages 1100 to 1450 (3)

The High and Late Middle Ages from the rise of universities to the fall of Constantinople.

HIST 3060 - The Crusades (3)

Why did pious Christians bring fire and sword to the home of the Prince of Peace? This is just one question that this course explores. Along the way we will examine the Islamic response to the crusades, the Crusader States, and the effects of the movement on Byzantium.

HIST 3070 - Catholic Traditions to 1540 (3)

Theology, spirituality, church organization, religious art from the time of the Apostles to the Counter Reformation. Readings from classics.

HIST 3080 - Catholic Tradition Since 1540 (3)

Theology, spirituality, church organization, religious art from the Council of Trent to the Second Vatican Council and its effects.

HIST 3090 - The Age of Renaissance (3)

The political, social and cultural influences which brought the medieval period to a close and prepared the way for a new European society.

HIST 3100 - The Reformation Era (3)

The religious crisis of age against the background of political, economic and intellectual change, 1500-1600.

HIST 3110 - The Age of Absolutism (3)

The rise and fall of dynasties; the Scientific Revolution and Age of Reason; beginnings of Industrialization. 1600-1789.

HIST 3120 - French Revolution and Napoleon, 1789-1815 (3)

The origins and history of the French Revolution; social, economic, intellectual, institutional, and constitutional changes; European War; the Napoleonic empire and its collapse.

HIST 3130 - The Age of Industrialism and Democracy, 1815-1914 (3)

The history of Europe from the Congress of Vienna to the First World War.

HIST 3140 - Twentieth Century Europe: Era of World Wars, 1914-1945 (3)

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 3150 - Europe since 1945 (3)

This course will examine how the European continent gained an unprecedented political, economic and social stability after 1945. It will also examine the impact of the Cold War on the European continent.

HIST 3160 - 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 3170 - Colonial Latin America (3)

A survey from the pre-Columbian period to the wars for independence.

HIST 3180 - Modern Latin America (3)

A survey from the wars for independence to contemporary Ibero-America.

HIST 3190 - Mexico (3-4)

Political, cultural and economic survey from Pre-Columbian period to the wars for independence.

HIST 3200 - China to 1644 (3)

From the embryo of the Middle Kingdom to the first confrontation with the west.

HIST 3210 - China Since 1644 (3)

From Manchu to Mao Tse Tung.

HIST 3220 - 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 3230 - Africa to 1884 (3)

Population movement and interaction; development of institutions and ideas African civilizations varying types of politics and revolutionary changes; slave and the Atlantic encounter; impact of Christianity and Islam.

HIST 3240 - 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 movement nationalism and nation building.

HIST 3250 - 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 3260 - 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 3280 - Russia to 1905 (3)

Survey of Kievan, Muscovite, and Imperial periods with major emphasis on Peter the Great and his successors; foreign and domestic politics, economic and social changes, westernization, religious and cultural developments.

HIST 3290 - Russia Since 1905 (3)

Causes and effects of the revolutions of 1905 and 1917. Foreign and domestic evolution of the Soviet state from its origins to its demise; the post-Soviet era; Lenin, Stalin, Khrushchev, Gorbachev, Yeltsin, and Putin.

HIST 3300 - Modern European Diplomatic History from 1815-1914 (3)

Metternich, Cavour, Bismarck, Disraeli, Salisbury, William H. Grey; Europe's diplomacy in the century before World War I.

HIST 3310 - Modern European Diplomatic History, 1914-Present (3)

How the destruction of World War enervated the democracies vis a vis totalitarian Nazism and Communism; World War II and its aftermath.

HIST 3330 - Modern History Spain:1808-Pres (3)

The altibajos of Spanish modernity. History of Spain from the French invasion to the present. Analysis of the nineteenth-century revolution, the First and Second Republics, the civil war, the Franco era and the democratic period from Adolfo Suarez to Jose Maria Aznar.

HIST 3340 - 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 3350 - Plagues and Peoples: Disease and Society in the Pre-modern World (3)

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. Prerequisite(s): HIST-1110 and HIST-1120.

HIST 3360 - English History: The Stuarts, 1603-1714 (3)

A political, social, cultural, and religious survey of the period.

HIST 3370 - English History: The Industrial Revolution, 1714-1880 (3)

A study of the economic, social and political circumstances which made England the worlds first industrial nation.

HIST 3380 - English History: The Victorian Age, 1837-1914 (3)

A political, social, cultural and religious survey of the period.

HIST 3390 - History of English Law (3)

Introduction to fundamentals of English law-terminology, concepts, and historical development.

HIST 3400 - Italy: 900-1860 (3)

This course will cover the political, social, economic, and cultural history of the Italian peninsula from the Early Middle Ages through the Risorgimento; development of characteristic political forms: communes, territorial states, and foreign dominated duchies.

HIST 3410 - Italy: 1860-Present (3)

The history of Italy from Unification to the European Community: the House of Savoy, the First World War, Mussolini and Fascism, D'Annunzio, Gramsci and Croce, Italy and the Holocaust, Christian Democracy, Italian Film, and Red Brigades.

HIST 3420 - The Atlantic World (3)

The Atlantic World began to emerge early in the second millennium CE with increased interaction between Europeans, Africans, and, later, Native Americans. This course will examine the social, cultural, political, economic, and military history of the Atlantic World through the 1830s. There are no prerequisites or co-requisites for the course.

HIST 3430 - African Economic History (3)

Surveys the varied heritage of African economies as well as performance from the pre-colonial period to the present. Includes agriculture, trade, urbanization, mining and industrialization. Impact of these economic activities on population and environment will be examined.

HIST 3440 - Imperialism & Nationalism (3)

A developmental and conceptual approach emphasizing the origins of new imperialism and its manifestations in the 19th and 20th centuries. Includes the rise of North Atlantic powers; imperial control in Africa and Asia; Decolonization; Post-colonial economies.

HIST 3450 - 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 3460 - Foundations of the American Republic, 1763-1816 (3)

The American Revolution, the Constitution and the early years of the Republic.

HIST 3470 - Antebellum America: Nationalism and Sectionalism, 1816-1860 (3)

Aftermath of the War of 1812; development of American political parties; the age of Jackson; Evangelical revivals and reform movements; the coming of the Civil War.

HIST 3480 - U.S. Civil War and Reconstruction, 1850-1877 (3)

Causes of the war; personalities; factors in the Northern victory; the war on the home front; reconstruction; experience of the freedmen.

HIST 3490 - The Gilded Age (3)

The rise of industrialism in the United States and the response of various institutions.

HIST 3500 - Progressive Era to the Jazz Age, 1890-1920 (3)

A survey of political, social, economic and cultural developments as America's society transformed from a rural-agrarian society to an urban-industrial power and from isolationism to a major force in world affairs.

HIST 3510 - Prosperity, Depression, and War 1920-1945 (3)

The 1920's, the New Deal and World War II.

HIST 3520 - Contemporary America, 1945 - Present (3)

The Cold War, civil rights, Vietnam, Watergate, the technological revolution and modern society.

HIST 3530 - U.S. Diplomatic Hist to 1900 (3)

An examination of the principles and foundations of American foreign policy the time of the Spanish-American War.

HIST 3540 - 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 3550 - 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 3560 - U.S. Social and Intellectual History to 1861 (3)

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 3570 - U.S. Social and Intellectual History SINCE 1861 (3)

Underlying ideas of American society; the impact of immigration, agrarianism, urbanization, industrialization, technological development and reform movements.

HIST 3580 - 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 3590 - 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 3610 - 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 3620 - Public Policy Since 1945 (3)

This course examines the history of American public policy since 1945. Among topics discussed include the development of the welfare state; civil rights; social policy; drug control policy; and urban policy.

HIST 3630 - The Saint Louis Region (1-3)

Examines the rich and varied heritage of St. Louis, its social, cultural, and intellectual dominance of the American Heartland, its contributions in business, religion, politics and the arts.

HIST 3640 - History of the American West (3)

A survey of the trans-Mississippi frontier, covering the mining, cattle, and farming frontiers, the cause for the great migration, and society and culture of the frontier, and the frontier in American myth.

HIST 3650 - Race and Religion in the Trans-Atlantic World, 1492-1992 (3)

This course examines the history of race policy in the Trans-Atlantic World from the 15th through the 20th Centuries. Focusing on Latin America, Caribbean, United States, and Africa, students will develop a comprehensive understanding of the history and development of religious race-based consciousness in the modern world.

HIST 3660 - North American Environmental History (3)

This course surveys the environmental history of what is now the United States from the fifteenth century to the present.

HIST 3670 - U.S. Economic History to 1865 (3)

This course examines economic history of United States from the colonial times through the civil war. Among topics to be discussed include mercantilism; economic causes of the American revolution; slavery and the Civil War.

HIST 3680 - U.S. Economic History to 1865 (3)

This course examines U.S. economic history since the Civil War to the present. Among the topics to be covered include the second industrial revolution; the rise of the corporation; the Great Depression; government-business relations in the postwar period; the rise of organized labor; government economic policy.

HIST 3690 - American Military History (3)

This course will examine American military and naval history from the earliest times to Vietnam and Iraq.

HIST 3700 - U.S. Constitutional History (3)

This course examines the origins, drafting, and ratification of the U.S. Constitution and its subsequent history as revealed in landmark supreme Court decisions and in constitutional crises from Nullification to Watergate. Attention will also be given to the growth of American law and the development of the legal profession.

HIST 3710 - The Catholic Reformation (3)

This course examines a major transition in the history of the Catholic Church (1500-1700) as church reformers sought to correct abuses in the church, provide greater pastoral care, and confront Protestantism. Will also explore the impact of Catholicism on social life, intellectual thought, and political development.

HIST 3720 - Cultural Encounters 1500-1700 (3)

This course explores the cultural interaction between Europeans and indigenous peoples in Asia, Africa, and the America from the time of exploration to colonization. Focus on missionary endeavors and political development.

HIST 3730 - Daily Life in Early Mod Europe (3)

Examination into the social life and daily routines of ordinary people in Europe from 1500 to 1800. Course focuses on material life, popular religion, gender relations, urban and rural labor, and community construction.

HIST 3740 - The British Empire (3)

Survey of British empire from late eighteenth century to end of the twentieth century. Topics include: cultural and material foundations of empire; collaboration and resistance; dynamics of race, gender, and class, role of art and literature, new national and local identities; decolonization and independence, and contemporary legacies of empire.

HIST 3750 - 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 3800 - Autobiography and History (3)

The autobiographical genre from St. Augustine's confessions to contemporary autobiography as literature and its relation to history.

HIST 3810 - 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 3820 - Islamic Middle East (3)

This is survey course of the history of the Middle East from the rise of Islam 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 3830 - Modern Middle East (3)

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

HIST 3930 - Special Topics (3)

Various topical courses offered from time to time.

HIST 4900 - 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 4901 - 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 4902 - 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 4910 - Internship/History in Practice (1-6)

A practical application of history through an internship with an archive, library, museum, historical site or project.

HIST 4930 - Special Topics in History (3-4)

Various topical courses offered from time to time.

HIST 4991 - History Senior 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 5000 - 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 5100 - Studies in Ancient History (3)

This reading course presents a broad historiographical survey of major issues and interpretations of Ancient History.

HIST 5110 - Advanced Studies in Ancient History (3)

This is a reading course that provides an in-depth examination of specific topics in Ancient History. The topic of the course will vary from semester to semester.

HIST 5150 - Perspectives in Ancient Histry (3)

This course will allow graduate students, by contract, to enroll in an upper level undergraduate Ancient History course. The contract would require additional readings and/or a research project. Since this course number involves taking an undergraduate class for graduate credit, a student may register for this course no more than twice in his/her degree program.

HIST 5200 - Ancient & Byzantine History (3)

A general examination of the historiography and literature in late ancient and Byzantine history.

HIST 5210 - Adv Ancnt & Byzantine Hist (3)

An examination of the historiography and literature in specialized topics in late ancient and Byzantine history.

HIST 5250 - Perspectives: Late Ancient and Byzantine History (3)

Lectures and readings on historical events and wider trends in late ancient or Byzantine history.

HIST 5300 - 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 5310 - Adv Std: Medieval History (3)

An examination of the historiography, literature, and current trends in specialized topics in Medieval history.

HIST 5350 - Perspectives Medieval Hist (3)

Lectures and readings on historical events and forces affecting specific periods in Medieval history.

HIST 5400 - Studies in Early Modern European History (3)

Study and discussion of secondary literature in Renaissance and Reformation (early Modern European) history.

HIST 5410 - Advanced Studies in Early Modern European History (3)

Examination of the historiography, literature, and current trends in specialized topics in Renaissance/Reformation History.

HIST 5450 - Prspctvs Rensnc & Rfrmtn Hist (3)

Lectures and readings on events and forces affecting specific periods in Renaissance/Reformation history.

HIST 5500 - Stdy 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 5510 - Adv Studies Modrn European His (3)

Examination of the historiography, literature, and current trends in specialized topics in Modern European history.

HIST 5550 - Prspctvs Modern European Hist (3)

Lectures and readings on events and forces affecting specific periods in Modern European history.

HIST 5600 - 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 5610 - Adv Studies American History (3)

Examination of the historiography, literature, and current trends in specialized topics in United States history.

HIST 5650 - Perspctivs in American History (3)

Lectures and readings on events and forces affecting specific periods in United States history.

HIST 5700 - Themes and Mthds in World Hist (3)

Themes and Methods in World History is designed to introduce students to the field of World History. Students will be familiarized with various theoretical and methodological approaches to World History as well as major debates within the field. Students will develop an understanding of the narrative outline of World History.

HIST 5800 - Race, Ethnicity and Culture Proseminar (3)

This course provides an introduction to the key concepts, themes and methods of a historically-focused study of race, ethnicity, and culture in American life. General issues explored in the course include the cultural, historical, and demographic context of race and ethnicity in North America.

HIST 5900 - History Teaching Practicum (0)

Required of all graduate teaching assistants, this course covers teaching methods, lecturing, and other topics necessary to prepare an effective teach

HIST 6800 - 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 6810 - 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 6820 - Seminar: Early Modern European History (3)

Introduction to research in Renaissance and Reformation Europe. Students become acquainted with research tools in Renaissance and Reformation history, to learn paleographic and codicological skills.

HIST 6830 - Seminar in Mod European Hist (3)

An opportunity to undertake advanced research, through primary and archiv sources and secondary literature, in a specific area of Modern European history (1600 to the present).

HIST 6840 - Seminar in American History (3)

An introduction to advanced research in American history. Readings in secondary literature. Students will undertake research, using also primary ar archival sources. Thematic and chronological topics.

HIST 6850 - Seminar in Ancient History (3)

This is a research seminar. Students will be required to produce a major pap based on original primary research.

HIST 6900 - Professional Writing for Historians I (3)

HIST 6900 is the first half (3 crs) of a two-semester course sequence designed to assist students in making the critical transition from being a student to becoming a scholar. The primary goals of the sequence are to orient students to professional expectations in the professorate and to devel a program of professional writing and dissertation research as efficiently and effectively as possible. More specifically, the courses aim to help students to conceptualize a dissertation, to fund a year of research from external source and to begin establishing a record of scholarship. As the first course in the sequence, HIST 6900 focuses on grant-writing and the dissertation prospectus, with the goal of having students submit at least one application for external funding and to finish the ¿problem section¿ of their prospectus. During the semester, the class also works on other professional development issues, such as networking and presenting conference papers. Offered ever Fall.

HIST 6901 - Professional Writing for Historians II (3)

HIST 6901 is the second half (3 crs) of a two-semester course sequence designed to assist students in making the critical transition from being a student to becoming a scholar. The primary goals of the sequence are to orient students to professional expectations in the professorate and to devel a program of professional writing and dissertation research as efficiently and effectively as possible. More specifically, the courses aim to help students to conceptualize a dissertation, to fund a year of research from external source and to begin establishing a record of scholarship. As the second course in th sequence, HIST 6901 focuses on completion of the dissertation prospectus and article writing. Students are expected to revise fully at least one seminar paper they have written and submit it for publication to a reputable academic journal. During the semester, the class also takes up timely professional development issues, such as interviewing for jobs, writing a cover letter, and organizing a CV. Offered every Spring. Prerequisite: HIST 6900

Integrated & Applied Sciences (IAS)

IAS 6010 - 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 6030 - 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 1100 - 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 2900 - 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 4910 - Intern in International Studies (0-4)

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 4910 - Intern in International Studies (0-3)

This course places emphasis on the integration of academic studies with professional practice oriented toward specific career goals. Students are responsible for setting up the internship under the direction of the advisor. Offered every semester.

Italian (ITAL)**ITAL 1010 - Communicating in Italian I (0-3)**

Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 1020 - Communicating in Italian II (0-3)

Expansion of oral and written communication skills in areas of daily life and personal interest.

ITAL 1200 - Italian for Speakers of Other Romance Languages (0-3)

Intensive Elementary Italian. Open to students with four years of a Romance Language (or Latin) in High School, or three semesters of College, or equivalent. Equivalent to ITAL 1010 Plus ITAL 1020. Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 1200 - Intensive Italian for Gamers (0-3)

Intensive Elementary Italian. Open to students with four years of a Romance Language (or Latin) in High School, or three semesters of College, or equivalent. Equivalent to ITAL 1010 Plus ITAL 1020. Introduction to Italian language and culture. Emphasis on acquiring communicative skills.

ITAL 2010 - Interm Italian: Lang & Culture (0-3)

Continued practice in all skills, enabling students. Reading in and discussion of Italian culture.

ITAL 2980 - Independent Study (0-3)

Prior approval required of sponsoring professor of department chair.

ITAL 3010 - Written Comm. in Italian I (0-4)

Reading and analysis of authentic language materials to develop written expression. Refining of communicative strategies for accurate expression of ideas.

ITAL 3020 - Oral Comm in Italian I (0-4)

Development of fluent oral expression through communicative activities stressing listening comprehension, structural accuracy and systematic approach to vocabulary expansion.

ITAL 3200 - Italian Cinema (3-4)

A survey of Italian Cinema from neorealism to the present. The course will cover both formal and thematic trends in the films of directors such as Rossellini, Visconti, Fellini, Antonioni, Wertmuller, Benigni. Film screenings will be in Italian with English subtitles. Lectures and course work will be in English, with a lab in Italian. No prerequisites.

ITAL 3250 - Love, Sex and Tragedy in the Middle Ages (1-3)

The study of the presence, nature and evolution of themes in the Fourteenth and Fifteenth centuries. No prerequisites. Course will be taught in English.

ITAL 3300 - Italian Women's Studies (3)

An introduction to the work of Italian women writers, thinkers, filmmakers, 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 3400 - Dante's Divine Comedy (1-3)

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 3450 - Mafia and Antimafia in Italian Culture: Perceptions, Representations, Experiences (3)

A critical exploration of perceptions and representations of organized crime in Italy and the US through the study of literary texts, films, and testimonials. Emphasis on: history of the mafia, the antimafia movement, and the impact gender on the experiences of mafia victims and perpetrators. Taught in English.

ITAL 3500 - Enlightening Tales: The Works of Italo Calvino (3)

An introduction to Italo Calvino's major works. Investigation of a selection of Calvino's novels, short stories, and essays against the backdrop of post WWII Italy's ideological and aesthetic debates. Emphasis on Calvino's textual conversations with literature, science, and the arts. Taught in English.

ITAL 3550 - Women, Knights, Weapons & Love: Medieval and Renaissance Italian Literature (3)

An introduction to literary masterpieces using the themes of love, war and women from the 13th century through the Renaissance. Readings from major works of selected authors illustrate the dominant intellectual trends and development of literary forms against the rich cultural background of medieval and Renaissance Italy. In English.

ITAL 3600 - Power and Play: Pre-Modern Italian Theatre (3)

A critical exploration of the development of literary texts of Italian theatre from the 13th to the 17th century. The course considers art, religion, gender, politics, race, sexual orientation and identity within their historical, religious and philosophical context. Course taught in English.

ITAL 3650 - All things Trans-: Modern Italy Across Borders, Cultures, and Disciplines (3)

A critical exploration of the development of literary texts of Italian theatre from the 13th to the 17th century. The course considers art, religion, gender, politics, race, sexual orientation and identity within their historical, religious and philosophical context. Course taught in English.

ITAL 3980 - Independent Study (2)

Prior approval required of sponsoring professor and/or department chair.

ITAL 4010 - 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 4020 - Oral Comm. in Italian II (3)

Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

ITAL 4200 - 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 4250 - Middle Ages to Renaissance (1-3)

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(s): ITAL-3020 or equivalent.

ITAL 4300 - An Assembly Manual for the Perfect Prince (1-3)

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.

Prerequisite(s): ITAL-3020 or equivalent.

ITAL 4350 - Themes in Italian Literature of the Nineteenth Century: Realism and Beyond (1-3)

The goal of the course is to explore and analyze major trends in Italian literature and culture of if the 19th century. Taught in Italian.

Prerequisite(s): ITAL-3020, or equivalent.

ITAL 4400 - History of Italian Literature from the Middle Ages to the Renaissance (1-3)

This is a course about Italian literature of central Centuries of Italian Literature. The goal of the course is to have the students have a general idea of the major trends in Italian literature and culture of the time. Taught in Italian.

Prerequisite(s): ITAL-3010 and ITAL-3020, or equivalent.

ITAL 4960 - 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 4980 - Advanced Independent Study (0-3)

Prior approval required of sponsoring professor and department chairperson.

Latin American Studies (LAS)**LAS 1000 - Latino Studies: An Overview (1)**

The course provides an understanding of various disciplinary approaches to understanding the dynamics of the Latino population in the U.S. This is a cross-disciplinary introduction to issues that are addressed by the Latino Studies Certificate and to the research that faculty members at Saint Louis University are conducting in the Latino community.

LAS 3000 - Introduction to Latin American Studies (3)

This course is designed to give students a general introduction to the societies, cultures, economies, and politics of Latin America. Topics covered include colonialism, and its contemporary legacies, the role of historically-marginalized groups, authoritarianism and violence, and the economic basis of modern Latin American societies.

Latin (LATN)**LATN 1010 - 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 1020 - 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 2010 - Interm Latin: Language & Lit (3)

Review of material learned during the first two semesters and coverage of remaining grammar; further vocabulary-extensions; extensive practice in reading continuous Latin prose.

LATN 4100 - Intro to Post-Classical Latin (3)

A general review of grammar and varied selections of post-classical Latin prose.

LATN 4110 - 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 4120 - Medieval Latin Readings II (3)

Reading of selections of medieval prose and poetry from the time of Charlemagne to the Ottonian Renaissance. Usually offered in the spring. In sequence with LATN 411 and LATN 413.

LATN 4130 - 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 4650 - Latin Literature I (3)

History of Latin literature from its beginning to the end of the Golden Age.

LATN 4660 - Latin Literature II (3)

History of Latin literature of the Early Empire.

LATN 4980 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chairperson required.

LATN 5010 - Latin for Reading (3)

This course is an intensive, comprehensive and rigorous study of the grammar and syntax of Classical and Medieval Latin. It is designed for the graduate who needs the translation tools to understand their Latin sources. Special attention will be directed to translation techniques specific to individual needs. Some previous study or experience with Latin is preferred but not necessary.

LATN 5230 - Cicero as Essayist (3)

This course will read in the original Latin selections from one or several of Cicero's writings. The focus is on understanding and translating the Latin successfully while exploring the content of Cicero's writing for its literary, cultural and philosophical importance. Prerequisite: LATN 2010. Intermediate Latin Language and Literature or consent of Instructor.

LATN 5280 - Readings in St. Augustine (3)

This course will read in the original Latin selections from one or several of St. Augustine's writings. The focus is on understanding and translating the Latin successfully while exploring the content of Augustine's writing for its theological, cultural and historical importance. Offered occasionally.

Language, Literature & Culture (LLC)**LLC 3250 - Migrants and Borders on Screen: The Cinema of Migration in the Mediterranean Europe (0-3)**

This course is an introduction to recent European cinema of migration with a focus on Italy, France and Spain. Students will develop cross-cultural awareness of how the experience of migrants shapes the host society, and how issues of gender and race affect migrants' journeys and their integration.

Athletic Training (MAT) (MAT)**MAT 5620 - Psychology of Sport and Injury (3)**

This course examines the effects of culture, motivation, personality, attitude, 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 course also deals with psychological response to injury, treatment, rehabilitation and return to participation.

Mathematics (MATH)

MATH 0240 - Intro Elementary Algebra I (3)

Review of the real number system; linear equations, and inequalities in one and two variables; functions; systems of linear equations. Fall. MATH 0240 and MATH 0250 together cover the same material as MATH 0260, but in two semesters.

MATH 0250 - Intro to Elementary Algebra II (3)

Exponents, polynomials and polynomial functions; factoring; rational expressions and functions; roots, radicals and root functions; quadratic equations, inequalities and functions. Spring. MATH 0240 and MATH 0250 together cover the same material as MATH 0260, but in two semesters.

MATH 0260 - Intermediate Algebra (0-3)

Review of the real number system; linear equations, and inequalities in one and two variables; functions; systems of linear equations; exponents, polynomials and polynomial functions; factoring; rational expressions and functions; roots, radicals and root functions; quadratic equations, inequalities and functions. Fall and spring.

MATH 1200 - College Algebra (0-3)

Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH-1320 or MATH-1400. Fall, spring and summer. Prerequisite(s): 2 years of high school algebra or a grade of C- or better in MATH-0250 or MATH-0260.

MATH 1220 - Finite Mathematics (3)

Brief review of algebraic essentials, graphs, functions and their graphs, linear and quadratic functions, polynomial and rational functions, exponential and logarithmic functions, systems of linear equations. Intended for students needing more preparation before taking MATH-1320 or MATH-1400. Fall, spring and summer. Prerequisite(s): 2 years of high school algebra or a grade of C- or better in MATH-0250 or MATH-0260.

MATH 1240 - Mathematics and the Art of M.C. Escher (3)

A SLU Inquiry Seminar. The art of M.C. Escher is used to explore topics in geometry such as symmetry, tessellations, wallpaper patterns, the geometry of the sphere and hyperbolic geometry. Taught in a computer classroom. Fall and spring. Prerequisite(s): 3.5 years of high school mathematics or a grade of C- or better in MATH-1200.

MATH 1250 - 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.

Prerequisite(s): Three years of high school mathematics or a grade of 'C-' or better in MATH-1200. (An understanding beyond MATH-114 is needed.)

MATH 1260 - Statistics Including Sports and Politics (3)

A SLU freshman seminar. Producing data through the use of samples and experiments; organizing data through graphs and numbers that describe the distribution of the data of one variable or the relationship between two variables; probability; statistical inference including confidence intervals and tests of significance. Prerequisite(s): 3.5 years of high school mathematics or a grade of 'C-' or better in MATH-1200.

MATH 1300 - 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. Credit not given for MATH-1300 and any of the following: STAT-1300 or OPM 2070. Prerequisite(s): MATH-1200 or equivalent.

MATH 1320 - Survey of Calculus (3)

Linear equations and graphs; functions and graphs; limits; the derivative; rules of differentiation; curve sketching and optimization; antiderivatives; the definite integral; multivariable calculus and partial derivatives. Prerequisite(s): 3.5 years of high school mathematics or a grade of C- or better in MATH-1200. (Offered every Fall, Spring and Summer)

MATH 1400 - Pre-Calculus (3)

Functions, graphs and models; modeling with linear and quadratic functions; polynomial and rational functions; modeling with exponential and logarithmic functions; trigonometric functions; trigonometric identities and conditional equations; additional topics in trigonometry; additional topics in analytic geometry; parametric equations. Fall, spring and summer. Prerequisite(s): 3.5 years of high school mathematics or a grade of C- or better in MATH-121

MATH 1510 - 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(s): 4 years of high school mathematics or a grade of C- or better in MATH-1400. 1818 Advanced College Credit

MATH 1520 - Calculus II (4)

Symbolic and numerical techniques of integration, improper integrals, applications using the definite integral, sequences and series, power series, Taylor series, differential equations. Fall, spring and summer.

Prerequisite(s): A grade of C- or better in MATH-1510. 1818 Advanced College Credit

MATH 1650 - Cryptology (3)

A SLU freshman seminar. Aimed at students who require a course at the level of calculus or higher and who are interested in the mathematical basis for cryptology systems. Topics include permutation based codes, block cipher schemes and public key encryption. Prerequisites: 4 years of high school mathematics.

MATH 1660 - 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. Prerequisite(s): A grade of 'C-' or better in MATH-1200 or equivalent.

MATH 1810 - Informal Geometry (3)

An informal introduction to geometry for Education majors. Does not satisfy the Arts and Sciences requirement in mathematics. Prerequisite(s): A grade of 'C-' or better in MATH-1200. (Offered periodically)

MATH 2530 - Calculus III (4)

Three-dimensional analytic geometry, vector-valued functions, partial differentiation, multiple integration, and line integrals. Fall and Spring semesters. Prerequisite(s): A grade of 'C-' or better in MATH-1520.

MATH 2660 - 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. Prerequisite(s): A grade of 'C-' or better in MATH-1510.

MATH 2690 - 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 pre-calculus, calculus, combinatorics, probability, inequalities. Coverage tailored to students' interests. May be repeated for credit. Fall semester. Prerequisite: None.

MATH 2980 - Independent Study (0-3)

Prior approval of sponsoring professor and chair required.

MATH 3110 - Linear Algebra for Engineers (3)

Systems of linear equations, matrices, linear programming, determinants, vector spaces, inner product spaces, eigenvalues and eigenvectors, linear transformations, and numerical methods. Credit not given for both MATH-31 and MATH-3120. Does not satisfy any requirements for the mathematics major. Spring semester. Prerequisite(s): A grade of 'C-' or better in MATH-1520 and a knowledge of vectors.

MATH 3120 - Introduction to Linear Algebra (3)

Matrices, row operations with matrices, determinants, systems of linear equations, vector spaces, linear transformations, inner products, eigenvalues and eigenvectors. Credit not given for both MATH-3110 and MATH-3120. Fall and Spring semesters. Prerequisites - MATH-2530 and MATH-2660.

MATH 3230 - Vector Analysis (3)

Vector algebra, differential and integral calculus of vector functions, linear vector functions and dyadics, applications to geometry, particle and fluid mechanics, theory of vector fields. Prerequisite(s): MATH-2530. (Offered periodically)

MATH 3240 - Numerical Analysis (3)

Review of calculus; root finding, nonlinear systems, interpolation and approximation; numerical differentiation and integration. Prerequisite(s): MATH-1520.

MATH 3270 - Advanced Mathematics for Engineers (3)

Vector algebra; matrix algebra; systems of linear equations; eigenvalues and eigenvectors; systems of differential equations; vector differential calculus; divergence, gradient and curl; vector integral calculus; integral theorems; Fourier series with applications to partial differential equations. Fall and Spring semesters. Prerequisite(s): MATH-3550.

MATH 3550 - Differential Equations I (3)

Solution of ordinary differential equations, higher order linear equations, constant coefficient equations, systems of first order equations, linear systems, equilibrium of nonlinear systems, Laplace transformations.

Prerequisite(s): MATH-2530.

MATH 3600 - Combinatorics (3)

Advanced counting methods: permutations and combinations, generalized permutations and combinations, recurrence relations, generating functions; algorithms: graphs and digraphs, graph algorithms: minimum-cost spanning trees, shortest path, network flows; depth first and breadth-first searches; combinatorial algorithms: resource scheduling, bin-packing: algorithmic analysis and NP completeness.

MATH 3760 - Financial Mathematics (3)

This course covers the theory of interest material for the Financial Mathematics exam of the Society of Actuaries. Time permitting, supplemental material covering financial derivatives will be discussed. Prerequisite(s): MATH-1520.

MATH 3800 - Elementary Theory of Probability (3)

Counting theory; axiomatic probability, random variables, expectation, limit theorems. Applications of the theory of probability to a variety of practical problems. Credit not given toward the math major or minors for both MATH-3800 and either MATH-3810 or MATH-4800. (Offered fall) Prerequisite(s): MATH-2530.

MATH 3810 - Probability and Statistics for Engineers (3)

Analyzing and producing data; probability; random variables; probability distributions; expectation; sampling distributions; confidence intervals; hypothesis testing; experimental design; regression and correlation analysis. Credit not given toward the math major or minors for both MATH-3810 and either MATH-3800 or MATH-3850. (Offered fall and spring) Prerequisite(s): MATH-2530.

MATH 3850 - Foundation of Statistics (3)

Descriptive statistics, probability distributions, random variables, expectation, independence, hypothesis testing, confidence intervals, regression and ANOVA. Applications and theory. Taught using statistical software. Prerequisite: MATH 1520. Credit not given toward the math major or minors for both MATH/STAT 3810 and MATH/STAT 3850.

MATH 4050 - History of Mathematics (3)

The development of several important branches of mathematics, including numeration and computation, algebra, non-Euclidean geometry, and calculus. Prerequisite(s): MATH-1520. (Offered periodically)

MATH 4110 - Introduction to Abstract Algebra (3)

Elementary properties of the integers, sets and mappings, groups, rings, integral domains, division rings and fields. Fall semester. Prerequisite(s): MATH-3120.

MATH 4120 - Linear Algebra (3)

Advanced linear algebra, including linear transformations and duality, elementary canonical forms, rational and Jordan forms, inner product space, unitary operators, normal operators and spectral theory. Spring semester.

Prerequisite(s): MATH-4110.

MATH 4150 - Number Theory (3)

Introduction to algebraic number theory. Topics will include primes, Chinese remainder theorem, Diophantine equations, algebraic numbers and quadratic residues. Additional topics will vary from year to year. Prerequisite(s): MATH-4110. (Offered periodically)

MATH 4210 - Introduction to Analysis (3)

Real number system, functions, sequences, limits, continuity, differentiation, integration and series. Fall semester. Prerequisite(s): MATH-2530.

MATH 4220 - Metric Spaces (3)

Set theory, metric spaces, completeness, compactness, connected sets, category. Spring semester. Prerequisite(s): MATH-4210.

MATH 4230 - Multivariable Analysis (3)

Introduction to analysis in multidimensional Euclidean space. Sequences and Series of functions, Differentiability, Integrability, Inverse and Implicit function theorems, Fundamental Theorems of Multivariable Calculus (Green's Theorem, Stokes Theorem, Divergence Theorem). Spring semester.

Prerequisite(s): MATH-4210.

MATH 4310 - Introduction to Complex Variables (3)

Complex number system and its operations, limits and sequences, continuous functions and their properties, derivatives, conformal representation, curvilinear and complex integration, Cauchy integral theorems, power series and singularities. Fall semester. Prerequisite(s): MATH-2530.

MATH 4320 - Complex Variables II (3)

This course is a continuation of MATH-4310. Topics covered include series, residues and poles, conformal mapping, integral formulas, analytic continuation, and Riemann surfaces. Spring semester. Prerequisite(s): MATH-4310.

MATH 4360 - Geometric Topology (3)

An introduction to the geometry and topology of surfaces and three dimensional spaces. Topics covered include Euclidean, spherical and hyperbolic geometry, topology of surfaces, knot theory, and the fundamental group. Prerequisite(s): MATH-4310.

MATH 4410 - Foundations of Geometry (3)

Historical background of the study of Euclidean geometry; development of two dimensional Euclidean geometry from a selected set of postulates. Prerequisite(s): MATH-1510. (Offered periodically)

MATH 4430 - Non-Euclidean Geometry (3)

The rise and development of the non-Euclidean geometries with intensive study of plane hyperbolic geometry. Prerequisite(s): MATH-1510. (Offered periodically)

MATH 4480 - Differential Geometry (3)

Classical theory of smooth curves and surfaces in 3-space. Curvature and torsion of space curves, Gaussian curvature of surfaces, the Theorema Egregium of Gauss. Offered occasionally.

MATH 4550 - Nonlinear Dynamics and Chaos (3)

Bifurcation in one-dimensional flows. Two-dimensional flows, fixed points and linearization, conservative systems, index theory, limit cycles. Poincaré-Bendixson theory, bifurcations. Chaos, the Lorenz equation, discrete maps, fractals, and strange attractors. Prerequisite(s): MATH-3550.

MATH 4570 - Partial Differential Equations (3)

Fourier series, Fourier Integrals, the heat equation, Sturm-Liouville problem, the wave equation, the potential equation, problems in several dimensions, Laplace transforms numerical methods. Prerequisite(s): MATH-3550.

MATH 4630 - Graph Theory (3)

Basic definitions and concepts, undirected graphs (trees and graphs with cycles), directed graphs, and operation on graphs, Euler's formula, and surfaces. Prerequisite(s): MATH-2530. (Offered periodically)

MATH 4650 - Cryptography (3)

Classical cryptographic systems, public key cryptography, symmetric block ciphers, implementation issues. Related and supporting mathematical concepts and structures. Prerequisite(s): MATH-1520

MATH 4800 - Probability Theory (3)

Axioms of probability, conditional probability. Discrete and continuous random variables, expectation, jointly defined random variables. Transformations of random variables and limit theorems. Theory and applications, taught using statistical software. Prerequisites: MATH/STAT 3850, MATH 2530 and MATH 1660 or MATH 2660. Credit not given toward the math major or minors for any two of MATH 3800, MATH 4800 and MATH 4810.

MATH 4840 - Time Series (3)

Applied time series. Topics include exploratory data analysis, regression, ARIMA. Spectral analysis, statespace models. Theory and applications, taught using statistical software. Prerequisite: MATH/STAT 3850.

MATH 4850 - Mathematical Statistics (3)

Theory of estimators, sampling distributions, hypothesis testing, confidence intervals, regression, bootstrapping, and resampling. Theory and applications, taught using statistical software. Prerequisite: MATH 4800. Students may not take both MATH 4850 and MATH 4820.

MATH 4860 - Statistical Models (3)

Poisson processes, Markov chains, hidden Markov models, continuous time Markov chains, queueing theory. Theory and applications, taught with statistical software. Prerequisite: MATH 4800.

MATH 4870 - Applied Regression (3)

Linear regression, model selection, nonparametric regression, classification and graphical models. Theory and applications using statistical software. Prerequisites: MATH/STAT 3850 and MATH 3110 or MATH 3120.

MATH 4880 - Probability and Statistics for Engineers (3)

Analyzing and producing data; probability; random variables; probability distributions; expectation; sampling distributions; confidence intervals; hypothesis testing; experimental design; regression and correlation analysis. Credit not given for both MATH-4880 and either MATH-4810 or MATH-4820. Fall and Spring semesters. Prerequisite(s) - MATH-2530.

MATH 4950 - Senior Residency (0)

Required for graduating seniors.

MATH 4980 - Advanced Independent Study (0-6)

Prior permission of sponsoring professor and chair required.

MATH 5102 - 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 5105 - Number Theory (3)

Introduction to algebraic number theory. Topics will include primes, Chinese remainder theorem, Diophantine equations, algebraic numbers and quadratic residues. Additional topics will vary from year to year. Prerequisite(s): MATH-4110

MATH 5110 - 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 5120 - 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 5202 - 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 5203 - Multivariable Analysis (3)

Sequences and Series of functions, Differentiability, Integrability, Inverse and Implicit function theorems, Fundamental Theorems of Multivariable Calculus (Green's Theorem, Stokes Theorem, Divergence Theorem).

Prerequisite(s): MATH-4210.

MATH 5210 - Real Analysis I (3)

The topology of the reals, Lebesgue and Borel measurable functions, properties of the Lebesgue integral, differential of the integral. Offered every Fall semester.

MATH 5220 - Complex Analysis (3)

Holomorphic and Harmonic functions and power series expansions. Complex integration. Cauchy's theorem and applications. Laurent series, singularities, Runge's theorem, and the calculus of residues. Additional topics may include Analytic continuation, Riemann surfaces, and conformal mapping.

Prerequisite(s): MATH-5210 and MATH-5310. Recommended: MATH-4310.

(Offered periodically)

MATH 5230 - Functional Analysis (3)

Banach and Hilbert spaces. Linear functions and linear operators. Dual spaces, weak and weak topologies. Hahn-Banach, Closed Graph and Open Mapping Theorems. Topological Vector spaces. Prerequisite(s): MATH-5210 and MATH-5310. (Offered periodically)

MATH 5240 - Harmonic Analysis (3)

Fourier Series on the circle, Convergence of Fourier series, Conjugate and maximal functions, Interpolation of Linear Operators, Lacunary Sequences, Fourier Transform on the line, Fourier transform on locally compact Abelian groups. Prerequisite(s): MATH-5210. Recommended: MATH-5310.

MATH 5310 - General Topology I (3)

Topological spaces, convergence, nets, product spaces, metrization, compact spaces, connected spaces. Offered every Fall semester.

MATH 5320 - General Topology II (3)

Compact surfaces, fundamental groups, free groups and free products, Seifert-van Kampen theorem, covering spaces. Offered every Spring semester.

MATH 5980 - Graduate Reading Course (1-3)

Prior permission of instructor and chairperson required.

MATH 6110 - Algebra III (3)

Categories and functors, properties of hom and tensor, projective and injective modules, chain conditions, decomposition and cancellation of modules, theorems of Maschke, Wedderburn, and Artin-Wedderburn, tensor algebras. Offered every other year.

MATH 6180 - Topics in Algebra (3)

Various topics are discussed to bring graduate students to the forefront of a research area in algebra. Times of offering in accordance with research interests of faculty. Offered occasionally.

MATH 6210 - 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 group. Offered every other year.

MATH 6220 - Rep Theory of Lie Groups (3)

Representation theory of Lie groups, irreducibility and complete reducibility, Cartan subalgebra and root space decomposition, root system and classification, coadjoint orbits, harmonic analysis on homogeneous spaces. Offered every other year.

MATH 6280 - 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 6310 - 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-Lefschetz duality. Offered every other year.

MATH 6320 - Topology of Manifolds (3)

Examples of manifolds, the tangent bundle, maps between manifolds, embeddings, critical values, transversality, isotopies, vector bundles and tubular neighborhoods, cobordism, intersection numbers and Euler characteristics. May be taught in either the piecewise linear or differentiable categories. Offered every other year.

MATH 6380 - 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 6410 - 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 6420 - Differential Geometry II (3)

Continuation of MATH-6410. (Offered every Spring)

MATH 6480 - 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 6980 - Graduate Reading Course (1-3)

Prior permission of instructor and chairperson required.

Micah House Program (MH)**MH 1100 - Exploring Urban Vocations (1)**

Introduces the challenges facing cities of the future and the wide range of SLU degree programs that address them. Through presentations by professionals, site visits, and shadowing, students explore careers in Healthcare, Education, Housing, Transportation, Urban Design, Engineering, Environment, Law, Criminal Justice, Economics, Public Administration, Social Services, and Community Organization.

MH 4960 - Senior Capstone (3)

Under supervision of a faculty member, students conduct research on a theoretical or practical issue involving social injustice and peace in the American city. Examples include philosophical or theological ideals of social order; psychological, sociological, or political obstacles to attaining such ideals; and practical solutions to such problems in fields such as public policy studies, social work, community service, and the health sciences.

Military Science (MILS)**MILS 1010 - Introduction to Leadership I (2)**

Examine the challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as cultural understanding, goal setting, time management, mental/physical resiliency, and stress management relate to leadership, officership, and the Army profession. MILS-1010 is open to all students and enrollment does not require a commitment to join the US Army.

MILS 1020 - Introduction to Leadership II (2)

Investigate leadership fundamentals such as problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership attributes and core leader competencies in the context of practical, hands-on, and interactive exercises. Learn fundamental military concepts and explore the Army's leadership philosophy. MILS-1020 is open to all students and enrollment does not require a commitment to join the US Army.

MILS 2010 - Innovative Team Leadership (3)

Explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and leadership theories. The course continues to build on developing knowledge of leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Enrollment in MILS-2010 does not require a commitment to join the US Army.

MILS 2020 - Foundations of Tactical Leadership (3)

Develop greater self-awareness as you assess your own leadership styles and practice communication and team building skills. Examine and practice the challenges of leading teams in the complex operational environment. Study dimensions of terrain analysis, patrolling, and operation orders. Explores the dynamics of adaptive leadership in the context of military operations. Enrollment in MILS-2020 does not require a commitment to join the US Army.

MILS 3010 - Adaptive Team Leadership (3)

This is an academically challenging course where you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, and small unit tactics. At the conclusion of this course you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom practical exercise (PE), a leadership lab, or during a military situational training exercise (STX) in a field environment. Prerequisite for this course is the successful completion of MSL 101 through 202; OR attendance at the Leader's Training Course (LTC). Contact the Military Science Department for more details.

MILS 3020 - Applied Team Leadership (3)

Continue to learn and apply the fundamentals of Army leadership, officership, Army values and ethics as you hone your leadership abilities in a variety of tactical environments and the classroom. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend the summer following this course at Fort Lewis, WA. You will receive systematic and specific feedback on your leadership attributes, values and core leader competencies from your instructors, other ROTC cadre, and senior cadets. Prerequisite for this course is the successful completion of MILS-3010.

MILS 4010 - Adaptive Leadership (3)

This course focuses on practical application of adaptive leadership. Throughout the semester, students will apply the fundamentals of principles training, the Army writing style and military decision making. Students will study the special trust reposed to Army Officers by the US Constitution and the President of the United States--a special trust given to no other civilian professions. Students will also study the Army officer's role in the Uniform Code of Military Justice, and the counseling and development of subordinate. Prerequisite for this course is the successful completion of the ROTC Leadership Development and Assessment Course (LDAC) or permission of the instructor.

MILS 4020 - Leadership in a Complex World (3)

Explore the dynamics of leading in the complex situation of current military operations in the contemporary operating environment. Examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non-government organizations, civilians on the battlefield and host nation support. Significant emphasis is placed on your transition to officership, preparing you for your branch school and first unit of assignment. Prerequisite for this course is the successful completion of MILS 4010 or permission of the instructor.

MILS 4200 - Seminar in Leadership and Ethics (2)

The curriculum in MILS-4200 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 4220 - Leadership & Ethics (3)

Identify and resolve ethical dilemmas. Refine counseling and motivating techniques. Examine aspects of tradition and law as it relates to leading as an Army officer.

MILS 4500 - Modern American Military History (3)

A survey of US military involvement beginning with the Treaty of Versailles following World War I and concluding with the current Global War on Terror. Students will follow a chronological study of crucial battles of World War II, Korea, Vietnam and conclude with in-depth case studies from Iraq and Afghanistan. The class focuses on both tactical and strategic lessons learned and the political and cultural influences that effect the way wars are fought. Prerequisite for this course is sophomore status and good standing in the ROTC program.

Modern Language (MLNG)**MLNG 3200 - Israeli Culture: From the Birth of Zionism to the 21st Century (3)**

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.

Medieval & Ren Studies (MR)**MR 2000 - 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 2100 - The Medieval World (3)

Introduction to Medieval Studies is a course meeting three times per week for fourteen weeks. Students will be exposed to the strong medieval tradition at SLU, and will gain an appreciation for the middle ages through this class.

MR 4000 - Medieval Synthesis (2)

Capstone course, offered each semester, requiring the Medieval Studies Certificate candidate to write a research paper on a medieval topic approached from an interdisciplinary point of view, written with the guidance of a member of the faculty.

MR 4910 - Internship in Medieval and Renaissance Studies (3)

The Internship is designed for senior level students who are going to pursue a graduate degree in medieval studies and who desire to work with a non-SLU entity (St. Louis Art Museum, for instance) on a project defined as constituting one semester of work. The student must first meet with a faculty member amenable to guide the internship, then present a signed internship form to the CMRS Director of Undergraduate Studies. The internship should entail 120-140 hours of work on a particular project through a semester.

Music (MUSC)**MUSC 1000 - 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 1100 - 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 1150 - History of Jazz (3)

An introduction to the development of Jazz and related American styles through lecture and extensive audio-video examples. Course work includes reading and listening assignments, two exams, one review of a live performance, and one brief paper. Fulfills Arts & Sciences Core Arts requirement for non-majors. May be used as a music literature elective for music majors.

MUSC 1160 - 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 1170 - World Music (3)

Introductory course to musical cultures around the world. History, sources, and aesthetic principles in each culture will be examined and compared with western society's Eurocentric styles. Students will learn to identify musical elements and characteristics unique to each culture, and acquire vocabulary for intelligent, respectful discussion of the topics.

MUSC 1180 - Music of the African Diaspora (3)

A study of the musical traditions of people of African descent outside of Africa with special emphasis on the influence of African music on popular music in America. Special attention will be given to historical and social context. No prerequisites required.

MUSC 1190 - American Musical Mosaic: Songs of an Immigrant Nation (3)

An exploration of the diverse musical styles in the United States, an immigrant nation, using historical/contemporary constructions of socio-cultural identity: class, race, ethnicity, geography, religion, language, and gender. Styles range from folk ballads to jazz, blues, Hispanic music, rock, to musical theatre, Native American and classical genres.

MUSC 1260 - Piano for Beginners 1 (2)

A small group lab class for students with little or no previous training at the keyboard. Introduction to basic keyboard knowledge and techniques include reading notes in treble and bass clefs, rhythm symbols and patterns, keyboard geography, five-finger exercises, beginning scales, key signatures and primary chords in major keys, common musical terms, control of dynamic levels and articulations, and performance of simple solos and duets. Satisfies 2 credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 1270 - Piano for Beginners 2 (2)

A small group lab class for students at the Late Elementary-Early Intermediate level with limited prior training (1-2 years) in music-reading and keyboard skills. Students should already be familiar with most major keys, and able to read and play simple melodies and basic chordal accompaniments. Studies include one-octave major and minor scales, hand-over-hand arpeggios, simple chord progressions, harmonization, transposition, and sight reading exercises. Solo and homework are assigned from class piano textbooks; techniques learned are applicable to all styles of music. Satisfies two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit. Prerequisite(s): MUSC-1260 or consent of instructor.

MUSC 1400 - Lower Division Class Music (1-2)

Small group instruction in class voice or instrumental family. An Applied Music Fee is required.

MUSC 2010 - 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 2020 - 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 2030 - 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 2040 - Applied Music: Woodwinds (1-2)

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

MUSC 2050 - Applied Music: Brass (1-2)

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

MUSC 2060 - Applied Music: Strings (1-2)

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

MUSC 2070 - Applied Music: Percussion (1-2)

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

MUSC 2100 - Applied Music: Majors Only (1-2)

Applied Music course taught by full-time music faculty. For admitted and declared Music Majors only, in process of completing required number of credits on major instrument. Private half-hour or hour-long lessons weekly; individualized, sequential instruction in classical repertoire and technique. No Applied Music lesson fee is attached to this course.

MUSC 2260 - 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 2270 - Music Theory I (3)

The first of the four-semester sequence of intensive theoretical study required of all music majors. Students enrolled in this class should be literate musicians with considerable prior experience performing/reading music. Specific topics include review of basic principles of notation, major and minor scales, key signatures, intervals, triadic harmony, figured bass, melody and two-voice counterpoint, fundamentals of diatonic harmony, and part writing in two, three, and four voices. Course work includes lecture-discussion of chapters, assigned workbook pages, frequent chapter tests, sight singing practice, and weekly computer assignments in ear training. It is strongly recommended that non-pianists concurrently study class piano.

MUSC 2280 - 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 2300 - Intro to Music Therapy (3)

This course gives an overview of basic principles of music therapy, including its history, research methods, characteristics of diverse populations served, and treatment process (referral, assessment, treatment plan, documentation and evaluation). Course includes field trips to clinical settings, and exploration of ethical issues and student's attitudes and motives as helpers.

MUSC 2360 - 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, and 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 2400 - 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 MUSC-2010 (Applied Music: Voice Lessons).

MUSC 2410 - Voice Studio Class (0-1)

Students enrolled in Applied Music: Voice, MUSC 2010 or MUSC 2100, may concurrently register for this course. In this weekly performance techniques class, students will sing, actively participate as observers, and contribute to the community of learners. This course will also prepare students for their end of the semester jury examination performances for the entire voice faculty.

MUSC 2500 - Intermediate Piano I (Piano III) (2)

Small group class, early Intermediate level, for students with several semesters of previous training. Technical, functional studies in scales, chord transposition, harmonization, sight reading. Standard classical repertoire from 18-21st centuries, assigned individually. Fulfills two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 2510 - Intermediate Piano 2 (Piano IV) (2)

Small group class, upper Intermediate level (sonatinas, easy inventions and preludes). Technical and functional studies in preparation for Piano Proficiency Exam (required of music majors). Standard classical repertoire from 18-21st centuries, assigned individually. Two (2) credits toward A&S Fine Arts requirement; not repeatable for Core credit.

MUSC 2850 - Piano Proficiency Exam (0)

Examination by Music Faculty in keyboard skills. All Music Majors must pass before enrolling in Music 485, Senior Capstone. Skills: Intermediate-level repertoire; scales, arpeggios, and chord progressions in all major and minor keys; transposition and harmonization of melodies; sight-reading; performance of national anthem. Co-requisite: Piano IV or instructor's permission.

MUSC 3270 - Music Theory III (3)

Third course in the required sequence for music majors. Study of secondary dominants, chromaticism and altered chords, modulations, and binary-ternary forms; traditional and contemporary harmonic usage.

MUSC 3280 - Counterpoint (3)

Required of theory majors. Study of two, three, and four-part writing of common period style and analysis of contrapuntal forms.

MUSC 3290 - 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 3300 - History of Music I (3)

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

MUSC 3310 - History of Music II (3)

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

MUSC 3350 - 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 3360 - 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 3410 - Chamber Music Ensemble (1)

Chamber Music Ensemble allows students to perform with a wide variety of groups including but not limited to saxophone quartet, percussion ensemble, piano trio, brass quintet, and woodwind quintet. Students will learn standard repertoire under the direction of appropriate faculty and perform a concert at the end of the semester.

MUSC 3420 - University Chorale (0-1)

Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude. Repertoire is chosen from the Renaissance through the Twentieth Century. The main concert always occurs at the end of the semester and usually takes place in the College Church. University Chorale provides an artistic opportunity for singers to be exposed to learn high quality choral music presented in a public concert. Within this context, singers will also be taught singing skills to enhance their vocal abilities. All of the primary basics of healthy singing and musicality will be stressed. This includes (1) a deeper understanding and application of breathing skills, (2) understanding and applying motions and movements that underlie both relaxation and released energy, (3) developing mental imagery so that the process of singing takes place internally, (4) learning the correct diction for all languages that are represented in the repertoire and (5) developing musicianship in which the singer is able to apply the principles of sustained legato and expressive singing. Participation and complete preparation is essential for every concert. At the beginning of the semester the director will clarify those compositions that need to be memorized and those that will be sung with musical scores. Only high quality choral music shall be rehearsed and presented in public performance.

MUSC 3420 - University Chorale (1)

Study and performance of choral arrangements and masterworks for large mixed ensemble. Open to all students with some choral experience and/or vocal aptitude. Repertoire is chosen from the Renaissance through the Twentieth Century. The main concert always occurs at the end of the semester and usually takes place in the College Church. University Chorale provides an artistic opportunity for singers to be exposed to learn high quality choral music presented in a public concert. Within this context, singers will also be taught singing skills to enhance their vocal abilities. All of the primary basics of healthy singing and musicality will be stressed. This includes (1) a deeper understanding and application of breathing skills, (2) understanding and applying motions and movements that underlie both relaxation and released energy, (3) developing mental imagery so that the process of singing takes place internally, (4) learning the correct diction for all languages that are represented in the repertoire and (5) developing musicianship in which the singer is able to apply the principles of sustained legato and expressive singing. Participation and complete preparation is essential for every concert. At the beginning of the semester the director will clarify those compositions that need to be memorized and those that will be sung with musical scores. Only high quality choral music shall be rehearsed and presented in public performance.

MUSC 3430 - Swing Choir (1)

A choral ensemble open to all singers interested in Swing, Jazz, and Show Choir repertoire. Class meets weekly for one 2 hour rehearsal period and performs at least one concert per semester.

MUSC 3440 - University Mastersingers (0-1)

Highly selective small vocal ensemble, with frequent public performances of early choral music and a capella works. Entrance by audition only. An advanced concert choir of approximately thirty five carefully chosen singers, with a selected core (16-18 singers) featured in Fall madrigal concerts from the Renaissance. Musical selections will vary with each semester. For the fall semester considerable emphasis will be to prepare concert music ranging from 20th century spirituals to a wide variety of traditional classical works and to madrigals for the smaller select ensemble from the Renaissance period. A full-length oratorio is prepared for the spring semester. All university choral groups generally join the Mastersingers for this event. This ensemble is highly sought after both within the University and the community at large. Concert engagements should be anticipated throughout the semester but especially during the Christmas season. The director, however, will be sensitive to other demands and time conflicts that students have as it relates to their course work when making such commitments. The Mastersingers also play a significant role as ambassadors for the University. Their appearance at ever including the University commencement service that takes place in mid-May a required event for members of this ensemble.

MUSC 3450 - Jazz Ensemble (0-1)

Rehearsal of music from the jazz repertoire with the goal of a public performance at the end of the semester. The primary focus of the band is a traditional big-band (5 saxes, 4 trumpets, 4 trombones, rhythm). Smaller improvisation oriented combos will be drawn from the larger group.

MUSC 3460 - String Ensembles (0-1)

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

MUSC 3470 - Pep Band (0-)

Undergraduates & alumni playing wind, brass, and percussion instruments with great enthusiasm at Men's and Women's Basketball games. Fall: Week rehearsals, late August - early November. Spring: Performances at home games, Chaifetz Center, January - March. Repertoire: Big Band Era to the present. Prerequisite: previous instrumental ensemble experience.

MUSC 3480 - Guitar Ensemble (0-1)

Guitarists work together as a whole and in smaller units to prepare and present a program of guitar ensemble music for a public concert. During this process students are exposed to a variety of classical repertoire from the major style periods, and gain experience in working with other musicians.

MUSC 3490 - Concert Band (0-1)

The Concert Band consists of experienced musicians (flutes, clarinets, French horns, saxophones, oboes, bassoons, percussion) who perform traditional concert band literature including marches, concert works, and popular selections. There is a final concert at semester's end. Prerequisite: Previous concert band experience.

MUSC 3500 - Piano Ensemble (0-1)

Lab course for advanced pianists in collaborative techniques, focuses on the musicianship skills need to accompany vocal-instrumental solos and ensembles, and to play duet and chamber repertoire. Students rehearse and perform with other musicians in lessons and rehearsals, and for departmental juries, auditions, and concerts.

MUSC 3850 - 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 4270 - 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 4410 - Conducting (3)

Theory and practice of conducting vocal and instrumental organizations. Required of music majors.

MUSC 4850 - Senior Capstone (0)

Senior Recital or Lecture-Presentation required of Music Performance and Music Studies Majors. Senior Recitals are 50-60 minutes long, comprised of several groups of classical music selections of varying style periods, and are performed from memory for the public in a University venue. Senior Lecture-Presentations are readings or demonstrations of studies in related fields, supervised by the student's primary advisor, and delivered in a University classroom or auditorium.

Neuroscience (NEUR)**NEUR 1950 - First-Year Mentoring (0)**

The objective of First-Year Mentoring is to familiarize students with the details and requirements for a B.S. degree in Neuroscience. This session will meet one time only during the semester. No prerequisites.

NEUR 2950 - Second-Year Mentoring (0)

The objective of Second-Year Mentoring is to familiarize students with the details and requirements for a B.S. degree in Neuroscience. This session will meet one time only during the semester. No prerequisites.

NEUR 3400 - Introduction to Neuroscience 1: Cellular, Molecular and Systemic (3)

This course teaches the fundamental anatomy and physiology of the nervous system. Clinical cases and neuroscience technologies will be discussed. The course covers cellular, molecular and organ-systemic aspects of the nervous system and relevant neuronal disorders. The prerequisite is BIOL 3020.

NEUR 3500 - Introduction to Neuroscience 2: Cognitive and Behavioral (3)

This course introduces fundamentals of the neural bases of cognition and behavior. Areas of study include: neuron structure and function, methods of Cognitive Neuroscience, sensation and perception, movement, attention, learning and memory, and social and emotional behavior. Prerequisites are PSY 1010 and NEUR 3400.

Portuguese (PG)**PG 1050 - Intro Brazilian Portuguese (5)**

Development of writing, reading, speaking and listening skills. Offered occasionally.

PG 1060 - Interm Brazilian Portuguese (5)

Continuation of PG 1050. (Offered periodically)

Philosophy (PHIL)**PHIL 1050 - Intro to Phil: Self & Reality (3)**

This course will focus primarily on the writings of Plato and Aristotle as central figures in that historical period when Western humanity began to use and to develop reason systematically as an instrument for understanding the world and its place in that world. Students will be introduced to the Greek contributions to logic, metaphysics, and ethics.

PHIL 2050 - Ethics (3)

This course undertakes a systematic analysis of fundamental problems and issues involved in questioning whether and how moral discourse can be rationally grounded; the utilitarian-deontological debate; questions concerning different levels of moral discourse; competing notions of justice and the relationship between morality and religion. Prerequisite(s): PHIL-1050

PHIL 3250 - Philosophy of Religion (3)

What is God's nature? What reasons are there for believing God exists? In this course, we approach these sorts of questions using tools and methods of philosophical investigation in order to engage students in reasoning about God. The course draws on classic texts of Western thought and on contemporary philosophical discussions. Prerequisite(s): PHIL-1050 and 2050.

PHIL 3300 - Philosophy of the Human Person (3)

Systematic or historico-systematic treatment of main philosophical problems such as the mind-body problem; the unity of man; survival and immortality; sensation and intelligence; the emotions, their interplay with intelligence and volition; freedom vs. determinism; the person in and with or against society. Every semester.

PHIL 3350 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 3360 - Medical Ethics (3)

Ethical problems of medicine, nursing and the life-sciences. Every semester

PHIL 3380 - Business Ethics (3)

Reflection on ethical issues relating to contemporary business practices and institutions.

PHIL 3400 - 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, whistleblowing, environmental impact. The course applies moral theories and casuistic analysis to cases. Every fall.

PHIL 3410 - Computer Ethics (3)

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

Prerequisite(s): PHIL-2050.

PHIL 3420 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 3430 - Philosophy of Law (3)

A critical survey of the major Western conceptions on the nature of law and the relationship between law and morality.

PHIL 3450 - 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 3480 - Jewish Life: Bible to Middle 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 3490 - 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 3600 - 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.

Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 3650 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4040 - 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(s): PHIL-1050 and PHIL-2050 or two mathematics courses or some combination of these.

PHIL 4080 - 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. Prerequisite(s): PHIL-4040.

PHIL 4090 - 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(s): PHIL-4040.

PHIL 4100 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4120 - Topics in Epistemology (3)

In this course we concentrate on an epistemological topic, such as skepticism, contextualism, virtue epistemology, or the value of knowledge.

Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4150 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4160 - Philosophy and Physics (3)

In this course we will survey the philosophical dimension of physics through its historical development, its methods, and the content of its theories. The course should be accessible to diligent students from both humanities and science backgrounds. The course's mathematical content is self-contained.

Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4170 - 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.

Prerequisite(s): PHIL-1050 and PHIL-2050

PHIL 4180 - 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 4210 - Topics in Metaphysics (3)

Through an examination of one or more topics in contemporary metaphysics (including but not limited to: universals; individuation of concrete particulars; propositions, facts and events; necessity and possibility; persistence through time; realism-versis-anit-realism; vagueness; free will; personal identity; material constitution). Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4220 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4260 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4280 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4310 - Topics in Ethics (3)

An in-depth examination of one or more topics in ethics. Topics might include virtue ethics; metaethics; moral realism and anti-realism; well being; happiness; moral evil; moral responsibility; ethics and human nature; recent work in deontological ethics (and/or consequentialism); theories of practical reason; morality and the emotions; moral relativism; moral psychology; and God and morality. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4320 - Feminism and the History of Ethics (3)

An examination of classic texts in moral philosophy and their authors' writing on women, with feminist responses to each. A fundamental guiding question to what extent do views about gender matter for moral theory.

Prerequisite(s): PHIL-1050 and PHIL-2050. Familiarity with feminist work is desirable but not required.

PHIL 4350 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4360 - 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.

Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4400 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4500 - Medieval Philosophy (3)

This course introduces students to some of the central texts and thinkers of the medieval period (c.400-1500 a.d.). The aim of the course is to engage students in the scholarly work of reading and interpreting medieval philosophical texts and in the philosophical work of evaluating the arguments and positions such texts contain. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4550 - 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). Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4560 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050

PHIL 4600 - 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 4650 - 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). Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4700 - Contemporary German Philosophy (3)

Nineteenth and twentieth century philosophical thought in Germany.

PHIL 4710 - 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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4720 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4750 - 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 4760 - Spanish Philosophy (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 4800 - Topics and Movements in Contemporary Philosophy (3)

Specific theme and focus of course to be determined by instructor. Course offered at Departmental discretion.

PHIL 4810 - 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 4820 - Philosophy and Race (3)

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

Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4830 - Person and Action: The Philosophical Anthropology & Ethic of John Paul II (3)

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. Prerequisite(s): PHIL-1050 and PHIL-2050.

PHIL 4840 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4850 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4860 - 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(s): PHIL-1050 and PHIL-2050.

PHIL 4870 - 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.

Prerequisite(s): PHIL-1050, PHIL-2050 and permission of the instructor.

PHIL 5100 - Feminist Epistemologies (3)

Topics such as the meaning of truth and knowledge, and the diversity of kinds and contexts of knowing. Offered annually.

PHIL 5200 - Problems in Metaphysics (3)

Topics such as substance, identity, time, space, and being. Offered annually

PHIL 5300 - 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 5400 - Probs in Soc & Pol Philosophy (3)

Topics such as the state, rights, sovereignty, democracy, freedom, property, and the meaning of justice. Offered annually.

PHIL 5800 - 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 6000 - 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 6050 - Sem on Maj Philsophr in Pol Phil (3)

A philosopher important for contributions to political philosophy such as Plato, Aristotle, Hobbes, Locke, Rousseau, Hegel, Marx. Offered annually.

PHIL 6100 - Sem on Maj Phlspher in Metaphy (3)

The metaphysical views of a major figure in the area such as Plato, Aristotle, Augustine, Aquinas, Heidegger, or Whitehead are explored. Offered annually.

PHIL 6150 - Sem on Maj Phlsphr in Epistem (3)

The epistemological position of a major theorist, such as Descartes, Hume, Kant, Husserl, Habermas, Popper, or Peirce is examined. Offered annually.

PHIL 6200 - 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 6220 - 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 6260 - 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 6300 - 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 6320 - Advanced Metaphysics (3)

Thorough exploration of such topics as substance, identity, time, space, and being. Offered annually.

PHIL 6340 - 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 6360 - 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 6380 - Seminar in Aesthetics (3)

Analyses of the meaning of beauty and the character of aesthetic judgments. Offered occasionally.

PHIL 6400 - Ancient Philosophy (3)

An advanced level seminar in which major figures and topics in the ancient period are examined. Offered annually.

PHIL 6450 - Medieval Philosophy (3)

Seminar study on a sophisticated plane of major philosophers and issues of the medieval era. Offered annually.

PHIL 6500 - Modern Philosophy (3)

Major philosophers and issues of the modern period. Offered annually.

PHIL 6550 - Contemporary Philosophy (3)

Major philosophers and issues in contemporary philosophy. Offered annually.

PHIL 6800 - 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 1010 - 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 1050 - 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 1110 - Introduction to Physics (1)

Broad survey of physics. Introduction to computational and laboratory methods. Enrollment limited to students majoring in physics.

PHYS 1130 - 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

PHYS 1150 - 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 1220 - General Physics I (0-4)

Prerequisite: High school algebra. Lectures, demonstrations, and laboratory mechanics and heat. For School of Allied Health Professions students only. Fall semester.

PHYS 1240 - 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(s): PHYS-1220.

PHYS 1310 - Physics I (3)

Lectures and demonstrations in mechanics and heat. PHYS-1320 should be taken concurrently with PHYS-1310. Fall semester. Prerequisite(s): High school algebra and trigonometry.

PHYS 1320 - Physics I Laboratory (1)

Should be taken concurrently with PHYS-1310. Laboratory in mechanics and heat. Fall semester.

PHYS 1330 - Physics II (3)

Lectures and demonstrations in electricity, magnetism, wave motion, sound, optics and modern physics. Prerequisite(s): PHYS-1310. Corequisite(s): PHYS-1340. (Offered every Spring)

PHYS 1340 - Physics II Laboratory (1)

Laboratory in electricity, magnetism, wave motion, sound, optics and modern physics. Prerequisite(s): PHYS-1310. Corequisite(s): PHYS-1330.

(Offered every Spring)

PHYS 1350 - Aviation Physics (0-4)

Units and measurement; vectors; force and motion; energy; momentum; gravitation; forces of drag and lift; rotational motion; equilibrium of forces during flight; harmonic motion; selected topics in fluid mechanics and thermodynamics; electricity; electrical energy; magnetism; electromagnetic induction; linear and wave optics; atmospheric optics; laboratory experiment relating to the topics above. Fall and Spring semesters. Prerequisite: Knowledge of high school algebra and trigonometry.

PHYS 1610 - Engineering Physics I (3)

Calculus and vector approaches to study of kinematics, statics and dynamic work and energy; impulse and momentum; circular motion and gravity; rotational motion and equilibrium; vibrations, waves and sound; heat; fluid mechanics; elasticity. Prerequisite(s): MATH-1510.

PHYS 1620 - Engineering Physics I Laboratory (1)

Laboratory experiments to illustrate and supplement material in PHYS-1610.

Co-requisite: PHYS-1610 (Offered every Fall and Spring)

PHYS 1630 - Engineering Physics II (3)

Calculus and vector approaches to study of electric charges, forces, fields and potentials; electric current; magnetic forces and fields; electromagnetic wave light and geometrical optics; mirrors and lenses. Prerequisite(s): MATH-153, PHYS-1610 and PHYS-1620. Co-requisite: PHYS-1640. (Offered every Fall and Spring)

PHYS 1640 - Engineering Physics II Laboratory (1)

Laboratory experiments to illustrate and supplement material in PHYS-1630.

Prerequisite(s): MATH-152, PHYS-1610 and PHYS-1620. Co-requisite(s): PHYS-1630. (Offered every Fall and Spring)

PHYS 2610 - Modern Physics (3)

Lectures three hours per week. At the level of Beiser's Concepts of Modern Physics. Prerequisite(s): One year General Physics. Prerequisite or Co-requisite: MATH-1520. Spring semester.

PHYS 2620 - Modern Physics Lab (1)

Prerequisite(s): One year General Physics. Prerequisite or Co-requisite: MATH-1520 & PHYS-2610. Spring semester.

PHYS 2910 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Sophomore standing. Offered every semester.

PHYS 3110 - Classical Mechanics (3)

The elementary theory of the statics, kinematics and dynamics of particles and rigid bodies. At the level of Symon's Mechanics. Prerequisite(s): MATH-2530

PHYS 3120 - Advanced Classical Mechanics (3)

Continuation of PHYS-3110, continuum mechanics and introduction to the analytical methods of Lagrange and Hamilton. Prerequisite(s): PHYS-3110.

PHYS 3310 - Optics (3)

Lectures and demonstrations three hours per week. Physical and geometrical optics. Pre-requisites: PHYS 1630 and MATH 2530

PHYS 3320 - Optics Laboratory (1)

The fundamental experiments of modern optics are repeated in this course. Three hours per week. It is to be taken concurrently with PHYS-3310.

PHYS 3410 - Thermodynamics and Statistical Mechanics (3)

At the level of Schroeder's Thermal Physics. Prerequisite PHYS-1630 & MATH-2530 Co-requisite: MATH-3550.

PHYS 3510 - Analog & Digital Electronics (0-4)

Lecture-laboratory six hours per week. Fundamentals of digital circuits with applications to computers. Operational amplifiers. Interfacing of computers with experimental equipment for data collection and control. One year General Physics, MATH-2530

PHYS 3860 - Physics Research I (0)

First of three course sequence required for B.S. degree in Physics.

PHYS 3910 - 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(s): PHYS-2910. (Offered every Fall, Spring and Summer)

PHYS 3915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Prerequisite: Junior standing. Offered every semester.

PHYS 4010 - Nanoscience and Nanofabrication Frontiers (3)

The Nanoscale Science and Nanotechnology applications have become increasingly important for industry and manufacturing. This interdisciplinary physics course is designed to introduce concepts and take a detailed look at how to study, understand and present interdisciplinary science that has significant experimental design components. This course will be devoted to several topics such as Nanoscale Physics, Nanomaterials Engineering, Nanofabrication and Nanolithography. Prerequisites: (Grade C+ or better in PHYS 1630 Engineering Physics II, and CHEM 1110 General Chemistry I,) and MATH 2530 Calculus III, or instructor's approval.

PHYS 4020 - Experimental Physics (3)

Experimental Physics teaches students basic techniques such as principles of ultra high vacuum, IV curve and resistance measurements, computer automation, microwave circuit design and measurements. We will also measure microwave resonators and quantum bits at 50 mK. All class work will consist of lab work in a studio classroom. Prerequisite(s): One year General Physics.

PHYS 4030 - Mathematical Methods in Physics with elements of Classical Mechanics (3)

The course introduces a variety of powerful mathematical techniques of great utility to physics. Topics covered include differential and integral equations, complex analysis, Green's functions, and variational methods, including Lagrangian and Hamiltonian formalisms. Mathematical methods are illustrated with examples from modern research topics. Prerequisite(s): PHYS-2610 and MATH-3270.

PHYS 4060 - Numerical Analysis and Computational Physics (3)

The course introduces numerical techniques and computing strategies used in computational physics and engineering. It will provide practical knowledge of computing on different platforms, ranging from High Performance Computing clusters to embedded systems in modern devices. Topics covered include linear algebra, filters, finite elements, optimization, parallel computing.

PHYS 4110 - Intro to Biophysics (3)

This course covers the basic concepts in biophysics at the fluid, cellular, macromolecular, and molecular levels, including diffusion processes, self-assembly, cooperative transitions, ion pumping, basic ideas of molecular machines, and passage of action potentials in neurons. Prerequisite(s): PHYS-3410 Thermodynamics and Statistical Mechanics or Instructor Permission.

PHYS 4210 - Electricity & Magnetism I (3)

Lecture three hours per week. At the level of Griffiths, Introduction to Electrodynamics. Spring semester, Prerequisite(s): MATH-3550

PHYS 4220 - Electricity & Magnetism II (3)

Lecture three hours per week. Electromagnetic Fields at an advanced level, continuation of PHYS-4210. Prerequisite(s): PHYS-4210. Fall semester.

PHYS 4410 - General Relativity (3)

This course is an introduction to Einstein's Theory of General Relativity. The special theory of relativity is reviewed, tensor analysis is introduced, and the general theory is approached through an examination of curved space-time and geodesic trajectories. Applications including black holes and cosmology are explored. Prerequisite(s): PHYS-2610, MATH-3550

PHYS 4610 - Quantum Mechanics (3)

At the level of Griffiths, Introduction to the Quantum Mechanics.

Prerequisite(s): PHYS-2610 and PHYS-3110, MATH-3550.

PHYS 4620 - Application of Quantum Mechanics (3)

Further development of Quantum Mechanics with applications to statistical mechanics, quantum optics, atomic, nuclear, particle and solid state physics. Spring semester. Prerequisite(s): PHYS-4610.

PHYS 4870 - Physics Research II (0)

Second of three course sequence required for B.S. degree in Physics.

PHYS 4880 - Senior Inquiry: Research Project (3)

Third of three course sequence required for B.S. degree in Physics (3 Cr), or satisfies senior inquiry requirement for B.A. degree in Physics (0-3 Cr).

PHYS 4910 - 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(s): PHYS-3910. (Offered every Fall, Spring and Summer)

PHYS 4915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person 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(s): PHYS-3915 or Senior standing. (Offered every Fall, Spring and Summer)

PHYS 4980 - Advanced Independent Study (1-6)

Prior permission of sponsoring professor and chairperson required.

PHYS 5010 - Nanoscience and Nanofabrication Frontiers (3)

Nanoscale Science and Nanotechnology applications have become increasingly important for industry and manufacturing. This course is designed to introduce concepts and take a detailed look at how to study, understand and present interdisciplinary science. The course will be devoted to several topics in Nanoscale physics, Nanochemistry, Nanomaterials, Nanofabrication and Nanolithography.

PHYS 5020 - Experimental Physics (3)

Experimental Physics teaches students basic techniques such as principles of ultra high vacuum, IV curve and resistance measurements, computer automation using LabVIEW, computer drafting of micro scale circuitry using L-Edit, and microwave simulations using Sonnet. All class work will consist of lab work in a studio classroom. Offered periodically in even years.

PHYS 5030 - Mathematical Methods in Physics (3)

This course introduces a variety of powerful mathematical techniques of great utility to physics. Topics covered include differential and integral equations, complex analysis, Green's functions, and variational methods, including Lagrangian and Hamiltonian formalism of classical mechanics. Mathematical methods are illustrated with examples from electrodynamics, statistical, quantum, and classical mechanics.

PHYS 5060 - Numerical Analysis and Computational Physics (3)

The course introduces numerical techniques and computing strategies used in computational physics and engineering. It will provide practical knowledge of computing on different platforms, ranging from High Performance Computing clusters to embedded systems in modern devices. Topics covered include linear algebra, filters, finite elements, optimization, parallel computing. Prerequisites: PHYS-2610 or PHYS-3510, or CSCI-1060 or CSCI 1300, or equivalent. Open to graduate students only.

PHYS 5310 - Optics for Educators (3)

This course will provide an upper level introduction to the concepts and techniques of modern optics, including: Review of ray optics and optical properties of lenses; Wave properties of light; Wave interference (including beats); Interference from two discrete sources of light; Interference from N discrete sources of light; Diffraction of light passing through apertures and past obstacles (plugs); Quantum nature of light (including photon counting); Laser physics. Offered in spring. Prerequisite(s): Engineering Physics 2 (PHYS-1630); or Physics 2 (PHYS-1330).

Registration for this graduate course is restricted to high school teachers associated with the 1818 Program seeking to gain graduate credit toward a Masters degree at SLU or add graduate credit beyond that taken for a Masters degree.

PHYS 5320 - Optics Lab for Educators (1)

This course will provide an upper level introduction to the concepts and techniques of modern optics, including: Review of ray optics and optical properties of lenses; Wave properties of light; Wave interference; Interference from two discrete sources of light; Interference from N discrete sources of light; Diffraction of light passing through apertures and past obstacles; Quantum nature of light (including photon counting); Laser physics, including principles of Raman Spectroscopy and Confocal Raman Imaging. Offered in spring. Prerequisite(s): Engineering Physics 2 (PHYS-1630); or Physics 2 (PHYS-1330).

Registration for this graduate course is restricted to high school teachers associated with the 1818 Program seeking to gain graduate credit toward a Masters degree at SLU or add graduate credit beyond that taken for a Masters degree.

PHYS 5510 - Electronics for Educators (4)

This course will provide an upper level introduction to the concepts and techniques of modern electronics. It will give fundamentals of analog and digital circuits design, characterization, and integration with computing system in modern classroom. The covered material includes filters, amplifiers, digital logic, analog and digital signal processing, micro-controllers. A special emphasis will be made on hands-on experience with modern circuits design for high-impact demonstrations. Offered in fall. Prerequisite(s): Engineering Physics 2 (PHYS-1630); or Physics 2 (PHYS-1330).

Registration for this graduate course is restricted to high school teachers associated with the 1818 Program seeking to gain graduate credit toward a Masters degree at SLU or add graduate credit beyond that taken for a Masters degree.

PHYS 5610 - Modern Physics for Educators (3)

This course will provide an upper level introduction to topics in Modern Physics including Atomic Physics, Statistical Physics, Molecular Physics, Solid State Physics, Nuclear Physics, Elementary particle Physics, Astrophysics, and Cosmology. Prerequisite(s): Modern Physics I (PHYS 261 or Instructor's permission). Offered in fall.

Registration for this graduate course is restricted to high school teachers associated with the 1818 Program seeking to gain graduate credit toward a Masters degree at SLU or add graduate credit beyond that taken for a Masters degree.

Political Science (POLS)**POLS 1100 - Introduction to American Government (3)**

This course is designed to provide students with an introduction to politics and government in the U.S. The course will focus primarily on political institutions: (the rules and constraints placed upon political actors operating in the three branches of government) and mass behavior (how citizens behave and interpret the political world).

POLS 1150 - American Political Systems (3)

This course will provide you with an overview of the literature and theoretical concepts associated with political science as it relates to American politics. The intent is to provide you with a sample of key findings in the literature, as well as help you develop critical skills for evaluating research.

POLS 1200 - U.S. State and Urban Politics (3)

This course examines American state and urban political institutions, politics and policy. We will evaluate policy relating to housing and land use, income and economic inequality, morality, education, and social welfare. Each section will focus on issues of race, gender, representation, and access to government for historically underrepresented groups.

POLS 1500 - Introduction to Comparative Politics (3)

This course introduces students to the logic, method, and theoretical approaches of comparative politics. It examines the institutions of government in various kinds of political systems around the world, particularly liberal democratic systems in advanced industrial countries, postcommunist regimes and new democracies in developing countries. It also investigates the process of political change, particularly modernization, democratization, globalization, state-building, and pressures on welfare state.

POLS 1510 - Politics of Developing World (3)

This course is an introduction to the domestic politics of developing countries in Africa, Asia, Eastern Europe, and Latin America. Topics include democracy and authoritarianism, economic development, political conflict, the role of political institutions, and political culture.

POLS 1600 - Introduction to International Politics (3-4)

Role of power, ethics, law, public opinion, effectiveness, of various techniques of international relations; diplomacy, propaganda, subversion. Crucial problems. Proliferation of nuclear weapons, revolutionary warfare, hunger. How should we respond to the challenge?

POLS 1700 - Foundations of Political Theory (3)

This course introduces students to political theory through competing answers to such questions as 'What is the difference between brute force and legitimate authority?' or 'What are rights and where do they come from?' Thinkers regularly studied include Plato, Aristotle, Hobbes, Locke and Rousseau. Reserved for freshmen and sophomores.

POLS 2000 - Methods in Political Science (4)

Behaviorist-traditionalist dichotomy, the nature of science, application of scientific methods, quantification of political phenomena, function of theory and theory building, surveys and computers.

POLS 2010 - Ethics and Politics (3)

This course challenges students to explore the relationship between moral values and political choices. Focusing on contemporary political issues, problems, and policies, we examine how different political philosophies, including Catholic social justice principles, provide different frameworks for judging the consequences of our political choices.

POLS 2100 - The American Constitution (3)

This course explores basic themes in the American Constitution, popular sovereignty, separation of powers, and federalism, and the historical struggles between various government actors over the allocation of political power in the American constitutional system from the Constitutional Convention in 1789 to the recent conflict over terrorism and state power.

POLS 2120 - The American Congress (3)

This course examines the lawmaking in the U.S. Congress through a semester-long simulation. Students explore concepts such as representation, legislative process, and group decision making.

POLS 2140 - The American Presidency (3)

An examination of the institution of the presidency, and the ways the President marshals his political resources to provide leadership to American society.

POLS 2150 - Black Politics (3)

This course explores the dynamics of race and ethnicity in American political life. How has race shaped American political life? What role do political institutions play in constructing and maintaining racial categories? Can we use these institutions to overcome racial boundaries? Fulfills the A&S Diversity in the U.S. requirement.

POLS 2150 - Race and Politics (3)

This course explores the dynamics of race and ethnicity in American political life. How has race shaped American political life? What role do political institutions play in constructing and maintaining racial categories? Can we use these institutions to overcome racial boundaries? Fulfills the A&S Diversity in the U.S. requirement.

POLS 2160 - Campaigns and Elections (3)

How age, sex, religion, occupation, education, ethnicity, group memberships, etc., explain why individuals do or do not participate in electoral activities, mainly voting and campaigning. Factors determining partisan and ideological direction of such activity; significance of elections and their outcomes for the individual and the system.

POLS 2210 - Civic Renewal: Service Learning and Community Justice (3)

Focuses on the Civic Renewal movement and academic and practical insights about citizen's participation in their communities. Topics include: racial/ethnic alienation; loss of efficacy to corporate lobbyists, political strategies, and media personalities; enhancing democratic participation. Service learning project investigates complexities of civic renewal through the eyes of the justice system.

POLS 2220 - Urban Politics (3)

This course offers an overview of the politics of American cities. It examines the economic, social, and political interaction of different individuals and institutions in an urban environment, provides basic knowledge of American cities. We further examine the interaction and conflict between cities and suburban areas.

POLS 2300 - Public Administration (3)

Theoretical and practical field of public administration. Focus on: 1. the development of public administration as an academic field; 2. organizational theory and society; 3. administrative principles; 4. public administration and public affairs; 5. future challenges in public administration.

POLS 2350 - Sex, Drugs, and Rock and Roll: Morality Politics in the United States (3)

Morality politics is defined as the legal sanction of right and wrong. This course offers an overview of morality politics and an examination of the historical foundations of legislating morality in the United States. This course examines the prohibition of alcohol, the war on drugs, capital punishment, and same-sex marriage.

POLS 2510 - West European Politics (3)

Comparative study of political and governmental institutions and policy processes of France, Germany, England.

POLS 2520 - Introduction to African Politics (3)

Study of governments and political processes in Africa. Examines salient themes such as the nature of African traditional heritage; the colonial experience; nationalism and independence; the challenge of nation-building; African political parties; the role of the military and contributions of different theories to the understanding of African politics.

POLS 2530 - Soviet and Post Soviet Politics (3)

This course uses the experience of the Soviet Union and Russia to understand change in political and economic systems, from collapse of existing governments to the revolutionary reconstruction of society to growing autocracy. Past developments are used to illuminate political and economic changes occurring since the collapse of communism.

POLS 2540 - 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 cc Cultural Diversity requirement.

POLS 2550 - Political Systems of the Sub-Sahara (3)

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

POLS 2560 - The Politics of Asia (3)

Course examines the three waves of: 1. Asia's traditional order and both its collapse and persistence in the face of the Western imperial onslaught, 2. The development of Asian nationalism out of this colonial legacy and 3. The subsequent clash between Marxist revolution and liberal democracy in Asia's quest for modernization.

POLS 2570 - Introduction to Latin American Politics (3)

This course is intended to be a multi-disciplinary introduction to Latin America. It examines the cultural factors that provide a unique context in which Latin American nations develop and analyzes both the challenges and the opportunities for economic and political development in the region. The course concludes with an examination of four country case studies.

POLS 2580 - Politics of Mexico (3)

Course focuses on the dynamics of Mexican politics from independence to the present. It examines issues of economic development, revolution, authoritarianism and democracy, and the role of civil society. In addition the course addresses US-Mexico relations and the impact of the Mexican diaspora in the US on Mexican politics.

POLS 2590 - Politics of the Middle East and North Africa (3)

This course examines the modern politics of the Middle East and North Africa emphasizing the years 1960 to 2010. Students who complete each of the written assignments for this course will gain a stronger understanding of the system of contemporary knowledge production about the region. No prerequisites.

POLS 2600 - Introduction to International Political Economy (3)

Explores the interaction of economic and politics in global affairs by examining Realist, Liberalist, and Marxist approaches. Special emphasis is placed on the political and economic dimensions of the postwar international monetary financial, and trading systems. Topics include, globalization, foreign departments, multinationals, international development, and regional economic organizations.

POLS 2610 - Introduction to Diplomacy (3)

An exploration of diplomatic method and of its contribution to the conduct of international relations. Nature and characteristics of diplomacy. The negotiation process. Diplomatic immunities. Different types of diplomacy and their essential traits.

POLS 2640 - International Terrorism (3)

Terrorism as a major problem of world affairs; identifies different types of terrorism and analyzes their complex causes; examines policies and techniques used to combat terrorism.

POLS 2650 - War & Peace in the Middle East (3)

Analysis of the major issues of Middle East politics and of their effects on the course of international relations. Examination of the foreign policies of all the states of the region in their historical context. Discussion of current trends.

POLS 2660 - Middle East/International Pol (3)

Analysis of the major issues of Middle East politics and of their effects on the course of international relations. Examination of the foreign policies of all the states of the region in their historical context. Discussion of current trends.

POLS 2691 - Theory and Practice of Human Rights (3)

This course critically examines the historical and intellectual evolution of human rights, different approaches and interpretations and contemporary practice. Particular topics include human rights in historical and intellectual contexts of emergence, modern slavery, human trafficking, the rights of children, gender-based violence, torture and immigration and the rights of refugees. Prerequisite: POLS 1000 or 1600; or Instructor Permission.

POLS 2700 - Issues in Political Philosophy (3)

Course introduces students to the subfield of political theory by examining issues in the history of political thought - such as the idea of democracy; or of freedom; or the relationship between individuals and the state - through close reading of texts. Not open to students who have taken POLS-1700.

POLS 2710 - Theories of Justice (3)

This class exposes students to various ways in which political theorists have attempted to answer the question: ¿What is justice?¿ The course covers a variety of theories of justice, including utilitarian, liberal, feminist, and socialist perspectives. The course also applies theories of justice to actual political issues.

POLS 2720 - American Anomaly: American Political Institutions in Comparative Perspective (3)

This course investigates claims that U.S. institutions are anomalous by comparing executive, legislative, judicial, and party functions in the U.S. with those functions in selected parliamentary systems. The goal is to understand how institutions and the ideas and values embedded in them shape U.S. policies and practices.

POLS 2800 - Men and Masculinities (3)

The course introduces research on men and masculinity, and gender more generally, and explores from a feminist perspective the personal and political issues this research -¿ and the current state of our world -¿ raise for men and women. Topics include socialization, college life, media, personal relations, politics, sports, and war.

POLS 2820 - American Foreign Policy (3)

Assessment of extent of formal and informal influence within the decision-making process exerted by governmental and non-governmental agencies on current U.S. foreign policy. (Offered occasionally.)

POLS 3100 - Judicial Politics (3)

Organization and procedures of American federal and state courts. Factors affecting judges' rulings and interpretation of law. Topics may include: politics of judicial selection, case studies of major decisions or social issues, and scope of judicial authority to implement social change.

POLS 3130 - Civil Liberties and Civil Rights (3)

This course surveys the various constitutional protections that may be employed by individuals against the state under the U.S. Constitution, the long struggle for racial equality in America, and the application of equal protection principles to other protected classes. Fulfills the A&S Diversity in the U.S. requirement.

POLS 3140 - Public Opinion and Mass Communication (3)

Major media and processes through which political ideas are communicated; nature, techniques, effects of propaganda and other forms of political communication; relationship of public opinions to policy-making. Offered occasionally.

POLS 3150 - American Presidential Elections (3)

Presidential nominating process and campaign; backgrounds of presidential candidates, interplay among candidates, issues, parties, interest groups, media and political strategies; considers presidential election reforms. Offered occasionally.

POLS 3200 - Women and Political Leadership (3)

This course examines theories of leadership to incorporate gender issues and ethics in reviewing the call to responsible citizenship and obligation to build just social institutions. Students will be encouraged to develop skills in reflection on their own commitment to create a just society. Prerequisite: Second semester sophomore standing.

POLS 3210 - Shelter in America: U.S. Housing Policy (3)

Using the 1949 Housing Act as a starting point, this course examines the history -¿ and the successes and failures-- of the federal government's involvement in sheltering all Americans. Topics include public housing, affordable rental housing, homelessness, Fannie Mae and Freddie Mac, neighborhood rehabilitation, and community development.

POLS 3250 - American Politics and Film (3)

Politics and Film considers the American movie industry's changing perspectives on U.S. political institutions and processes. Award winning cinema classics are analyzed both as art and as political communication within the context of their historical settings. Students research a particular work in terms of context, art, and political communication.

POLS 3300 - U.S. Public Policy (3)

This course will serve as an introduction to the U.S. public policy process including the questions of how values, institutions and political actors shape policy outcomes Enrollment requires Intro to American Government (POLS-1100) or permission of the instructor.

POLS 3310 - Administrative Law (3)

Legal issues concerning public administrative agencies, their relationships with other governmental institutions, private corporations and the general public. Sovereign and limited immunity, primary jurisdiction and exhaustion, standing and ripeness; estoppel; discretionary justice.

POLS 3320 - Politics, Policy & Inequality (3)

In this course we examine how economic inequality influences American politics and policy and, in turn, how these policies shape economic inequality Prerequisite is Introduction to American Government (POLS-1100) or permission of instructor.

POLS 3330 - Metropolitan Environment (3)

An interdisciplinary course presenting the political, social, economic, education, and religious dimensions of metropolitan areas. Socio-demographic trends and methods for analyzing neighborhoods will be discussed. The political and governmental system with an emphasis on its state and local manifestations will be presented. These topics will be explored against the background of cultural diversity which exists in society.

POLS 3410 - Government Decision- Making: Organization Behavior (3)

Application of organization behavior theory to the decision-making process of governmental administrative agencies; impact of organization on governmental policies.

POLS 3500 - East Asian Political Economy (3)

This course explores the politics and processes of economic development in the four Asian 'Tigers' -- Singapore, Hong Kong, South Korea, and Taiwan. It examines competing explanations for their successful performance and emphasizes the role of government, the sociopolitical causes and consequences of development, and linkages with the international economy

POLS 3510 - Rebirth of Democracy (3)

This course examines the nature of democracy and the recent trend toward democratic reform around the world, but especially in Eastern and Central Europe and Latin America. The course also examines the theoretical and practical interconnections between political and economic reform and between democratic and market systems.

POLS 3520 - 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 3530 - 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 3540 - Latin American Social Movements (3)

This course focuses on organized social movements in Latin America with a combination of theoretical analysis and case studies of specific social movements. Issues covered in the course include class and labor movements, gender and sexuality, race and ethnicity, and the globalization of social movements.

POLS 3560 - Political Process - Latin America (1-3)

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 3567 - Political Development in Contemporary 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. Prerequisite: POLS 1000 or 1600; or Instructor Permission.

POLS 3570 - Third World Development (3)

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

POLS 3590 - The Arab Uprisings: The Politics of Expertise (3)

This course has two objectives. The first is to examine the events of the Arab Spring and subsequent uprisings in North Africa and the Middle East. The second course objective is to explore the politics of expertise. Who is considered an expert? Prerequisite(s): POLS-2590.

POLS 3600 - 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 3610 - 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 3620 - International Organization and the Management of World Problems (3)

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 3630 - International Security and Conflict Resolution (3)

Course familiarizes students with theories of international security and conflict resolution: history of political and strategic ideas; main causes of war; classification of actors in conflicts; balance of power; mediation and strategies for avoiding conflict; role of intergovernmental bodies and new technologies. Case studies include past conflicts and contemporary unrest. Prerequisite: POLS 1000 or 1600; or Instructor Permission.

POLS 3640 - 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 3650 - 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 3660 - US Strategy in Asia (3)

This course is designed to explore various parts of East Asia and American strategy to deal with issues we face in the region. We will discuss the nature of relationship the United States maintains with countries in East Asia and strategic options mostly in the post-Cold War era.

POLS 3670 - America and the Middle East (3)

This class examines the politics of expertise in the making of American foreign policy in the Middle East in the twentieth and twenty-first centuries. Students will investigate what qualifies people as experts and how experts' interpretations and cultural biases shaped policy toward the Middle East.

POLS 3710 - Ancient and Medieval Classics in Political Thought (3)

This course traces the development of Western political thought from its beginnings in the Greek city-state to end of the Middle Ages. Thinkers addressed may include: Plato, Aristotle, Cicero, Augustine, Aquinas. Alternate years

POLS 3720 - Renaissance and Modern Political Theories (3)

This course is a survey of modern political thought. Issues addressed include the rise of humanism, individualism, and liberalism; changing interpretations of natural law; constitutionalism and checking of absolutism; the Enlightenment. Among writers considered are Hobbes, Locke, Rousseau, Hegel, Marx, Nietzsche, and Mill. Alternate years.

POLS 3740 - Capitalism, Racism, Patriarchy: Theorizing Structural Power (3)

This advanced course in political theory teaches students to analyze system relations of power. We first address the idea of structural rather than individual power; then examine the logics of capitalism, racism and patriarchy; then consider the whole that they jointly comprise. Prereq: One theory course or permission of instructor.

POLS 3750 - Modern Democratic State (3)

Philosophy and theory of democratic government in the context of institution and processes of nineteenth and twentieth century Western democratic systems; fundamental tenets of popular participation in the decision-making process. Prerequisite: POLS 1000 or 1600; or Instructor Permission.

POLS 3770 - 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 with feminist thought, especially as it is formed by political philosophy including liberal, radical, Marxist and postmodern feminism. Sub-field in political science is Political Thought.

POLS 3780 - Disability Theory and Politics (3)

This course applies insights from disability studies to Western political thought in order to examine the political nature of disability and the disabling nature of politics. In this course, students are exposed to varying definitions, cultural representations, social justice issues, human rights concerns, and bioethical debates related to disability.

POLS 3790 - Topics in Political Theory (3)

This course focuses in depth on selected thinkers and themes in political theory. Topics vary from semester to semester. Sample topics include Kant and Contemporary Theory, Theories of Political Action, Marx and Capitalism

POLS 3800 - The Structure of Poverty: Globally and Locally (3)

This course examines the theoretical and empirical literature on the social, political, and economic structures that produce and perpetuate cycles of poverty. Students will get a first hand view of the structure of poverty as they engage in service learning projects at the well-established, nonprofit organization, Queen of Peace Center.

POLS 3810 - Latin American-U.S. Relations (3)

This course examines relations between the United States and the countries of Latin America. It focuses on both the history of US-Latin America relations as well as current issues. Topics range from economic relations and trade, security, drug trafficking, democracy and human rights, and the role of international organizations.

POLS 3850 - Feminism in Action (3)

This course addresses feminist activism on a wide range of issues (including domestic violence, rape, education and health care), and in a variety of forms (including writing, theater, public protests and coalition building). It gives students the opportunity to study the scholarship of activism and to participate in feminist action.

POLS 3860 - Global and Transnational Feminism (3)

This course offers an advanced survey of the field of theory and political activism referred to as transnational feminism. Students are introduced to the history of feminist work in international political and economic forums (e.g. the UN and World Bank), as well as to on-going feminist efforts in the context of current social movements around the globe.

POLS 3880 - Violence Against Women (3)

This course examines current issues and responses to the problem of gender-based violence. We will focus on the topics of rape/sexual assault, intimate partner violence, sexual harassment, stalking, and sex trafficking in the U.S. We will analyze the causes and effects of such violence, and political discourses surrounding these issues.

POLS 3910 - Federal Government Internship (1-6)

Interns serve in federal agencies or offices of elected officials, in Washington, DC or locally, and gain experience and insight into the functioning of the federal system. Students keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 3911 - State or Local Govt Internship (1-6)

Interns serve in state or local agencies or other government offices located in Jefferson City or in the St. Louis area. Students keep journals and write an essay relating their experiences to assigned readings or course work. At least one previous course in American Politics preferred.

POLS 3912 - Administrative Internship (1-6)

Students who have satisfied course prerequisites in public administration employ classroom administrative theory while working in a public administration agency under the direction of experienced administrators. Student keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 3913 - Atlas Internship (3)

In this internship, students collaborate to coordinate SLU's Atlas Program. The goal of the program is to increase awareness of contemporary global injustices and educate students of the responsibilities of global citizenship. The internship is designed to empower students to become effective leaders of social change. Permission of Instructor required.

POLS 3914 - Foreign Service Internship (3)

Interns serve in agencies or nongovernmental organizations concerned with the conduct of foreign relations abroad, in Washington or in St. Louis. Students keep journals and write an essay relating their experiences to assigned readings or course work. At least one previous course in International Relations preferred.

POLS 3915 - Legal Internship (1-6)

Interns work in law firms, in the legal department of large corporations, or in public agencies involved in the judicial process. In selecting their internships, Political Science majors are guided by the faculty member directing this program. Ideal for students interested in a legal career.

POLS 3916 - Campaign Practicum (1-6)

This course examines theories of leadership to incorporate gender issues and ethics in reviewing the call to responsible citizenship and the obligation to build just social institutions. Students will be encouraged to develop skills in reflection on their own commitment to create a just society. Prerequisite: Second semester sophomore standing. Permission of instructor required. See faculty member before accepting internship.

POLS 3917 - Research Internship (1-6)

Students work with Political Science professor on professor's research. Instructor's permission required.

POLS 3918 - Overseas Fieldwork (1-6)

Students work at overseas agency or organization. Students keep journals and write an essay relating their experiences to assigned readings or course work. Permission of instructor required.

POLS 3919 - Women Leaders Internship (1-6)

Interns work with women in leadership positions in governmental or nongovernmental civic organizations, or collaborate on research projects related to women leaders in the public sector. Students keep journals and write an essay relating their experiences to assigned readings on gender justice and the role of women in public policy.

POLS 4010 - Cultural Methods: Gender, Politics, and Power (3)

This course addresses methods of studying gender, politics, and power, one also termed qualitative methods, such as ethnography, interviewing, and coding. Students prepare a research proposal using some of the methods. Broader epistemological, ontological and ethical issues are covered, with students developing their own philosophy and ethic of research. Pre-requisite: POLS 2000 and junior standing; or Instructor Permission.

POLS 4110 - American Political Institutions (3)

Course examines design and contemporary function of America's political institutions, including the three constitutionally-defined branches of government, parties and interest groups. Historical and contemporary readings on organization of Congress and the Executive; mobilization of societal interests for political action; how representative and responsive these institutions are; whether they produce 'good' policy. Prerequisite: a previous American politics course. Prerequisite: Junior Standing, POLS 2000 and either POLS 1100 or 1150; or Instructor Permission.

POLS 4120 - Civil Rights: A Moot Court Seminar (3)

This course examines civil rights law in the U.S. since mid-20th century. Students serve as lawyers and justices and retry Supreme Court cases on school desegregation, the Civil Rights Act of 1964, affirmative action, school busing, sex discrimination, and sexual orientation discrimination. Prerequisite: Junior Standing, POLS 2000 and either POLS 1100 or 1150; or Instructor Permission.

POLS 4125 - Women and the Law (3)

This course explores legal constructions of gender by examining Supreme Court cases, federal legislation, historical documents, news stories, and scholarly essays on sexual equality and inequality in the United States. Topics include employment, sexual harassment, reproduction, domestic violence, sex discrimination and more.

POLS 4126 - Sexuality and the Law (3)

This seminar explores how law and sexuality influence each other. We read decisions that give expression to ideas about human nature, social goods, normalcy and deviancy, socially constructive behavior, the relationships between private and public, and how gender, sexuality, disability, and race interact.

POLS 4140 - Political Parties (3)

This course examines the role of political parties and interest groups in the representative process, elections and governance. Prerequisite: Junior Standing, POLS 2000 and either POLS 1100 or 1150; or Instructor Permission.

POLS 4150 - Gender and Politics (3)

This course examines the ways women shape and are shaped by American politics and public policy. We explore the history, approaches, findings, and controversy in research about women in American politics and political science from various theoretical and methodological approaches. Prerequisite: Junior Standing, POLS 2000 and either POLS 1100 or 1150, or Instructor Permission.

POLS 4160 - Advanced Topics: American Presidency (3)

Studies the executive policy-making process, recruitment processes; Office of the President; bureaucracy's role, effect of presidential style and personality on policy processes. Prerequisite: a previous American politics course. Prerequisite: Junior Standing, POLS 2000 and either POLS 1100 or 1150, or Instructor Permission.

POLS 4170 - Electoral Politics (3)

An analysis of the dynamics of party alignment, realignment, and of nomination and election to public office in American national government.

POLS 4171 - Law, Policy, Society (3)

Law, Policy, Society examines the complexities and concerns in social science and legal understandings of the relationship between law and society. We will focus on law and legal processes and the relationship between law/courts and society. At least junior-level standing, POLS 2000, and either POLS 1100 or POLS 1150.

POLS 4300 - Law, Politics, and Regulatory Policy (3)

This course studies regulatory behavior of governmental agencies through legal cases, focusing on how administrators uphold procedural due process while conducting regulatory business. Topics include: legal-administrative relations, rule-making, adjudication, administrative discretion, judicial review of agency actions, and administrative search and seizure. Prerequisite: a previous course in American politics and junior-level standing; or Instructor Permission.

POLS 4340 - Issues in Public Policy (3)

"Issues in Public Policy" focuses on how public policies are made, implemented, and evaluated in the context of the political system. Once the principles of public policy analysis are understood, students will select and analyze major public policy problem areas facing America.

POLS 4350 - Intro to Geographic Info Syste (3)

Focus on Geographic Information Systems analysis of the politics and legal issues involved in selected functional categories of urban public policy. Offered Fall semester.

POLS 4500 - 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 4510 - Seminar: Democratization (3)

This course examines the process of developing new democratic systems, with particular focus on Eastern and Central Europe, theories of democratic transition, and interconnections between democratic and market systems. Prerequisite: Junior-level standing and a previous course in comparative politics.

POLS 4520 - Political Change (3)

This course examines major theoretical approaches to understanding and explaining periods of political change, focusing mostly on Latin America. Attention is given to both long-term and immediate causal processes and their consequences. Topics include revolution, democratization, social mobilization, and protest. Prerequisite: junior-level standing and a previous course in comparative politics.

POLS 4530 - Authoritarianism: A Study in Conceptual Utility (3)

Since its identification as a regime-type by Juan Linz in 1964, authoritarianism has become a major concept in the field of comparative politics. In this course, we will explore the conceptual utility of authoritarianism. Prerequisite: junior-level standing and a previous course in comparative politics.

POLS 4590 - Crisis of Leadership (3)

The research seminar analyzes different perspectives on political leadership in light of recent global challenges. Students will explore institutional settings and domestic political conditions to understand the emergence of different type of leaders. Pre-requisite: previous course in comparative politics and junior-level standing.

POLS 4610 - 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; or Instructor Permission.

POLS 4620 - Global Diplomacy (3)

This course examines diplomacy used by international actors to address the problems confronting international society. Problems addressed include peace and security; the maintenance of order in the world; economic stability; sustainable development; and the protection of human rights, the environment, and global social justice. Prerequisite: prior IR class; or Instructor Permission.

POLS 4630 - 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.

Prerequisite(s): Senior standing & ECON-1900; or Instructor Permission.

POLS 4640 - Problems of International Terrorism (3)

This course provides an in-depth examination of selected problems related to global terrorism and the struggle against it. Prerequisites: junior level standing and a previous course in International Relations; or Instructor Permission.

POLS 4650 - War, Peace, and Politics (3)

Course topics include role of military and economic power in international politics, Clausewitz, Sun Tsu's Art of War, spread of nuclear weapons, terrorism, insurgency, rising powers like China, cyber security, conflicts between cultures and civilizations and U.S. grand strategy. Pre-requisite: junior-standing, POLS 2000, and a previous course in international relations (POLS 1600-1699, 2600-2699, 3600-3699, 2820, 3810).

POLS 4692 - Theories of World Politics (3)

An advanced field seminar of international relations. Students analyze some of the field's most important works. Topics include globalization, security studies, international organizations, and implications for US foreign policy. Restricted to juniors and seniors. Prerequisite(s): POLS-2000 and POLS-1600 or POLS-2600.

POLS 4710 - Citizenship and Social Difference (3)

This course will attempt to integrate the insights from feminist theory, critical race theory, and disability studies into an analysis of what it means to be an American citizen. Prerequisite: junior-level standing, POLS 2000 and one of the following courses: POLS 1700, 2700, 3710, 3720, or 3770, or instructor permission.

POLS 4730 - 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, POLS 2000 and one of the following courses: POLS 1700, 2700, 3710, 3720, or 3770; or Instructor Permission.

POLS 4740 - Marx's CAPITAL (3)

Marx's CAPITAL is a seminal work of social philosophy and political economy providing the foundation for any number of fields of 20th century inquiry--including critical theory and cultural theory. The upper-level seminar consists of a very close reading of Volume 1. Prerequisite: junior-level standing, POLS 2000 and one of the following courses: POLS 1700, 2700, 3710, 3720, or 3770; or Instructor Permission.

POLS 4750 - 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. Prerequisite: junior-level standing, POLS 2000 and one of the following courses: POLS 1700, 2700, 3710, 3720, or 3770; or Instructor Permission.

POLS 4800 - Theories of Constitutional Interpretation (3)

Course explores justification for the judicial review in the U.S. Why do unelected judges in America possess the power to invalidate democratically enacted laws? Students read historical, legal, philosophical, and empirical works and develop their own ideas about the role of constitutional courts. Prerequisite: junior-level standing, POLS 2000 and either POLS 1150 or 1100; or Instructor Permission.

POLS 4840 - Global Health Politics and Policy (3)

This course examines how power relations, ideology, ethics, values determine choices made about how to confront health issues. Using case studies, students become familiar with the political roles of individuals, institutions, political leaders, and societies relative to health policy. Prerequisite: junior-level standing and POLS 2000, or instructor permission.

POLS 4910 - Political Science Internship (3)

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 4980 - 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 4990 - Research Design (3)

An independent research project under a project director and a faculty committee in any of the subfields of Political Science. A requirement for students in the Political Science Honors Thesis Program, which is designed for students with a strong record in political science courses who want to apply to graduate school or top law schools. Permission of the Honors Thesis Program director and project director required. Counts as one 4000-level seminar.

POLS 4991 - Political Science Honors Thesis (3)

An undergraduate thesis written in any of the subfields of Political Science under the direction of a Political Science faculty member. For members of the Political Science honors Program only. A requirement for this program. Permission from the Department Chair and Thesis Director required.

POLS 5020 - Advanced Topics in Research Methods (3)

This course focuses on the application of qualitative and quantitative methods in political science. Topics examined in this course include survey design, experimental design, focus groups, field research, case study analysis, interview techniques, analysis of variance, linear regression, and in introduction to non-linear models.

POLS 5060 - Qualitative Research Methodology (3)

This course will provide descriptive research methods including participant observation, oral history, and photography and their application to program evaluation and policy analysis.

POLS 5100 - Seminar in American Politics (3)

This is a graduate seminar in American Politics. It is designed to provide an overview of the literature and theoretical concepts associated with political science as it relates to American government and politics. The topics we cover include campaigns and elections, mass behavior, public opinion, institutions of government, and policymaking.

POLS 5110 - American Political Institutions (3)

Course examines design and contemporary function of America's political institutions, including the three constitutionally-defined branches of government, parties and interest groups. Historical and contemporary readings on organization of Congress and the Executive; mobilization of societal interests for political action; how representative and responsive these institutions are; whether they produce a good policy.

POLS 5130 - American Race Relations (3)

The theme of this course is the transformed nature of racism and its effect on racial inequality. The course examines the degree to which racism and privilege are systemic, institutionalized features of U.S. society, focusing on the structural, ideology, and public-policy factors that created and sustained patterns of racial inequality.

POLS 5140 - Political Parties (3)

Though the Constitution is largely silent about them, political parties and interest groups perform indispensable functions in modern democracies. Despite their importance, these institutions are often misunderstood by the public and there is a deep ambivalence toward these political organizations. In this course we will pursue a detailed understanding of parties and organized interests in America - how and why parties and organized interests form, what they do, and what we might want them to do.

POLS 5150 - Gender and American Politics (3)

This course examines the ways in which women shape, and are shaped by, American politics and public policy. We explore the history, approaches, findings and controversy in research about women in American politics and political science from a range of theoretical and methodological approaches. Cross-listed as WGST 5150.

POLS 5170 - Seminar in Electoral Politics (3)

An analysis of the dynamics of party alignment, realignment, and of nomination and election to public office in American government systems.

POLS 5171 - Law, Policy, Society (3)

This class examines the complexities and concerns inherent in social science and legal understanding of the relationship between law and society. The class will focus on (1) the dynamics and development of law and legal processes and (2) the relationship between law/courts and society.

POLS 5200 - Seminar in American State Politics (3)

This course will focus on the comparative study of U.S. State politics. The topics we cover include campaigns and elections, mass behavior, public opinion, institutions of government, and policy making. The overarching theme of the course will focus on the process of representation in the American states.

POLS 5210 - Law, Crime, and Policy (3)

This course will provide students with theory and analytical skills to understand the socio-political parameters of crime and society's policy response. Students will engage in real world policy analysis with an acute understanding of the political and practical issues involved in constructing

POLS 5300 - Law and Regulatory Policy (3)

This course studies regulatory behavior of governmental agencies through legal cases, focusing on how administrators uphold procedural due process while conducting regulatory business. Topics include: legal-administrative relations, rule-making, adjudication, administrative discretion, judicial review agency actions, and administrative search and seizure. Offered occasionally

POLS 5310 - Issues in U.S. Public Administration (3)

This course examines the implementation of government policy in the US, focusing on the historical evolution of government policies, programs, and behavior of officials and current issues. Issues include: privatization, quotas, affirmative action, whistle-blowing.

POLS 5320 - Environmental Politics and Policy-Making (3)

This course investigates why governments make environmental laws; the competing values that influence environmental policy; and the institutions, processes and political actors that shape the creation and implementation of environmental laws in the U.S. We also consider the U.S. role in global effort to address climate change.

POLS 5325 - Public Sector Budgeting (3)

Public budgeting at all levels of government; economic and political aspects budgeting. Features an in-class budget simulation.

POLS 5330 - Public Sector Economics (3)

This course introduces the economics of the public sector. Topics include: public goods, externalities, revenues and expenditures, taxation, and the economics of certain public policies like Social Security, Medicare, and welfare programs.

POLS 5340 - Policy Ethics (3)

This course enhances students' awareness of ethical tensions present in the study of public policy and administration, focusing on how religious, cultural and moral principles interact in the making and implementation of public policy. Particular themes include social justice, equality, fairness, individual liberty, and minimizing harm to others.

POLS 5350 - Issues in Public Policy (3)

"Issues in Public Policy" focuses first on how public policies are evaluated, examining the different approaches used by professionals to analyze the costs and benefits of various public policies. Once the principles of public policy analysis are understood, students will select and analyze major public policy problem areas facing America. Offered as Needed / Periodically.

POLS 5360 - Urban Economic Development (3)

This course on community economic development policy will focus on three issues: (1) theories of economic development; (2) methodological choices for the scale for community economic development (e.g., neighborhood, street, and block); and (3) best practices and evidence based approaches to community economic development. Offered occasionally.

POLS 5500 - 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 5510 - 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 5520 - Political Change (3)

This course is designed to familiarize students with major theoretical approaches to understanding and explaining periods of political change. Political change involves understanding both the long-term causal processes and their consequences and the more immediate causes and consequences of political change.

POLS 5530 - Authoritarianism: A Useful Concept? (3)

This course explores the conceptual utility of authoritarianism. We begin by examining the literature on concepts. We then explore the classics in the field. The heart of our inquiry explores the transitions literature, sub-types of authoritarianism and contemporary cultural, economic and institutional approaches to the study of authoritarianism. Offered in the fall of odd years.

POLS 5550 - Politics of Economic Development (3)

This course undertakes an advanced study of the development of the modern state and of how states interact with various other forms of political community as well as with markets and other states. Students examine how ongoing processes of economic globalization have rendered the concept of the state problematic.

POLS 5580 - Islam and Gender (3)

The primary goal of this course is to introduce students to the study of Islam and gender. A second goal is to capture the diversity of contemporary Islam by emphasizing Muslim communities outside the Middle East. This class also seeks to develop students' oral communication skills through rigorous spoken assignments. Offered fall semester in even years.

POLS 5590 - Crisis of Leadership (3)

This course analyzes different perspectives on political leadership. It is designed as a research seminar in which we explore institutional settings and domestic political conditions that help us to understand the emergence of different types of leaders. Students examine current leadership crises through debates, simulation, and research. (Offered: Annually in the Fall)

POLS 5610 - International Relations: Theory & Practice (3)

This course explores key theoretical traditions in international relations, including realism, liberalism, constructivism, Marxism, feminism, and postcolonialism. It also investigates methodological and epistemological controversies. Students stage debates about events such as the Peace of Westphalia, the decision to go to war in Iraq, and struggles for equality and emancipation. (Offered: Annually in the Spring)

POLS 5620 - Global Diplomacy (3)

The course is concerned with the kind of diplomacy that enables international actors to address the problems confronting international society: problems addressed include peace and security; the maintenance of order in the world; economic stability; sustainable development; and the protection of human rights, the environment, and global social justice.

POLS 5630 - International Security & Conflict Resolution (3)

This course focuses on major theoretical issues in the study of international security and conflict resolution, including the history of political and strategic ideas; causes of war; mediation and strategies for avoiding conflict; the role of intergovernmental bodies and new technologies. Students apply selected theories in case studies of conflicts. (Offered: Annually in the Fall)

POLS 5640 - Problems of International Terrorism (3)

This course provides an in-depth examination of selected problems related to global terrorism and the struggle against it.

POLS 5650 - War, Peace, and Politics (3)

This is a graduate-level survey course in the field of international security. The course is designed to provide the student with the background and conceptual tools for understanding international security. The topics include causes of war and peace, cyber security, roles of nuclear weapons in international security, regular war and irregular war, terrorism, insurgency, and American grand strategy. Offered as needed.

POLS 5690 - Theories of World Politics (3)

An advanced field seminar of international relations. Students analyze some of the field's most important works. Topics include globalization, security studies, international organizations, and implications for US foreign policy. Pre-requisite: At least junior-level standing plus POLS 2000 and POLS 1600 or equivalent. Fulfills the Political Science seminar requirement.

POLS 5700 - Hist Western Political Thought (3)

Students in this course will engage in close reading and careful discussion of canonical texts in the history of Western social and political philosophy, so as to acquire a solid foundation for further work in political theory, political science, other social sciences and/or the humanities. Offered occasionally.

POLS 5710 - Citizenship and Social Difference (3)

This course will examine several aspects of the embodied nature of citizenship. Looking specifically at the interplay between citizenship (as an identity, legal status, and practice) and socially constructed identities predicated upon perceived bodily differences (gender, race, and disability), we will examine the following preliminary questions: Historically, how and why has the American state denied women, people of color, and people with disabilities citizenship status? Should civil, social, and political rights, which are contingent upon citizenship status, be universal rights, or group-differentiated rights? How should we expand/amend conventional definitions of citizenship and political participation to account for the lived experiences of women, people of color, and people with disabilities? How do social constructs and maintained inequalities—via sexism, racism, and ableism—influence the practice of citizenship? Overall, this course will attempt to integrate the insights from feminist theory, critical race theory, and disability studies into an analysis of what it means to be an American citizen.

POLS 5730 - 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 5740 - Marx's Capital (3)

This class is devoted to the close reading of Volume 1 of Marx's CAPITAL, leading to an understanding of Marx's analysis of capitalism. Students with a background in political theory or philosophy will find that training to be helpful but the course does not presuppose previous reading of the text. Offered periodically.

POLS 5750 - American Political Thought: Meanings of Citizenship (3)

Course examines ideas, institutions, and practices that have influenced the different meanings of citizenship experienced by different groups of Americans since the founding era. Readings include traditional sources in American political thought as well as writings of and about women, African Americans, Native Americans, other racial and ethnic groups, and poor people. Offered every year.

POLS 5760 - Feminist Theory (3)

Begins with the history of feminist scholarship from the pre-modern period to the 19th century and proceeds to examine liberal, socialist/Marxist, radical, postmodern, and global feminism. Critical reviews of each theory will include issues of race/ethnicity, class, sexuality, and spirituality. Offered each fall semester.

POLS 5770 - Feminist Epistemologies (3)

Examination of how feminist scholarship has recontextualized epistemological issues in the philosophy of science, eco-feminism, hermeneutics, mysticism and phenomenology. Students will write and present papers to demonstrate their integration of feminist theory and feminist epistemological issues within their own major fields of study. Offered each spring semester.

POLS 5780 - Leadership and Culture (3)

Course examines why certain leaders and styles of leadership have emerged in the cultures of particular social groups, ranging from electoral coalitions in American presidential campaigns, to African American churches, to transnational social movements and more. Particular emphasis is placed on the role of gender and race. (Offered: As needed/Periodically)

POLS 5800 - Theories of Constitutional Interpretation (3)

Course explores justification for the judicial review in the U.S. Why, in a democratic system, do unelected judges possess the power to invalidate laws approved through the democratic process? Students read historical, legal, philosophical, and empirical works and develop their own ideas about the role of constitutional courts. Prerequisite: one American politics course

POLS 5840 - Global Health Politics & Policy (3-6)

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 will be the AIDS and Ebola pandemics in Africa.

POLS 5850 - Policy Evaluation and Assessment (3)

This course will provide students with an understanding of the complexity and scope of policy evaluation and analysis. Students will become familiar with the concepts, methods, and applications of evaluation research. Students will also develop a toolkit to design traditional and cutting-edge evaluation methodology and analysis.

POLS 5910 - Graduate Internship (1-6)

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 5911 - Graduate Capstone Internship (3-6)

Interns work in government agencies/offices, non profit organizations, or interest groups under similar conditions to POLS 5910. 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 5913 - 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.

POLS 5950 - Study for Special Exams (0)

Required of all graduating MA students in their final semester.

POLS 5960 - MPA Capstone (0-3)

Student selects a project examining an issue of importance to St. Louis, the region, or the nation, conducts independent research, and works with an adviser and committee to produce and present the capstone project to the committee. Offered every semester.

POLS 5970 - Research Topics (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 5980 - 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 5990 - Thesis Research (3)

For students completing an MA thesis. Permission of the instructor and the director of graduate studies is required.

POLS 6100 - 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.

POLS 6250 - Poverty, Inequality and Public Policy (3)

This course provides a multidisciplinary framework to understand the theories and mechanisms that contribute to poverty and inequality in the U.S. The course will also provide a history of anti-poverty policies interventions and introduce current state of knowledge on policies that work at the national, state, city, and neighborhood level.

POLS 6300 - U.S. Health Care Policy (3)

This course will provide students with an overview of the U.S. health care system; orient students to the policy process, and increase the student's understanding of the nature of health policy making and health politics; and provide opportunities to develop an in-depth understanding of current health care issues.

POLS 6310 - Policy Process (3)

This course deals with various inputs into the US policy-making process. Particular attention is focused on the impact of legislative law, administrative rule, and judicial order.

POLS 6320 - Organization Theory & Behavior (3)

This course will provide a general focus on theories that provide insights into organizational life. Emphasis is given to public bureaucracies. Topics include motivational theory, management behavior and policy evaluation.

POLS 6330 - Public Finance Theory (3)

This course examines the public finance functions of governments: stabilization, allocation, and distribution. Topics include the elements of an effective tax structure, in-depth analysis of revenue sources. Discussion is focused on theories of political economy, including classical, Marxist, Keynesian, neo-classical and new institutional economics.

POLS 6340 - Politics, Power, and Coalitions (3)

This class offers an intensive consideration of power, coalition, and decision theory and models for purposes of analyzing behavior and policy outcomes in communities and formal organizations.

POLS 6700 - 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.

POLS 6710 - Leadership & Culture (3)

This seminar examines why certain leaders and styles of leadership have emerged in the cultures of particular social groups, ranging from electoral coalitions in American presidential campaigns, to African American churches, to transitional social movements and more. Particular emphasis is placed on the role of gender and race. (Offered: As needed/Periodically)

Public & Social Policy (PSP)**PSP 6800 - Policy Dissertation Seminar (3)**

The primary objectives of this course are twofold: 1. introduce students to various approaches to conducting policy-relevant research and examples of good and bad policy research; and 2. to have students write a draft of their dissertation proposal that fills methodological and conceptual holes apparent in earlier research.

Psychology (PSY)**PSY 1010 - 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 1540 - The World of Work: Billiken Bridge to Success (1)

This course is designed to introduce you to the working world. Individual and group projects will be used to help you learn about industries, the global economy, and how they affect one another. Various careers and self-reflective activities will assist you in your educational and career goals.

PSY 1840 - 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 2050 - Foundations of Research Methods and Statistics (0-4)

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

PSY 3060 - Applications of Research Methods and Statistics (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 3100 - Brain, Mind & Society (3)

The course examines core features of the human mind that render it wholly different from the mental faculties of even our closest genetic relatives. The biological origins of the brain, the shaping of the mind by culture, and the human capacity for morality and religiosity are among the topics addressed.

PSY 3120 - Cognitive Psychology (3)

Discussion of higher-order cognitive processes, including memory functioning, reasoning, thinking, problem-solving, language production and comprehension.

PSY 3130 - Physiological Psychology (3)

Neural basis of behavior, including sensory and motor systems, ingestive behaviors, sleep, aggression, learning, and psychological disorders.

PSY 3160 - 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 3210 - 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 3230 - 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 3300 - 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 3310 - 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 3450 - 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 3500 - Introduction to Neuroscience 2: Cognitive and Behavioral (3)

This course introduces fundamentals of the neural bases of cognition and behavior. Areas of study include: neuron structure and function, methods of Cognitive Neuroscience, sensation and perception, movement, attention, learning and memory, and social and emotional behavior. Prerequisites are PSY 1010 and NEUR 3000.

PSY 4010 - 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 nonparametric. 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 4130 - Cognitive Neuroscience (3)

The purpose of this course is to develop an advanced understanding of the biological bases of mental activity. Course includes a focus on how the brain and mind are involved in perception, attention, learning and memory, language, movement, emotions, decision-making, and consciousness.

Prerequisite(s): either PSY-3120 or PSY-3130.

PSY 4140 - 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 4150 - 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 4270 - 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 4320 - Close Relationships (3)

Uses a social psychological approach to cover theory and research on attraction, social cognition, communication, interdependence, friendship, love, relationship maintenance, stresses and strains, conflict, and dissolution.

PSY 4330 - 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 4340 - 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 4350 - 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. Prerequisite: One of the following courses, PSY 3300-3390, PSY 4300-4390 or PSY 4750.

PSY 4390 - Abnormal Psychology (3)

A survey of mental disorders, their signs, symptoms, underlying causes and treatment, with more emphasis on signs and symptoms.

PSY 4410 - 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 4420 - Psychology Tests & Measurements (3)

Theory and techniques in the measurement of intelligence, personality special aptitudes and interests. Emphasis on test construction, evaluation and interpretation.

PSY 4460 - 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 4480 - 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 4710 - Studies: Experimental Psych (1-3)

The purpose of this course is to develop an advanced understanding of the biological bases of mental activity. Course includes a focus on how the brain and mind are involved in perception, attention, learning and memory, language, movement, emotions, decision-making, and consciousness.

PSY 4720 - Studies: Developmental (3)

Prerequisite(s): PSY-1010 for all upper division courses. PSY-3210 is strongly recommended for course.

PSY 4790 - 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 4800 - Undergraduate Research (1-6)

Outside-the-classroom research activity done under faculty supervision.

PSY 4860 - 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 4870 - 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 4880 - 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 4900 - 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 5030 - Clinical Assessment I (3)

Theory, research, and concepts in clinical assessment, with emphasis on cognitive abilities.

PSY 5040 - Clinical Assessment II (3)

Theory, research and concepts in assessment of personality and behavioral disorders for individuals and groups.

PSY 5080 - Adv Quantitative Rsch Methods (3)

This course is designed to strengthen and extend students' foundational knowledge of the general principles involved in doing quantitative research in psychology. Topics covered include the measurement of behavior and mental processes (e.g., operational definitions, modalities of measurement (self-report, observational, physiological), measurement reliability and validity); research settings (laboratory, field); research designs (experimental, correlational, quasi-experimental); types of experimental control; internal and external validity; sampling; power and design sensitivity; analysis, interpretation, and reporting of data within various research designs; and research ethics. (Offered every Fall semester). Prerequisite: graduate status in psychology or permission of instructor.

PSY 5090 - Psychometric Theory (3)

This course provides an overview of the concepts and issues central to an understanding of psychological measurement. Topics for the course include an overview of basic statistical concepts, scaling, item and test construction, scoring algorithms, item analysis, reliability and generalizability theory and application, validity, prediction and classification, analysis of test dimensionality including factor analysis, test refinement and revision, evaluation of test bias, and item response theory. Emphasis is placed on application of theoretical foundations to practical problems in the aforementioned areas. Following completion of the course, students should be able to critically examine the psychometric properties of tests and write proposals pertinent to test development, refinement, and evaluation. (Offered every Spring semester). Prerequisite: graduate status in psychology or permission of instructor

PSY 5100 - 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 5120 - 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 5130 - Neuroscience (3)

Physiological and neural correlates of normal animal and human behavior with emphasis on a broad spectrum of areas within physiological psychology.

PSY 5220 - 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 5250 - Cognitive Development (3)

This seminar is designed to selectively introduce students to major theories, concepts and recent empirical research in the field of cognitive development. The textbook will provide students with broad overviews of classic and contemporary topics and issues in the field. Assigned readings from the course pack will permit more in-depth examination of current noteworthy topics and will be the primary focus of class discussion.

PSY 5300 - 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 5310 - 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 5410 - 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 5460 - 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 5470 - Psychology of Small Groups (3)

Theory, research and practice in small group behavior. Use of laboratory experiential learning methodologies.

PSY 5520 - Psychopathology (3)

Survey of psychopathology, primarily emphasizing etiology with secondary emphasis on taxonomy.

PSY 5530 - Psychology of Trauma (3)

This psychology of trauma course explores the ways in which traumatic events are experienced, the definitions of the events, themselves, and the range of posttraumatic reactions. These reactions, as varied as victims themselves, can affect cognitive, emotional, biological/physical and interpersonal aspects of functioning. Students in this course will receive an overview of the epidemiology of potentially traumatic events, the theories underlying their impact and the range of posttraumatic reactions. Special topics will be explored with an emphasis on interpersonal trauma. Societal, cultural, and historical influences on views of trauma will also be discussed. Offered in spring.

PSY 5540 - Sports Psychology (3)

This course is designed to provide students with knowledge and understanding of the broad theoretical, scientific, and conceptual foundations of the psychology of sport and exercise. This course will provide students with the key concepts, theories, and principles of sport psychology and the application of psychological knowledge and principles to enhance sport performance and exercise behaviors. Offered in summer.

PSY 5610 - Clinical Interventions (3)

Studies of theoretical, empirical, and conceptual foundations of clinical interventions, including outcome, client, and therapist variables and processes.

PSY 5670 - Behavior Therapy (3)

Concepts and applications of models derived from learning theory and oriented toward changing behavior, including systematic de-sensitization, implosive therapy, covert sensitization and covert reinforcement, assertion training, aversion therapies, token economics, and contingency contracting.

PSY 5780 - Program Evaluation (3)

Social action research theory and strategy; emphasis on current methods and models of program evaluation.

PSY 5790 - Applied Univariate Statistics in Behavioral Science (3)

This course is designed to strengthen student's foundational knowledge of popular applications of statistical analytic techniques in behavioral science, with emphasis on classical univariate inferential techniques. Topics covered include a review of probability theory and sampling distributions, data evaluation, correlation, multiple regression, analysis of variance (ANOVA), and categorical data analysis and other nonparametric approaches. Emphasis of the course will be placed on conceptual knowledge, application, and interpretation of the results.

PSY 5800 - Clinical Assessment Practicum I (0)

Supervised clinical experience in the administration, scoring and interpretation of individual tests of intelligence and academic achievement.

PSY 5810 - 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 5820 - 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 5830 - Clinical Assessment Practicum II (0)

Supervised clinical experience in the administration, scoring, and interpretation of objective and projective psychological tests.

PSY 5840 - Experimental Psychology Research Vertical Team (0-6)

Supervised experience in the integrating of the content of experimental psychology with its applications.

PSY 5850 - PRC: Applied Psychology (0-6)

Supervised experience in the application of social action research theory and strategy.

PSY 5860 - Clinical Research I (0-3)

Presents an overview of current research in psychology, particularly clinical psychology, with focus on research ethics, conceptualization, method and statistics.

PSY 5870 - 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 5880 - Practicum: Psychopathology (0-3)

Supervised diagnostic clinical practicum.

PSY 6000 - Teaching of Psychology (3)

Reading, lectures and supervised experience designed to prepare the student for teaching psychology at the college level.

PSY 6030 - 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-/profession practice emphasis.

PSY 6040 - Topics: Assessment (3)

Survey of selected measures and research.

PSY 6060 - Topics: Quantitative Psych (3)

Selected topics from the quantitative aspects of psychology, such as information theory, decision theory, Bayesian analysis, computer application etc.

PSY 6190 - Topics: Cognitive Neuroscience (3)

Advanced seminar in newly developing areas of experimental psychology.

PSY 6290 - Topics: Developmental Psych (3)

Advanced seminar in selected areas of developmental psychology.

PSY 6390 - Topics: 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 6490 - Topics: Organizational Psychol (3)

Advanced seminars in organizational change and development, organizational intervention, training and development, and newly developing areas in organizational psychology.

PSY 6500 - Applied Multivariable and Multivariate Statistics in Behavioral Science (3)

This course will survey multivariable and multivariate techniques commonly used in behavioral science. Topics covered include multiple regression, MANOVA, logistic regression, time-to-event analysis, canonical correlation, principal components analysis, factor analysis, and discriminant function analysis, with a brief introduction to structural equation modeling. Emphasis of the course will be placed on conceptual knowledge, application, and interpretation of the results. (Offered every Spring semester). Prerequisite: PSY 594 or equivalent

PSY 6520 - 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 6560 - Addictions: Assessment & Intervention (3)

This course provides an overview of the biopsychosocial concepts relevant to understanding the etiology, diagnosis and treatment of substance use disorders and other addictions (e.g., gambling disorder) from a scientist-practitioner perspective. Specific addiction-related assessments tools and interventions are covered. Offered in spring. Prerequisites: PSY 5520 - Psychopathology, PSY 5610 - Clinical Interventions, or equivalent

PSY 6590 - Topics: Psychopathology (3)

Advanced seminar on newly developing areas of research and theory in psychopathology.

PSY 6600 - Structural Equations Modeling (3)

This is an introductory structural equation modeling course that will cover path analysis, confirmatory factor analysis, and analysis of full structural equation models using latent variables. Emphasis is placed on application, interpretation, and presentation of results using computer software programs.

PSY 6630 - Cnsltatn Skills: Theory/Practi (3)

Theories, types and goals of consultation as well as relevant research associated with each type of consultation. Primary focus on training in systems consultation and its evaluation.

PSY 6650 - 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 6660 - Psychodynamic Psychotherapy (3)

Theoretical and empirical literature pertaining to psychodynamic orientations in various modes of psychotherapy.

PSY 6680 - Neuropsychological Assessmnt (3)

An overview of the specialty area of neuropsychology. Emphasis is placed on understanding functional neuroanatomy and disorders with known neurobehavioral sequelae. Several approaches to assessment of neuropsychological functioning are reviewed.

PSY 6690 - Topics: Intervention Stratgs (3)

Advanced seminar in newly developing areas of intervention strategies.

PSY 6780 - Commnty Psych & Prmry Prev. (3)

Concepts and methodologies relating clinical psychology to community problems, including welfare and dependency, crime and delinquency, urban and rural poverty, and problems of aging.

PSY 6790 - Topics: Applied Psychology (3)

Advanced seminar in newly developing areas of evaluative/applied psychology.

PSY 6800 - 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 6810 - Clinical Practicum III (0-3)

Supervised clinical experience with children, adolescents, adults, couples, families, and groups covering administration, advanced interpretation, integration, report writing, case conceptualization of traditional and specialized assessment instruments, and advanced psychotherapeutic interventions for individuals couples, families and groups.

PSY 6820 - 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 6860 - 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 6880 - PRC: Clinical Interventions (0-3)

Applied course in the methods, techniques and practice of psychotherapy.

Russian (RUSS)**RUSS 1010 - 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 1020 - Communicating in Russian II (0-3)

Continuation of RUSS-1010. (Offered every Spring)

RUSS 2010 - 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 2220 - 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 2610 - 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 Prerequisites.

RUSS 2620 - A Taste of Russia (1-2)

This course is designed to introduce students to Russian culture with particular focus on Russian customs, traditions and attitudes toward food. Exploring the concept of Russian cuisine in literature, arts, holidays, and folk traditions, students will develop a better understanding and appreciation of Russian cultural identity and lifestyle. No Prerequisites.

RUSS 2630 - Soviet Agents/Spies on Screen: Filming Espionage in the East and West (1)

This course explores ways in which Soviet and post-Soviet directors examine Russia's history of espionage in connection with her extensive secret police network by comparing their works with those of their Western counterparts in an effort to explore political and cultural dimensions to the portrayal of espionage on screen.

RUSS 3010 - Oral & Written Proficiency I (0-3)

Extensive review and refinement of grammar skills. Continued emphasis on speaking. Regular writing assignments. Fall semester.

RUSS 3020 - Oral & Written Prof in Russ II (0-3)

Continuation of RUSS-3010. (Offered every Spring)

RUSS 3050 - Russian Conversation (3)

This course focuses on advancing students' knowledge of spoken Russian and their understanding of linguistic registers with the goal of improving their fluency as well as their ability to respond with nuanced diverse speech acts in native speakers of Russian. Prerequisite: RUSS 2010.

RUSS 3070 - 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 3200 - Saints and Sinners in Russian Literature and Film: 19 c. (3)

The course provides a concise and comprehensive survey of the development of the literary trends in the Golden Age of Russian literature. The students will read and discuss selected works of some outstanding Russian authors of the 19th century and compare some of them to their screen versions.

RUSS 3250 - Russian Culture & Civilization (3)

Understanding Russia today through a comprehensive outline of its multinational, multicultural past: origins, geography, language; Christianization; focus on Old Russian period (pre-Petrine); Women in Russia. Focus on the Empresses; Russia and the Arts. Readings mainly in Russian. Fulfills Cultural Diversity Requirement.

RUSS 3250 - Russia From Peter to Putin: Imperial, Soviet, and Post-Soviet Culture (3)

This course, required for the Russian major, provides a broad overview of Russia's contributions to world culture in the areas of art, architecture, literature, and music. Students will explore various dimensions to this vast region from Peter the Great's construction of St. Petersburg to the celebration of the Sochi Olympics.

RUSS 3320 - Dostoevsky Through the Centuries (3)

This course considers Dostoevsky's impact on world culture through an examination of his major works, including Notes from the Underground, Crime and Punishment, and The Brothers Karamazov, and their dialogue with the writings of such famous personages as Friedrich Nietzsche, Sigmund Freud, D. H. Lawrence, and Albert Camus.

RUSS 3350 - Chekhov as Dramatist: Performance, Adaptations, and Intermedial Transpositions (3)

The appeal of Chekhov's major plays remain the focus of this course that examines the adaptation, mutation, and appropriation of his drama on stage and screen to encourage an appreciation for the intermedial transpositions of the Chekhov text across cultures, recent histories, and media in Russia, on Broadway, and beyond.

RUSS 4010 - Fluency in Russian (3)

Further practice in speaking, listening comprehension, reading, and writing to achieve fluency. Fall or Spring semester. Prerequisite(s): RUSS 3020 or permission of the Instructor.

RUSS 4150 - Topics in Russian Grammar (1-3)

Structural review of the morphology of the verb and the nominals, syntax, and word formation.

RUSS 4200 - Topics in Russian Literature (3)

Semester-long study of one major Russian author: Pushkin, Lermontov, Gogol, Tolstoy, Dostoevsky, Turgenev or Chekhov; or one genre: short story, novel, poetry.

Sociology (SOC)**SOC 1010 - 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 1100 - Introduction to Sociology (3)

This introductory course emphasizes fundamental concepts in sociology and their application to contemporary society for the purpose of enhancing the students understanding of the world in which they live.

SOC 1110 - Introduction to Sociology: Diversity Emphasis (3)

This course will survey the field of sociology, stressing important ideas, methods, and results, as well as paying particular attention to points of controversy and disagreement among sociologists to develop critical and analytical thinking. As a survey course, topics this semester will include critical inquiry into the sources of group identities, the structures of diversity or inequalities based on race, gender, class, age and life style, as well as the institutions that promote or challenge those inequalities. Students will engage these topics through readings, group discussions and exercises.

SOC 1120 - Introduction to Sociology: Diversity and Health Emphasis (3)

This course surveys the field of sociology, stressing important ideas, methods, and results. It focuses on health and diversity to illustrate the application of sociological ideas and develop analytic thinking skills. The text is supplemented with articles/chapters illustrating topical issues and exercises on the skills of the social sciences. There are no prerequisites.

SOC 1180 - 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 1190 - Cultural Geography (3)

This course will familiarize the student with broad themes in cultural geography. Student will begin to think critically about how humans interact with their environments, analyze daily geographies and complete practice based assignments that explore core concepts of cultural geography.

SOC 1200 - 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, archeology, 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 1500 - The Urban Community: Race, Class, and Spatial Justice (3)

This course will focus on people in racial and ethnic urban neighborhoods in the United States. The course will explore the basic concepts and ideas behind neighborhood, community, race, ethnicity, immigration, ethnic identity and the spatial hierarchies of cities based on race, ethnic, and class characteristics.

SOC 2000 - 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. Prerequisites: SOC 1100 or 1110 or 1120 or 1200

SOC 2080 - Urban Issues: Poverty in a Global Perspective (3)

This class examines urban poverty and unemployment from a global perspective. It takes as its point of departure a fundamental paradox: The globally connected economy has enabled the accumulation of unparalleled wealth; while at the same time, it has produced staggering inequality within and across cities. No prerequisites

SOC 2080 - Urban Issues: Poverty and Unemployment (3)

This class examines contemporary urbanism from a global perspective. It takes as its point of departure a fundamental paradox: The globally connected economy has enabled the accumulation of unparalleled wealth; while at the same time, it has produced staggering inequality within and across cities.

SOC 2100 - 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. Prerequisites: SOC 1100 or 1110 or 1120 or 1200

SOC 2110 - 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 2180 - Cities and Space (3)

This course familiarizes students with the concepts of urbanization, with a focus on cities in the context of globalization. The class will also focus on urban processes and politics with an emphasis on processes of immigration and citizenship. Students are evaluated through written projects on themes discussed in the course. No prerequisites

SOC 2200 - 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 type of anthropological research and discuss how the work of anthropologists is relevant to understanding the human condition. Prerequisite: SOC 1200

SOC 2210 - Biological Anthropology (1-3)

The course examines humans within an evolutionary context to better understand ourselves as apart of the natural world. Topics include: the history of evolutionary thought, molecular and population genetics; human variation and adaptation; living and extinct primates; the hominid fossil record; and biological and cultural strategies of humans through time. Prerequisite: SOC 1200

SOC 2220 - 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'. Prerequisite: SOC 1200

SOC 2240 - Archaeology (3)

Archaeology is the study of past cultures through the analysis of their material remains. This course introduces archeology as a subfield of anthropology and emphasizes the scientific methods and procedures, tools and techniques used by archaeologists to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and ecofacts.

SOC 2300 - 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 2460 - Global Mental Health: Culture, Mental Health and Psychiatry (3)

This course will discuss how anthropologists think about emotions and emotional support across cultures, the meanings of illness and disease, and the historical construction of psychiatric knowledge and power in East Asia, Western Europe, and North America.

SOC 2470 - Culture and Health (3)

This course will focus on exploring the interplay between culture and health by examining issues such as the social construction of disease and health and the traditional health and illness beliefs and practices of select populations both within and outside the United States.

SOC 2480 - Drugs and Society: Legal and Medical Implications of the "War on Drugs" (3)

This course takes a sociological approach to understanding U.S. drug use and drug policy. We will examine what constitutes a "drug", how drugs' meanings and uses have changed over time, and how professional, economic, and cultural forces shape how we make sense of drugs and the people who use them.

SOC 2490 - Sociology of Medicine (3)

Sociological interpretation of selected aspects of the field of medicine, including health and illness behaviors, professional socialization, analysis of health organization, political and economic aspects of health care delivery, cross national comparisons of health systems. No prerequisites

SOC 2500 - Social Ecology (3)

Social ecology is a holistic approach to urban problems recognizing that interactions within the social, institutional, and cultural contexts of people-environment relations support well-being. The causes of urban problems (e.g. sprawl, crime, violence, disease/illness, housing segregation and food insecurity) are sought in social structures, environmental scarcity, and people's socio-economic status.

SOC 2600 - Survey of Forensic Science (3)

Students learn scientific methodology, its rules and norms, as applied in the biological and chemical analysis of crime and how these methodologies are used to evaluate legal arguments and solve legal issues. They also learn how the technical/scientific analysis articulates with the different components of the legal system.

SOC 2930 - Special Topics (3)

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 3010 - Quantitative Analysis (3)

This course introduces the quantitative skills, methods, and techniques necessary for analyzing the implementation and impact of social programs and policies (more specifically, those related to sociology and criminal justice). Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. This is an introductory course in quantitative (i.e., numerically-based information or data) statistical analysis that covers the properties/characteristics of data and variables and presents both descriptive and inferential statistics. Prerequisite: SOC 2000

SOC 3020 - 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. Prerequisite: SOC 2000

SOC 3100 - 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 3180 - Immigration (3)

Students critically engage themes of urban immigration, citizenship and transnationalism, while developing the skills needed for graduate research. They write a professional quality research proposal for a small fieldwork study and participate in the research seminar by helping to critique each other's proposals. SOC-1180, World Geography is recommended as a prerequisite not required.

SOC 3200 - 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(s): SOC-1200 or instructor's permission.

SOC 3210 - Science and Pseudoscience (3)

This course will explore the data surrounding notable claims such as Atlantis, Piltdown man, Shroud of Turin, and other myths and hoaxes in anthropology. Students will learn the nature of scientific inquiry and how the scientific method is applied to archaeological as well as other areas of social science research. No prerequisites.

SOC 3220 - 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 3230 - 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 3240 - Anthropology of Sex & Gender (3)

This course examines human sexuality in an anthropological context, highlighting the importance of integrating biological and cultural aspects of sexuality. Broad perspectives on sexual behavioral patterns across, and within, human cultures are taken. Topics include sexuality in an evolutionary perspective, the physiology of sex, human sexual practices around the world and gendered sexuality.

SOC 3260 - Peace and Conflict (3)

This course examines cooperation and conflict in human sociality. We compare the underlying assumptions that humans are innately aggressive or war-like with data to the contrary. We look at cross-cultural examples through a series of readings by contemporary social science authors, and also examine our evolutionary past for clues to what is really human nature.

SOC 3270 - 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 3280 - Forensic Anthropology (3)

This course is an introduction to the field of forensic anthropology, which involves the analysis of human skeletal remains within the context of a legal investigation. We will explore knowledge of human osteology, dentition, skeletal variation, and pathology to identify human remains.

SOC 3290 - Native Peoples of North America (3)

This course is an introduction to past and present indigenous cultures of North America. The course explores the beliefs, behavioral systems, economic and sociopolitical systems, and regional attributes of North America's indigenous peoples.

SOC 3300 - 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 3340 - World Archaeology (3)

This course discusses significant archaeological discoveries throughout the world that serve to inform us about our human past, from human origins to the advent of writing, focusing on major cultural changes documented through archaeology.

SOC 3350 - 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 3360 - 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 3380 - Power in U.S. Society (3)

The socioeconomic roots of political affiliation and interest group formation are examined as are the theoretical and practical considerations of the relationship between social structure and political action.

SOC 3390 - 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 3420 - 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 3430 - 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 3460 - 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 3480 - Sociology of Emotions (3)

This course focuses on a deeply personal yet thoroughly social phenomenon, human emotion. It will examine some of the major themes and notable studies that have emerged in recent decades and students are encouraged to understand and creatively apply course concepts to their own lives and the world around them.

SOC 3490 - Sociology of Mental Health (3)

This course provides an overview of how western society defines and researches mental health, the causes and consequences of mental health problems, and how institutions respond to mental illness. Topics include: perspectives on mental health, stigma, demographics of incidence/prevalence, treatment and institutional responses. No prerequisites.

SOC 3500 - 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-1100 (Introduction to Sociology) or SOC-1200 (Introduction to Anthropology) or SOC-1900 (Introduction to Criminal Justice) and SOC-200 (Research Methods) and SOC 2100 (Classical Social Theory).

SOC 3510 - The Structure of Poverty: Globally and Locally (3)

This course examines the structural causes of poverty at the global and local levels from a multidisciplinary perspective. The course focuses on the social political, and economic structures that produce and perpetuates poverty. The global dimension of the course focuses on developing countries, while the local dimension focuses especially in the St. Louis area.

SOC 3525 - Elite & White Collar Deviance (3)

This course will use sociological and organizational theories to analyze, critique, and examine deviance and crimes committed by organizations, the rich, and powerful. This class will place an emphasis on the social structural (macro-level) and social psychological (micro-level) factors associated with elite and white collar deviance.

SOC 3570 - Sociological Theories of Crime (3)

This course offers theoretical and methodological tools to study the different explanations of criminal and deviant behavior. Students will learn about strain control, life course, disorganization, and subcultural theories. The course relates the theories to their historical intellectual origin and the role they play public policy today.

SOC 3580 - Deviant Behavior: Drugs, Alcohol and Addiction (3)

Deviance takes the forms from simple violations of informal codes of dress (violations) to the systematic eradication of human lives (genocide). Our studies together will consider both individual and systemic deviance, with particular attention paid to deviant behavior on the part of powerful social groups and even entire nations.

SOC 3590 - 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 3610 - 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 3620 - Chemical Forensics (4)

Chemical Forensics is the application of physical science to both the collection and analysis of evidence. This course will introduce various methodologies and applications of chemical and physical principles. Prerequisite(s): SOC-2600 Survey of Forensic Science

SOC 3630 - Forensic Biology (4)

This lecture/laboratory course is an overview of the biological evidence and techniques used in forensic science. Topics include pathology, fingerprinting forensic anthropology, forensic entomology, serology, DNA hair analysis, botany and microbial forensics. Prerequisite(s): SOC-2600

SOC 3710 - Archaeological Field School (4)

This course offers instruction in survey, excavation, artifact identification, mapping, sediment analysis, laboratory and interpretive techniques. In addition, students will attend lectures and discussions on prehistoric archeology and material culture in the American Bottom. Prereq.: consent of instructor.

SOC 3720 - Archaeological Lab Method (2)

This course introduces archaeology, a subfield of anthropology, and the scientific methods and procedures used to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and ecofacts. Students learn to process, inventory, analyze and interpret the archaeological record and write preliminary report on their findings.

SOC 3840 - African-American Religious Traditions (3)

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

SOC 3850 - 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 3930 - Special Topics (1-3)

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 4000 - 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. Instructor permission required.

SOC 4010 - 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 2000 and SOC 3010 or 3020

SOC 4020 - Forensic Science Practicum I (3)

Fieldwork in forensic science at forensic labs, county morgue, and other governmental agencies, as well as business and private social service organizations. Approval of the instructor required. Every Semester.

SOC 4030 - 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 4040 - Sociology Practicum (3)

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

SOC 4050 - 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 4100 - 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 4180 - Citizenship: The Struggle to Belong (3)

Students critically engage themes of citizenship in the Western tradition while also building the skills needed for graduate research. Students complete an annotated bibliography and write a professional quality literature review during the class. Students participate in the research seminar by helping to critique each other's proposals. No prerequisites

SOC 4200 - Cities, Suburbs, & Neighborhoods (3)

This class explores theories that contribute to the historical and contemporary understanding of urban life. Students will explore and critique micro and macro theories related to community, neighborhood, race, and inequality. Students will have the opportunity to engage in empirical research related to urban challenges and opportunities in American cities.

SOC 4240 - Primate Social Behavior (3)

This course examines the social lives of primates. The course includes an introduction to primate evolution and taxonomy and behavioral ecology. The course covers topics such as conservation, behavior, physiology, reproduction, and evolution of social organization will be highlighted.

SOC 4260 - Census and Neighborhood Analysis (3)

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

SOC 4310 - 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 4320 - 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 4330 - 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 4510 - 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. Prerequisite: SOC 1100 or 1110 or 1120 or 1200

SOC 4520 - 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. Prerequisite: SOC 1100 or 1110 or 1120 or 1200

SOC 4530 - Urban Ethnography (3)

This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation. Throughout this course, you will gain hands-on experience by carrying out your own ethnographic research project. Prerequisite: SOC 1100 or 1110 or 1120 or 1200

SOC 4540 - Environmental Impact (3)

This course examines the social, economic and environmental dimensions of sustainability in cities around the world. Also examined are policies and opportunities to address the challenges of sustainability from both developed and developing countries.

SOC 4550 - Crime Scene Investigation (4)

Crime Scene Investigation is the application of science to both the collection and analysis of evidence at a crime scene. This course will introduce various methodologies and applications of crime scene processing. Prerequisite: SOC 2600

SOC 4610 - Death Investigation (2)

This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches the tools and techniques necessary to perform such an investigation. Disseminating this information is also covered. The course teaches the 29 national guidelines in Death Investigation: A Guide for the Scene Investigator. SOC 260, Introduction to Forensic Science is a prerequisite. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine.

SOC 4615 - Advanced Topics in Death Investigation (2)

This workshop is designed for the instruction of experienced medicolegal death investigators, forensic pathologists, law enforcement officers, forensic scientists, physicians, attorneys, and investigative personnel who have previously been trained in a basic death investigation program. e.g. SOC 4610

SOC 4630 - Sociology of Religion (3)

The sociology of religious institutions, the emergence, maintenance and change of social organizations around religious implement.

SOC 4640 - Demography: Measuring and Modeling Population Process (3)

This course covers beginning and intermediate demographic methods. This course consists of lectures, seminars, and labs. Topics to be covered include: Population Dynamics, Economic Dynamics, Social Dynamics, and Applied Demographic Methods and Policy.

SOC 4650 - Introduction to GIS (3)

This class introduces concepts, science and theory of GIS with hands-on experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-4170, BIOL-4170, or SOC-4650.

SOC 4670 - Spatial Demography: Applied Statistics for Spatial Data (3)

This course covers intermediate and advanced topics in Spatial Statistics. This course consists of lectures, seminars, and labs. Topics to be covered include: Spatial Autocorrelation, Spatial Regression, Geographically Weighted Regression, and Gravity Models. Prerequisite: SOC 4650

SOC 4680 - Forensic GIS (3)

This course teaches students how to apply spatial statistics and sociological theories to the study of crime and deviance in American cities. Topics to be covered include: hot spot mapping, journey to crime models, temporal and spatial patterns of crime, and risk terrain modeling.

SOC 4700 - Applied Spatial Analysis for Social Sciences (3)

This course covers advanced topics in demography, spatial statistics, and Geographic Information Science (GIS). Topics to be covered include: gravity models, spatial segregation, spatial inequality, spatial scaling, journey to crime models, risk terrain models, and hierarchal spatial models. Pre-reqs include: SOC 464; SOC 465; and SOC 466.

SOC 4710 - Archaeological Field School (4)

Participate in an active archaeological dig at Cahokia Mounds (UNESCO World Historical Site). This course offers instruction in survey, excavation, artifact identification, mapping, sediment analysis and interpretive techniques. In addition, students will attend lectures and discussions on prehistoric archaeology and material culture in the American Bottom.

SOC 4720 - Archaeological Laboratory Methods (2)

This course emphasizes the scientific methods and procedures used by archaeologists to investigate, reconstruct, interpret, preserve, and learn from artifacts, features, and eco-facts. Students learn to process, inventory, analyze and interpret the archaeological record and write a preliminary report on their findings.

SOC 4800 - Research Activity: Supervised (1-3)

This course provides students with research experience under the guidance of a faculty member. Student involvement in various components of the faculty member's research project(s) is the typical form. The course provides competitive advantages for students interested in applying to graduate schools.

SOC 4840 - Sociology Capstone (3)

Provides the opportunity for students to synthesize the knowledge and skills they have gained from previous courses. In the process of examining conventional common sense assumptions, students are encouraged to think critically and deeply about themselves and the world in which they live.

SOC 4870 - Capstone in Anthropology (3)

This course allows anthropology majors to write a rigorous 25-page paper that focuses on a single topic in depth. Develop a serious scholarly manuscript that you could use for graduate school applications, or (in exceptional cases) as a paper that could be presented at conferences or submitted to third-tier anthropology journals.

SOC 4890 - Reading Statistics in Research (3)

This course provides background in statistical techniques for judging the legitimacy of an author's claims based upon statistical results. It focuses on understanding what a given technique accomplishes statistically, the types of conclusions that can be reached using a technique and how the results are reported in research articles and dissertations.

SOC 4930 - Special Topics (1-3)

Students are introduced to key issues involved in sociological research.

SOC 5010 - Organizational Theory and Administration (3)

The theories of organization exist at the intersection of motivation/leadership politics, and ethics as they relate to policy. Organizational theory is concerned with matters of organizational design, and thus is a useful complement to the study of motivation and leadership taking place in other disciplines. Further, because the social sciences are more tolerant of departures from the 'rational mode' of organizational behavior than economics and business, it is a favorable location for research and teaching on the politics of organizational behavior and policy. Finally, and related point, social science familiarity with cross-cultural research enables students to discuss values and their relation to policy more fluently than those in other disciplines. Thus, policy is well framed by the study of organizational theory.

SOC 5060 - Qualitative Research Methodology (3)

This course will provide descriptive research methods including participant observation, oral history, and photography and their application to program evaluation and policy analysis.

SOC 5100 - Proseminar (3)

This course critically examines the linkage of theoretical and practical issues in criminal justice. Topics include crime causation, policing, adjudication and sentencing, and corrections. offered annually.

SOC 5171 - Law, Policy, Society (3)

This class examines the complexities and concerns inherent in social science and legal understanding of the relationship between law and society. The class will focus on (1) the dynamics and development of law and legal processes and (2) the relationship between law/courts and society.

SOC 5200 - Cities, Suburbs, & Neighborhoods (3)

This class explores theories that contribute to the historical and contemporary understanding of urban life. Students will explore and critique micro and macro theories related to community, neighborhood, race, and inequality. Students will have the opportunity to engage in empirical research related to urban challenges and opportunities in American cities.

SOC 5205 - Science, Technology & Policy (3)

This course will give students a multidisciplinary toolkit to study 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 in organizations.

SOC 5210 - Law, Crime, and Policy (3)

This course will provide students with theory and analytical skills to understand the socio-political parameters of crime and society's policy response. Students will engage in real world policy analysis with an acute understanding of the political and practical issues involved in constructing

SOC 5300 - Police Administration (3)

Students examine the components of administering a police agency, including human resource management, budget issues, political and constituent group influence, crime trends, legal issues, and community policing.

SOC 5310 - Issues in Jurisprudence (3)

Policy issues regarding court administration are addressed and students examine practical issues facing modern court administration. Offered annually.

SOC 5320 - Contemporary Issues in Law Enforcement (3)

Issues in the administration of correctional agencies are addressed, including mission development, management and leadership, policy and practice, human resources, legal issues, and budgeting. Offered Annually.

SOC 5330 - Issues in Corrections (3)

This course examines how various institutional and community sanctions (or 'corrections') have been used as a method in responding to crime. Correctional concepts, history, processes and contemporary issues in corrections will be explored and discussed within the social and legal context in which correctional facilities function. Further, we will examine the theory, practice, and human impact of treating criminal offenders, under correctional supervision, in both community and institutions. Thus, we will study (1) the major themes and issues present within the broad arena of corrections, (2) the conceptual debates and controversies surrounding certain correctional programs and policies, and (3) the current research on community and institutional based corrections activities and their effectiveness.

SOC 5400 - Race, Gender, Class and Criminal Justice (3)

This course will provide students with an understanding of how various master statuses, including race, gender and social class influence how people are treated by the criminal justice system as perpetrators, victims and practitioners. The ways in which this differential and adverse treatment of groups by the system threatens social cohesion and conflicts with Constitutional mandates as well as ideas of justice and equality will also be explored.

SOC 5470 - Adv. Issues in CJ Policy (3)

The general public policy process is presented and students examine the various influences on the development and practical implementation of criminal justice policy. Offered annually.

SOC 5500 - Social Stratification (3)

This course provides an interpretative framework for examining the many issues associated with social stratification and resulting inequalities. We will focus primarily on Western models of stratification, but we will also explore the different ways this concept is both imagined and perpetuated in other, non-Western societies. The emphasis will be on socioeconomics stratification, but we will also look at other forms of stratification such as gender, race, ethnicity, etc.

SOC 5510 - Constructing Social Problems (3)

This course provides an overview of the constructionist approach to social problems.

SOC 5520 - Sociological Social Psy (3)

This course provides an overview of sociological social psychology, which is often broadly referred to as a symbolic interactionism.

SOC 5530 - Urban Ethnography (3)

This course introduces students to a sociological perspective of everyday social settings by applying methods of systematic, qualitative observation.

SOC 5540 - Environmental Impact of City (3)

This course examines the social, economic and environmental dimensions of sustainability in cities around the world.

SOC 5550 - Comparative Theories of Race / Ethnic Relations (3)

This course will examine the issues of racial, ethnic, and cultural minority groups in the U.S. and abroad from historical, economic, political, and sociological perspectives. Students will learn theoretical perspectives to address issues relevant to race and ethnic relations. The course will use a seminar format which will require students' active involvement in presentations and discussion.

SOC 5600 - Research Methodology (3)

This course offers general knowledge and basic skills of conducting scientific research. This course focuses on several major research techniques, such as survey, experimental, evaluation, qualitative, and unobtrusive methods. Students will develop a research design in the form of grant proposal, Master's thesis prospectus, Ph.D. dissertation prospectus, or a professional paper as required by individual departments.

SOC 5610 - Death Investigation (2)

This course exposes the various forensic disciplines involved in a medicolegal death investigation and teaches an individual the tools and techniques necessary to perform a thorough, competent medicolegal death investigation. Proper instruction for disseminating this information is also covered. The course is designed to teach the 29 national guidelines as set forth in the National Institutes of Justice 199 publication, Death Investigation: A guide for the Scene Investigator. Registration in this course requires concurrent registration in the Medicolegal Death Investigator Course sponsored by the Pathology department in the School of Medicine.

SOC 5620 - Probtn, Parole, & Comm Correct (3)

This course describes the operations of community corrections programs, addresses the obstacles and challenges to success, and discusses issues in the future. Offered annually.

SOC 5640 - Demography: Measuring & Modeling (3)

This course covers beginning and intermediate demographic methods. This course consists of lectures, seminars, and labs. Topics to be covered include: Population Dynamics, Economic Dynamics, Social Dynamics, and Applied Demographic Methods and Policy.

SOC 5650 - Intro to GIS (3)

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

SOC 5670 - Spatial Demography: Applied Statistics for Spatial Data (3)

This course covers intermediate and advanced topics in Spatial Statistics. This course consists of seminars and labs. Topics to be covered include: Spatial Autocorrelation, Spatial Regression, Geographically Weighted Regression and Gravity Models.

SOC 5700 - Applied Spatial Analysis (3)

This course covers advanced topics in computational spatial statistics, geoinformatics, and spatial analytics. This course will provide students with state-of-the-art skills to apply cutting-edge geospatial analysis and visualization techniques to study social and economic inequality. Topics include: spatial segregation and inequality, spatial scaling, risk terrain model and spatial-temporal models.

SOC 5750 - Qualitative Analysis, Grounded Theory Method (3)

The course will focus on hands-on learning of developing a research design, collecting and analyzing data, interpreting and presenting the results, and publishing the research results. Grounded Theory Method for data collection and analysis will be a major framework of research design, and students will learn different paradigms in analyzing qualitative data.

SOC 5800 - Survey Design & Sampling (3)

This course offers basic knowledge and skills of survey methods so that students will be able to apply various techniques for data collection and analysis. During the course, students will learn basic proposal development, instrument preparation, data collection and analysis, and presentation of the results, through hands-on practice. Students are expected to write publishable/presentable manuscripts as a term paper. Prerequisite: One introductory level statistics course.

SOC 5840 - Research in Criminal Justice (3)

Students learn about research outcomes in criminal justice, conduct their own research projects using proper methodologies, and determine how the results of their research can contribute to understanding criminal justice organizations, issues, policies and programs.

SOC 5850 - Policy Evaluation and Assessment (3)

This course will provide students with an understanding of the complexity and scope of policy evaluation and analysis. Students will become familiar with the concepts, methods, and applications of evaluation research. Students will also develop a toolkit to design traditional and cutting-edge evaluation methodology and analysis.

SOC 5890 - Reading Statistics in Research (3)

This course provides background in statistical techniques for judging the legitimacy of an author's claims based upon statistical results. It focuses on understanding what a given technique accomplishes statistically, the types of conclusions that can be reached using a technique and how the results are reported in research articles and dissertations.

SOC 5910 - 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 5970 - 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 5980 - Graduate Reading Course (1-3)

To prepare for comprehensives or to do more in-depth study of a specific criminal justice area.

SOC 6100 - Regression Analysis & Non-linear Models (3)

This course offers advanced knowledge and skills of multiple regression analysis, logistic regressions, log-linear and logit models so that students will be able to apply various techniques for data analysis. Students are encouraged to use their own data for course assignments. Students will develop a draft of a publishable/presentable manuscript as a term paper. Prerequisite: One introductory level statistics course.

SOC 6200 - Urban Social and Political Theory (3)

In this course we will review ways in which people imagine the urban world and try to make life more corrigible for the persons who live and work in it. We will review nine books and excerpts that address critical elements from specialists in these academic and applied disciplines. Offered every two years.

SOC 6225 - Urban Community Development (3)

This course has three goals: introducing students to the history of community development efforts in the U.S.; assessing the policy goals of these efforts; and reviewing relevant research on this subject. The redevelopment of St. Louis receives special attention. Persons who know about the city's redevelopment present guest lectures.

SOC 6250 - Poverty, Inequality and Public Policy (3)

This course provides a multidisciplinary framework to understand the theories and mechanisms that contribute to poverty and inequality in the U.S. The course will also provide a history of anti-poverty policies interventions and introduce current state of knowledge on policies that work at the national, state, city, and neighborhood level.

SOC 6275 - Health and Social Sciences (3)

This course surveys topics in health & the social sciences, stressing social science concepts, principles, scientific reasoning, problem solving, the design and interpretation of research as well as data based and statistical reasoning. Offered every two years.

SOC 6300 - U.S. Health Care Policy (3)

This course will provide students with an overview of the U.S. health care system; orient students to the policy process, and increase the student's understanding of the nature of health policy making and health politics; and provide opportunities to develop an in-depth understanding of current health care issues.

SOC 6320 - Organization Theory & Behavior (3)

This course will provide a general focus on theories that provide insights into organizational life. Emphasis is given to public bureaucracies. Topics include motivational theory, management behavior and policy evaluation.

SOC 6350 - Economic Development Policy (3)

This course on community economic development policy will focus on three issues: (1) theories of economic development; (2) methodological choices for the scale for community economic development (e.g., neighborhood, street, and block); and (3) Best practices and evidence based approaches to community economic development.

SOC 6525 - Nonparametric Statistical Analysis (3)

Students learn conceptual understanding of nonparametric methods, to select the appropriate nonparametric tests, to perform nonparametric procedures, interpret and write up results. No prerequisites.

Spanish (SPAN)**SPAN 1010 - 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 1020 - Communicating in Spanish II (0-3)

Continuation of SPAN-1010. Prepares the student to function in simple situations related to personal interests and daily life.

SPAN 2010 - Inter Spanish: Lang & Culture (0-3)

Continued practice in all skills. Readings in and discussion of Hispanic Culture.

SPAN 2230 - 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 2240 - 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 2980 - Independent Study (1-3)

Prior approval required of sponsoring professor and department chairperson

SPAN 3010 - 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 3020 - Oral Communication (0-3)

Development of fluent oral expression through communicative activities stressing listening comprehension, structural accuracy and systematic approach to vocabulary expansion.

SPAN 3030 - Fluency in Spanish (0-3)

Continuation of SPAN-3020. Description, narration and exposition in topics of particular interest and special fields of competence.

SPAN 3040 - Advanced Oral Communication (0-3)

Continuation of SPAN 3030. Accuracy and fluency in oral expression in topics of particular interest and special fields of competence.

SPAN 4000 - Advanced Spanish Grammar (3)

The objectives of the course are to identify and describe intuitive knowledge that a native speaker of Spanish possesses and to perfect the student's knowledge of various topics of Spanish grammar by means of theoretical explanation and solving practical exercises. Assignments emphasize inductive reasoning as well as original language use.

SPAN 4050 - 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 4090 - Spanish Sociolinguistics (3)

This course aims to develop students' abilities to notice, investigate and interpret sociolinguistic phenomena in the world around them. Topics include pragmatics, historical changes in Spanish, and dialectal variation. Discussions will center primarily but not exclusively around sociolinguistics of the Spanish-speaking world. Prerequisites are SPAN 3030 and 3040.

SPAN 4110 - Language and Linguistics (3)

This course provides an introduction to the study of human language and the distinct fields of linguistic inquiry, including phonetics, morphology, syntax, semantics, and pragmatics. Special emphasis is placed on language diversity worldwide and linguistic variation in American English. Restricted to Juniors and Seniors.

SPAN 4130 - Second Language Acquisition (3)

This course reviews major theories about how second or foreign languages are learned and what factors influence the process. We will discuss what these theories mean to the teacher, the learner, and the policy maker, and what the theories tell us about psychology and linguistics. Taught in Spanish.

SPAN 4150 - Spanish for the Health Professions (3)

This course is an introduction to Spanish used in the health professions for advanced students of Spanish. Medical terminology, language skills, patient interaction, cultural awareness and sensitivity are among the topics covered. This course is designed to accommodate the needs of students in diverse health fields. Course taught in Spanish. Pre-requisites: SPAN 3030 and SPAN 3040

SPAN 4160 - Business & Prof Spanish (0-3)

Application of language skills and cultural awareness to specific business and professional practices.

SPAN 4190 - Three in One: Hispanic Exper (3)

This course provides an understanding of the language variation, value systems, religious beliefs and assumptions about reality of Hispanic culture and its three manifestations: modern day Spain, Latin America and the Hispanic groups in the United States.

SPAN 4200 - 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. Prerequisites: SPAN 3030 and SPAN 3040.

SPAN 4240 - Contemp Latin Amer Short Story (3)

Short story trends, themes and techniques. Selections from outstanding authors with emphasis on Borges, Cortazar and Marquez.

SPAN 4260 - 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 4270 - 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 4280 - Early Latin American Novel (3)

This course discusses crucial cultural concerns of nineteenth-century Latin America through a socio-historical examination of novels written after Independence. Special attention will be given to the construction of social norms, the creation of cultural institutions, and the role of identity within the formation of new national cultures. Prerequisite: SPAN 4200.

SPAN 4290 - Contemp Latin-Amer Novel (2-3)

Survey course that examines the Latin American novels written between 1940 and 1970. Main themes and formal characteristics of these novels will be discussed in the context of the so-called Latin American Boom.

SPAN 4300 - Latin-American Thinkers (3)

Systematic analysis of predominant themes among current Latin-American thinkers. Taught in English.

SPAN 4310 - Contemporary Latin-Am Drama (3)

Survey course that analyses the development of Latin American Theater through the 20th century. Different schools and trends will be discussed. Occasionally this course will focus on specific issues or group of authors i.e. women playwrights, etc.

SPAN 4320 - The African Experience in Spanish America (3)

This course examines the literary contributions of Afro-Hispanic writers from Spanish America and Equatorial Guinea in order to discuss the complexity of the African experience in the Spanish-speaking world from the colonial period to the 21st Century.

SPAN 4330 - Latin Am Novel after 1970 (3)

Survey course that analyses a representative group of Latin American novels written after 1970. Main themes and formal characteristics of these novels will be discussed in the context of the so-called Post-modern Era.

SPAN 4340 - Identities of the Other in 19th-c. Latin American Narrative (3)

Exploration of textual and visual imagery of the foreigner in the nineteenth century, the formative period of modern-day Latin American identities. We will read novels, excerpts, short stories, contemporary essays, and critical theory on the Other, Foreigner, Stranger and Outsider. Prerequisite: SPAN 4200.

SPAN 4350 - Latin American Testimony (3)

This course bridges Latin American literary and cultural productions that confront the use and abuse of local and international power. Voiceless people speak about their disenchanting life. Taught in Spanish. Prerequisites: SPAN 4200. (Offered occasionally.)

SPAN 4360 - Women's Literature in Lat Am (3)

This course introduces the students to the work of Latin American women writers from the Colonial period to the 20th century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society, and the construction of women's identity.

SPAN 4370 - 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 4380 - Cultural Stereotypes: Latin Am (3)

This course is an interdisciplinary approach which confronts stereotypes about Latin American cultures. It involves a vast array of experiences that has established differences, stigmas, and marginalization of Latin Americans. Taught in Spanish. Prerequisite(s): SPAN-4200.

SPAN 4400 - Strangers in a Familiar Land: Displacements in Latin America (3)

This class discusses literature, films, documentaries and paintings that portray Latin American displacement after 1950. The approach offers a multidisciplinary view of the diverse participants in Latin American realities. We debate the dynamic of border crossing in the global era, specifically with respect to refugees, exiles, excluded and missing people.

SPAN 4410 - Spanish Literary Culture (3)

History of the merger of Christian, Arabic and Jewish influences on Spanish literary culture. Offered occasionally.

SPAN 4510 - Contemporary Latino Literature (3)

Merge with Access

SPAN 4520 - From West Side Story to Hip-Hop: Studies in Latino/a Performance (3)

Merge with Access

SPAN 4521 - The Kingdom of Brevity: Spanish and Spanish-American Short-Short Stories (3)

Introduction to the micro-short story in Latin America and Spain since first decades of the 20th century, followed by the evolution of ultra-brief narrative present. From year 2000, we will analyze the hyper-brief narrative in accordance with Lit-Theory & new ideological and sociological tendencies. Prerequisite: SPAN 4200.

SPAN 4560 - 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 4571 - PEOPLE AND THINGS OUT OF PLACE: Transnational Border Crossings in 21st-Century Hispanic Cinema (3)

We will explore a selection of films --from Latin America and Spain, from the turn of the 21st-century to the present-- that portray changing migratory flows of bodies and commodities throughout the Hispanic World, allowing us to address critical questions regarding gender/social (in)equalities, human rights, racism, and political oppression. [Prerequisite: SPAN 4200]

SPAN 4580 - Golden Age Drama (3)

The Spanish theatre of the sixteenth and seventeenth centuries. Analysis of the works of Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcón, Agustín Moreto, and Pedro Calderón.

SPAN 4590 - Spanish Jewry in Spain and in the Diaspora (3)

This course studies medieval Spanish Jewish life, under Islam and Christianity. How the three groups related to and influenced one another. It continues with the New Christians after the expulsion of 1492, in Iberia and the New World, and with the Sephardic Jews in the Diaspora. Fulfills Cultural Diversity Requirement. May be taught in Spanish or English. Prerequisites: SPAN 3030, 3040 & 4200.

SPAN 4590 - Spanish Jewry: Medieval Spain (3)

Medieval Spanish Jewish Life under Islam and Christianity. Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardic life in the Diaspora. Fulfills Cultural Diversity Requirement. May be taught in Spanish or English.

SPAN 4620 - 19th Century Spanish Novel (3)

Costumbrism, naturalism and social revolution illustrated in works by Fernán Caballero, José María de Pereda, Emilia Pardo Bazán, Juan de Valera, Ben Pérez Galdós, and Blasco Ibáñez, and Leopoldo Alas.

SPAN 4630 - Narrative of the Spanish Civil War (3)

This course is a study of the narrative of the Spanish Civil War, using works that reflect the conflicts and social injustices which existed between the two Spains. This class will analyze the ideological differences which found their end in the tragedy of the Civil War of 1936-1939. Prerequisites are SPAN-3030, SPAN-3040 and SPAN-4200.

SPAN 4660 - Generation of 98 (2-3)

Ideology, themes and literary styles of major contemporary prose fiction writers: Miguel de Unamuno, Pio Baroja, Valle Inclán, Gabriel Miró, Ramón Pérez de Ayala and Gómez de la Serna.

SPAN 4670 - 20th Century Spanish Thought (2-3)

Major contributors to contemporary Spanish social, philosophical, political and literary thought: Miguel de Unamuno, José Ortega y Gasset and F. X. Zubiri, P. Lain Entralgo. Taught in English.

SPAN 4680 - Contemp Spanish Short Story (3)

This is a survey course of the short story in Spain in the twentieth century since the Civil War. It studies the ideological, sociological, and formal characteristics that define the short story writing of this period. Authors: Aldecoa, Matute, Gaité, Cubas, Puértolas among others.

SPAN 4700 - 20th Century Spanish Poetry (3)

Antonio Machado, Juan Ramón Jiménez, Pedro Salinas, Aleixandre, Federico García Lorca, Blas de Otero: Nuances of existential dilemmas.

SPAN 4710 - 20th Century Spanish Novel (2-3)

Ideological themes and aesthetics of Camilo José Cela, Carmen Laforet, Ramón Sender, Juan Goytisolo, Elana Quiroga, A.M. Matute, Delibes, and L.M. Santos.

SPAN 4720 - Twentieth Century Spanish Drama (3)

Themes and aesthetics of Alejandro Casona, Federico García Lorca, Alfonso Sastre, F. Arrabal, and Buero Vallejo.

SPAN 4740 - Peninsular Span Ptry 1965-pres (3)

Literary analysis and poetic interpretation of a representative selection of Peninsular Spanish poetry since 1965. Awareness of how the political and social changes the last three decades of the 20th Century influenced the literary production in Spain. Authors include: Pere Gimferrer, Jenaro Talens, Luis Antonio de Villena, José Miguel Ullán, Miguel D'Ors, Jon Juaristi, Julio Llamazares, Ana Rossetti, Blanca Andreu, Aurora Luque.

SPAN 4760 - Spanish Literature and Film (3)

Literary analysis and cinematic interpretation of a representative selection of modern and contemporary Spanish masterpieces and homonymous films. Awareness and understanding of how literature and film techniques progressively relate to each other. Among the authors and film directors to be studied: Benito Pérez Galdós, Federico García Lorca, Miguel Delibes, Carlos Saura, Luis Buñuel and Pilar Miró. Prerequisite: SPAN 4200.

SPAN 4770 - Spanish Women Poets (3)

Historical analysis and literary interpretation of a representative selection of modern and contemporary Spanish women poets. Discussion of the topics and preoccupations present in their work, and of their contribution to reformulating the male canon in general.

SPAN 4790 - 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 4820 - The short story in medieval Spain: fear, education and humor (1-3)

This course explores short narrative types and their functions during the thirteenth century up to the sixteenth century in Spain. Topics to cover are: the interplay of different cultures, gender roles, ideological uses, and differences between medieval and contemporary short narratives. All texts are provided in modern Spanish. Required: SPAN-4200

SPAN 4830 - Spanish Medieval Masterpieces (3)

Close reading and discussion of several medieval Spanish masterpieces, which have remained modern throughout the ages. Insight into social, historical, literary, and creative issues. Analysis of topics such as medieval conceptions of violence, ethics, heroism, originality, love, etc. Medieval texts are read in modern Spanish. Prerequisite: SPAN4200.

SPAN 4840 - Towards the sentimental novel: the mystic, the individual, and the lover in medieval Spain. (3)

This course explores different ways of conceptualizing and talking of and through love by means of a selection of texts inherited from medieval Spain. The student will be exposed to mystic love, passionate love, antifeminist discourses, medical notions, etc. Medieval texts are read in modern Spanish. Required: SPAN-4200

SPAN 4850 - 16th - 17th Century Spanish Prose (3)

Prerequisite(s): SPAN-3030, SPAN-3040 and SPAN-4200

SPAN 4900 - Between Laughter and Tears: Gender Stereotypes in Spanish Comics (3)

This course explores the portrayal of gender in Spanish comics. It discusses the nature of crying and laughing as expressions of human behavior and the gender stereotypes traditionally associated with them.

SPAN 5000 - Teaching College Spanish (0)

Practice-centered teaching training for college-level Spanish courses. Discussion and application of course development, of current approaches to teaching and of evaluation techniques. Systematic incorporation of technology in the learning process. (Available to Teaching Assistants only. Offered every semester.)

SPAN 5010 - Spanish for Reading and Translation (3)

Fulfills requirement for foreign-language reading proficiency for doctoral candidates in various departments. Presents principles and practices of translation. Students learn reading comprehension by recognizing fundamental grammatical patterns of Spanish and by translation skills. Required readings from Hispanic history, culture, literature. For projects students choose and translate passages of their own academic interest.

SPAN 5020 - Spanish in the World (3)

A comprehensive analysis of Hispanic dialectology and its historical context. Topics covered include the peninsular origins of Spanish, its past and present contacts with other languages, the features which characterize the different varieties of Spanish (including U.S. Spanish), and the lexical, grammatical, and phonetic features which distinguish European and American Spanish. Offered occasionally.

SPAN 5030 - Spanish Linguistics (3)

Synchronic and diachronic analysis of the Spanish Language. Phonological development and morpho-syntactical, lexical and semantic change. Dialects. Discussion of special topics. Offered occasionally.

SPAN 5040 - Methods and Technology for the Teaching of Spanish (3)

Study of effective classroom presentation techniques for areas which are major sources of difficulty for instructors and students. Designed specifically for test classroom application of new approaches to old language problems. (Offered every other year.)

SPAN 5050 - Spanish Phonology and Its Place in the Classroom (3)

A survey of fundamental concepts in phonology and phonetics so that the students will be able to describe the primary characteristics of the Spanish sound system, how Spanish phonology differs from English, and ways in which some Spanish accents differ from each other. Also discussed are how such concepts can be used to improve the pronunciation and listening comprehension of students of Spanish, students' appreciation of dialectal variation, and one's own control over Spanish pronunciation. Offered occasionally.

SPAN 5070 - Spanish Stylistics (3)

This course presents a theoretical foundation of writing styles as models for extensive practice in descriptive, narrative and analytical modes of written expression. (Offered occasionally.)

SPAN 5080 - Learning Texts: Tradition, Authenticity and Virtuality (3)

This course analyzes the role of textbooks in foreign language classes and how new technologies have changed the concept of publishing. Students will identify desirable characteristics of texts of particular teaching situations, become familiar with technologies that can be used in teaching, and design lessons based on alternative texts.

SPAN 5190 - Contemp Span-Am cult & Civil (3)

A critical analysis of historical, cultural, political, religious, socio-economic and demographic considerations that have contributed to the Spanish American ethos, value system, attitudes, behavior, art and ideas. (Offered occasionally)

SPAN 5200 - Intro to Literary Criticism (1-3)

This course introduces the main schools of contemporary literary criticism. Students then apply these theories to interpret specific works from a variety of genres in Hispanic literature. (Offered once a year.)

SPAN 5240 - Short Stories: History, Histories (3)

This course explores the Latin American short stories written after 1950. This class's approach works to bridge literary texts with cultural production in order to allow for a comprehensive view of the contemporary historical life. The production of authors such as Uslar Pietri, Borges, Juan Rulfo, García Márquez, Julio Cortázar and others is discussed.

SPAN 5260 - Latin American 'Modernismo' (2-3)

A survey course that examines the literary expressions of the debate on Modernity and Modernization in Latin America in the period 1820-1920. Topics such as national identity, the creation of modern cities, the 'education of women' and the role of minorities will be examined through an anthology of short stories, articles, poems, essays and comics. (Offered occasionally.)

SPAN 5270 - Contemp Latin American Poetry (2-3)

Survey course that analyses a representative group of Latin American poets. Main themes and formal characteristics of these authors will be discussed. (Offered occasionally.)

SPAN 5280 - Early Latin American Novel (3)

Survey course that examines the Latin American novels written between 1890 and 1940. The class presents an overview of the major movements that informed the novels of the period such as Naturalism, Indigenism, the Historicism, Futurism and other Avant-gard trends. The issues of the construction of national identity and the formation of modern 'civilized' societies will be addressed. (Offered occasionally.)

SPAN 5290 - Boom, Mass Media and Utopia (2-3)

This course discusses the Latin American narratives and essays and the birth of media culture in Latin America. The cultural production discussed is implied in the political context of the so-called cold war. Main novels discussed belong to the so-called Boom of novel. (Offered occasionally)

SPAN 5310 - Women Writing Women: Latin American Women Playwrights (3)

This course focuses on the work of Latin American women playwrights from 1980 until today. Particular attention will be given to the way women represent and perform other women on the stage. . (Offered occasionally.)

SPAN 5320 - Themes in Latin American Literature (2-3)

This course examines the literary contributions of Afro-Hispanic writers from Spanish America and Equatorial Guinea in order to discuss the complexity of the African experience in the Spanish-speaking world from the colonial period to the 21st Century. In addition to the discussion of race and class issues, the class focuses on the subject of Canon formation and Canon exclusion in order to bridge the real and imagined gaps between Afro-Hispanic literature and that written by canonized writers in Spanish America and Spain. (Offered occasionally)

SPAN 5330 - Narratives on the End of Utopias (3)

This course examines recent Latin American trends that broke up the traditional canon of novel and literary conceptions based on Modernist culture. Categories based on hegemonic discourse and hierarchies are debated. (Offered occasionally.)

SPAN 5340 - Quien Es El Otro, Quien El Yo: Identities of the Other in 19th-c. Latin American Narrative (3)

Exploration of textual and visual imagery of the foreigner in the nineteenth century, the formative period of modern-day Latin American identities. We will read novels, excerpts, short stories, contemporary essays, and critical theory on the Other, Foreigner, Stranger and Outsider. (Offered: As needed/Periodically)

SPAN 5350 - Counter Hegemony Discourses (3)

This course bridges Latin American literary and cultural productions that confront the use and abuse of local and international power. Voiceless people speak about their disenchanting life. Taught in Spanish. Prerequisites: SPAN 4200. (Offered occasionally.)

SPAN 5360 - Written by Herself: Latin American Women Writers (3)

This course introduces the students to the work of Latin American women writers from the Colonial period to the 21st century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society and the construction of women's identity. (Offered occasionally)

SPAN 5370 - Latin American Film (3)

This course looks at critical historical moments and issues over five centuries of conflict and change in Latin America through the vehicle of film. We will look at issues of authenticity and voice, some of the pitfalls of using film to understand history, and at the role of cinema in the creation of national and popular memory.

SPAN 5380 - Cultural Stereotypes: Latin America (3)

This course is an interdisciplinary approach which confronts stereotypes about Latin American cultures. It involves a vast array of experiences that has established differences, stigmas, and marginalization of Latin Americans. (Offered occasionally.)

SPAN 5400 - Strangers in a Familiar Land: Displacements in Latin America (3)

This class discusses literature, films, documentaries and paintings that portray Latin American displacement after 1950. The approach offers a multidisciplinary view of the diverse participants in Latin American realities. We debate the dynamic of border crossing in the global era, specifically with respect to refugees, exiles, excluded and missing people.

SPAN 5520 - From West Side Story to Hip-Hop: Studies in Latino/a Performance (3)

Explores intersections between performance studies and contemporary U.S. Latino/a cultural production through the analysis of everyday performative practices, music, theater, film, television, spoken-word poetry, performance and activism. Attention is brought to the construction of Latino/a identities as they shape - and are shaped by - ethnicity, race, class, sex and gender. Offered periodically.

SPAN 5521 - Hispanic Short-Short Stories (3)

An introduction to the micro-short story in Latin America and Spain in the early 20th century, followed by the evolution of the ultra-brief narrative throughout the 20th century. Analysis of hyper-brief narratives through current ideological and sociological tendencies. Special focus on formal analysis of the genre through selected readings. Offered in fall in even years.

SPAN 5550 - Medieval Spanish Jewish Life under Islam and Christianity (3)

Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardi life in the Diaspora. (Taught alternatively in Spanish and English. Offered occasionally)

SPAN 5560 - Don Quixote by Cervantes (3)

Study of Cervantes's masterpiece, Parts 1 & 2, with special attention to its literary form and structure. The term Spanish Golden Age, and the concept of the modern novel will be followed by a close textual reading of Don Quixote. A range of critical essays will enrich the study of the primary text. (Taught in Spanish. Offered occasionally)

SPAN 5570 - Golden Age Lyric Poetry (3)

Seminar on the Renaissance and Baroque poets in the sixteenth and seventeenth centuries: Garcilaso de la Vega, Fray Luis de Leon, San Juan de las Cruz, Luis de Gongora. (Offered occasionally.)

SPAN 5580 - Golden Age Drama (3)

Seminar on the Spanish theater of the 16th and 17th centuries. Analysis of the works of Lope de Vega, Tirso de Molina, Juan Ruiz de Alarcón, Pedro Calderón de la Barca (Offered occasionally.)

SPAN 5590 - Spanish Jewry: Medieval Spain (3)

Medieval Spanish Jewish Life under Islam and Christianity. Cultural and literary exchanges among the three groups. The tragic events of 1391. Expulsion, 1492. Forced Baptisms of Portugal, 1497. Converso life in Iberia and the New World. Sephardi life in the Diaspora. Fulfills Cultural Diversity Requirement. May be taught in Spanish or English.

SPAN 5610 - 19th Century Poetry & Drama (2-3)

Poets: Becquer, Espronceda. Dramatists: Duque de Rivas, García Gutiérrez, Zorrilla. (Offered occasionally.)

SPAN 5620 - Nineteenth Century Novel (3)

Regionalism and naturalism illustrated in works by Jose Maria de Pereda, Emilia Pardo Bazan, Juan de Valera, Benito Perez Galdos, Blasco Ibañez, Leopoldo Alas. (Offered occasionally.)

SPAN 5680 - Contemp Spanish Short Story (3)

This course introduces the students to the general study of the Spanish short story of the twentieth-century after the Spanish Civil War from the seventies to the nineties. The focus will be the most significant tendencies of each period, and their principal authors will be studied.

SPAN 5700 - Twentieth-Century Poetry (3)

Machado, Salinas, Jimenez, Aleixandre, Garcia Lorca, Blas de Otero, Hierro. Searching for meaning of life in a fragmented world. (Offered occasionally.)

SPAN 5710 - Twentieth-Century Novel (2-3)

Themes and styles of Camilo Jose Cela, Carmen Laforet, Ramon Sender, Juan Goytisolo, Elena Quiroga, A.M. Matute, and L.M. Santos. (Offered every other year.)

SPAN 5720 - Twentieth-Century Drama (3)

Casona, Buero, Sastre, Garcia Lorca, Arrabal. Probing into the human condition: especially human mortality. (Offered every other year.)

SPAN 5740 - From the Poetry of Knowledge to the Poetry of the Turn of the Century (3)

Study of how Spanish poetry has recorded the different political, social, and cultural changes in the country during the second half of the twentieth-century to the present. Movements studied include: the poetry of knowledge, the *¿novísimos¿*, *¿post-novísimos¿*, the poetry of experience, the new sentimentality, the poetry of silence, and the poetry of the turn of the century.

SPAN 5750 - Spanish Novel After 1970 (3)

This course introduces the students to the study of the Spanish novel after 1970. The class will begin with the years of transition from dictatorship to democracy. There will be a specific study of the most representative movements and tendencies of the Spanish novel after the seventies, with special emphasis on the period from 1975 until the end of the century. (Offered occasionally.)

SPAN 5770 - Verbum: the Journey of Women Poets in Contemporary Spain (3)

Historical analysis of Spain's contemporary women poets' struggle with the canon. Literary interpretation of a representative selection of modern and contemporary Spanish women poets: Rosalía de Castro, Ernestina de Champourcin, Concha Zardoya, Carmen Conde, Gloria Fuertes, María Victoria Atencia, among others. (Offered occasionally.)

SPAN 5780 - Contemporary Spanish Women Writers (2-3)

This course introduces the student to the study of the narrative written by contemporary Spanish women authors. There will be a specific study, through selected texts, of the most representative movements and tendencies of the post-war narrative and of the various means chosen by the authors to express their literary universe from their condition as women. (Offered occasionally.)

SPAN 5790 - Contemporary Spanish Culture & Civilization (3)

This course provides a study of the nature of Spanish society today, with special emphasis on those events that make Spain unique in relation to other Western countries. Topics of discussion will include elements of the economic, cultural, social and religious life of contemporary Spain. (Offered occasionally.)

SPAN 5820 - Medieval Short Stories: Power, Wisdom and Fantasy in Tales (3)

In this course we explore the worldviews and lessons about human experience conveyed by Spanish medieval short narratives and fairy tales. Basic topics are: differences between medieval and contemporary stories; cultural and ideological functions of a tale; the interplay of different cultures; gender roles; and the popularity of certain motifs. Offered periodically.

SPAN 5830 - El Cid/El Amor/La Celestina (3)

Close reading and discussion of three medieval Spanish masterpieces, which have remained modern throughout the ages. Insight into social, historical, literary, and creative issues. (Offered occasionally.)

Statistics (STAT)**STAT 1100 - Introduction to Statistics (3)**

Basic descriptive and inferential statistics. Emphasis on becoming a smart consumer of statistics. Will include the study of examples of statistics in the medical news. Prerequisite(s): Two years of High School math or grade of C- or better in Intermediate Algebra. Credit not given for MATH-1300 or MATH 1260 or DSCI-2070 and STAT-1100.

STAT 1260 - Statistics Including Sports and Politics (3)

A SLU inquiry seminar. Producing data through the use of samples and experiments; organizing data through graphs and numbers that describe the distribution of the data of one variable or the relationship between two variables; probability; statistical inference including confidence intervals and tests of significance. Prerequisite(s): 3.5 years of high school mathematics or a grade of C- or better in MATH-1200.

STAT 1300 - Elementary Statistics with Computers (3)

Data production and analysis; probability basics, distributions; sampling, estimation with confidence intervals, hypothesis testing, t-test; correlation and regression; Cross tabulations and chi-square. Students learn to use a statistical package such as SPSS. Credit not given for STAT-1300 and any of the following: MATH-1300 or OPM 2070. Prerequisite(s): MATH-1200 or equivalent.

STAT 3850 - Foundation of Statistics (3)

Descriptive statistics, probability distributions, random variables, expectation, independence, hypothesis testing, confidence intervals, regression and ANOVA. Applications and theory. Taught using statistical software. Prerequisite: MATH 1520. Credit not given toward the math major or minors for both MATH/STAT 3810 and MATH/STAT 3850.

STAT 4800 - Probability Theory (3)

Axioms of probability, conditional probability. Discrete and continuous random variables, expectation, jointly defined random variables. Transformations of random variables and limit theorems. Theory and applications, taught using statistical software. Prerequisites: MATH/STAT 3850, MATH 2530 and MATH 1660 or MATH 2660. Credit not given toward the math major or minors for a two of MATH 3800, MATH 4800 and MATH 4810.

STAT 4840 - Time Series (3)

Applied time series. Topics include exploratory data analysis, regression, ARIMA. Spectral analysis, statespace models. Theory and applications, taught using statistical software. Prerequisite: MATH/STAT 3850.

STAT 4850 - Mathematical Statistics (3)

Theory of estimators, sampling distributions, hypothesis testing, confidence intervals, regression, bootstrapping, and resampling. Theory and applications, taught using statistical software. Prerequisite: MATH 4800. Students may not take both MATH 4850 and MATH 4820.

STAT 4860 - Statistical Models (3)

Poisson processes, Markov chains, hidden Markov models, continuous time Markov chains, queueing theory. Theory and applications, taught with statistical software. Prerequisite: MATH 4800.

STAT 4870 - Applied Regression (3)

Linear regression, model selection, nonparametric regression, classification and graphical models. Theory and applications using statistical software. Prerequisites: MATH/STAT 3850 and MATH 3110 or MATH 3120.

Theological Studies (THEO)**THEO 1000 - Theological Foundations (0-3)**

Prerequisite to all further courses. This course begins the disciplined reflection on religion in the university. Along with providing the basic vocabulary, methods of theology, and key theological concepts, it equips the student with the historical, textual, and comparative methods and skills that are foundational for further study on the university level. Offered every semester.

THEO 2110 - Old Testament (3)

Literary and historical study of the Hebrew Bible, its cultural background, and, then, the problems modern thought poses for it, and its permanent significance.

THEO 2210 - New Testament (3)

Books of the New Testament; their formation as literary material, message and meaning for the modern world, and transmission via the community.

THEO 2310 - History of Christianity: The First 2000 Years (3)

This course will study how in 2000 years the messianic beliefs of a small group of Jews transformed into a world wide religion. How have Christian beliefs, practices, and institutions changed over time? We will consider major developments in theology, spirituality, modes of authority, and social structures. Prerequisite(s): THEO-1000

THEO 2350 - 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 2410 - Making Christianity Credible (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 2415 - The Church: Yesterday & Today (3)

Explores how humans have understood the notion of God with emphasis on the Christian traditions, the God of Jesus of Nazareth.

THEO 2425 - 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 2430 - 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 2510 - Christian Ethics (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 2515 - Social Justice (3)

This course is designed to engage students in the reality of social injustice while introducing them to the variety of ways in which the Christian tradition responds to this reality. Students will study selections from scripture, Catholic Social Teaching, Christian theologians, and the lives of Christian saints and martyrs. This course fulfills the Cultural Diversity in the U.S. Core requirement by addressing issues of racism, classism, and sexism, and by engaging the works of African American, feminist, womanist, and Latino/a theologians. Students should leave the course with a better understanding of Christian perspectives on social justice that can be applied to their own faith or spirituality, political choices, and way of life.

THEO 2520 - Comparative Religious Ethics (3)

An exploration of several moral issues and the ethical beliefs/practices that are brought to bear on them among various religious traditions around the world. Attention will be devoted to narratives of significant persons who contributed to human dignity, rights, and liberation, especially with regard to 'the other.' Prerequisite(s): THEO-1000

THEO 2525 - Theological Bioethics: Medicine and Morality (3)

Principles of moral theology and their application to the health care provider and consumer. Specific issues include life-prolonging measures, neonatal care, genetics, experimentation, allocation of resources, and spiritual care of the sick and dying.

THEO 2610 - 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 2710 - Religions of the World (3)

This course is an introduction to the history, belief-systems, practices, and divisions of the world's major religions. It focuses especially on Hinduism, Sikhism, Buddhism, Jainism, Confucianism, Taoism, Shintoism, Zoroastrianism, Judaism, Christianity, Islam, the Baha'i Faith, and Native American spirituality. The only prerequisite is Theology 100: Theological Foundations.

THEO 2715 - Jerusalem: Three Faiths, One City (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 2717 - Muslims, Christians, and Jews in Medieval Spain (3)

This course will cover the history and achievements of what was once a multi-religious, multi-cultural civilization and explore the lessons we can learn from time when Muslims, Christians and Jews lived and worked together, especially in the areas of theology, commerce, culture and art. Pre-requisite: THEO 1000.

THEO 2720 - 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 2815 - Psychology and the Soul (3)

This course considers the intersection between psychology and theological conceptions of the "soul" and "self." This course provides the student the critical means by which to think about the relationship between psychology and religious beliefs and experiences. Prerequisite: THEO 1000

THEO 2820 - 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.). Credit not given for both THEO-2820 and BIOL-2560

THEO 2840 - Christianity and Literature (3)

This course explores works of literature as privileged sites for theological reflection on religious mysteries -- the mystery of God and the mystery of the human person. Engaging the religious imagination of important literary thinkers, this course examines such dynamics as sin and grace, faith and doubt, forgiveness and reconciliation, solitude and community. Prerequisite: THEO 1000

THEO 2900 - 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 2905 - Death and 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 3110 - Pentateuch (3)

This course examines the first five books of the bible, analyzing key figures such as Abraham and Moses, as well as major theological themes such as covenant, the nature of God, the purpose of biblical law, and the Ten Commandments. Prerequisites are THEO-1000 and any 2000-level theology course.

THEO 3120 - Old Testament: Psalms (3)

To survey the literary, historical, social and political background of the Psalms, their literary forms, main themes, structure, theology and relevance to modern times.

THEO 3125 - God and the Bible (3)

Students will examine biblical texts from both testaments, focusing on fundamental attributes of God such as God's presence, relationality in the form of covenant, wrath yet loving compassion, and other divine traits. Prerequisite: One THEO 2000 level course.

THEO 3210 - One Jesus, Four Portraits: the Gospels (3)

Offers a comparative study of the Synoptic Gospels.

THEO 3215 - Christianity and Judaism: Parting of the Ways (3)

Christianity is deeply indebted to Judaism. The Christian Old Testament is the Jewish scriptures. The New Testament was written by Jewish believers in Jesus. When did Christianity become something distinct from Judaism? This course will explore this question by examining both New Testament writings and early Christian and Jewish writings. Prerequisite: One THEO 2000 level course.

THEO 3310 - Rise of Christianity (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 3320 - Modern Christianity (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 3325 - The Reformations of the 16th Century (3)

This is a study of the Protestant Reformation and the Catholic Reformation in the 16th century.

THEO 3330 - Coming to the Americas: Religious Encounters in the Colonial Age (3)

This course examines religious encounters between Europeans and the Indigenous and enslaved peoples of the Americas. Students in this course will become familiar with the general outline of colonial history, engage closely with primary texts, and think critically about key historiographical issues. Prerequisite: One THEO 2000 level course.

THEO 3335 - 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 3345 - The Life and Theology of Augustine of Hippo (3)

This course examines the life and theology of St. Augustine of Hippo (354-430). We will focus on Augustine's central writings, including "Confessions", "The Trinity" and his writings on grace. Prerequisites: THEO 1000 and one THEO 2000 level course.

THEO 3365 - Teachers in Early Christianity (3)

Examines selective writings and thought of theologians in the early centuries of Christianity.

THEO 3370 - Teachers in 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 3375 - Women in the Bible (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 3410 - Christianity and Atheism: A History of Disbelief (3)

This course investigates the crisis in traditional belief that accompanied Europe's transition to modernity. It examines various critiques from both the Enlightenment and post-Enlightenment Europe. It also looks at different Christian responses to these critiques. The course aims to deepen students understanding of Western society and its understanding religion.

THEO 3415 - Christ and Color: Liberation Theology (3)

This course analyzes and evaluates the theology of Gustavo Gutiérrez. The goal is to gain an appreciation for the unique contributions of Liberation Theology to the historical development of Western theology through a direct reading of important primary texts in the areas of Christology, Soteriology, and Ecclesiology. Prerequisite(s): THEO-1000

THEO 3420 - Women and God: Feminist Theology (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 3510 - Faith and Politics (3)

The course is designed to help students sort through the complex relationship between faith and politics. It examines different approaches to bringing faith into the public sphere and treats controversial issues such as abortion, immigration, and gay marriage.

THEO 3515 - Poverty, Wealth & Justice (1-3)

This course examines how people in the U.S. view poverty and wealth. It also considers various and sometimes differing Christian perspectives on poverty and wealth, focusing especially on the Catholic social tradition and its teachings on economic justice, the meaning of work, and the relationship between justice and charity.

THEO 3525 - Green Discipleship: Theology & Ecology (3)

This course explores what the Christian theological tradition teaches about how humankind ought to be relationship with the rest of creation. Focus will be on, but not limited to, Christianity and on key theological themes and perspectives while also seeking to discern possible promising foundations for responding to ecological concerns.

THEO 3535 - Sex, Gender and Christian Ethics (3)

This course is designed to introduce students to contemporary Christian thinking on sex, gender, and sexuality. The goal is to present a wide range of positions within the Christian tradition, so that students can discuss and debate the available alternatives. Pre-req: 2000-level.

THEO 3560 - A Post Human Future? The Ethics of Technology (3)

Technological advances are surely changing the way we understand human nature. This course will provide the forum for asking if this is a change for the better. Course goals include identifying and understanding key issues in the development and use of technology. Prerequisite: One THEO 2000 level course.

THEO 3610 - Early Christian Worship (3)

This course covers the patterns of worship in the Christian Churches of the first five centuries CE. Drawing upon a range of methods, we will consider literary and material culture as they pertain to the rites of initiation, eucharist daily prayer and other aspects of liturgy in early Christian communities. Prerequisite: One THEO 2000 level course.

THEO 3615 - Christian Iconography (3)

Examines the theological themes found in early and contemporary Christian art.

THEO 3710 - Arts of Hinduism and Buddhism (3)

Study of the art and architecture of the Hindu and Buddhist traditions, beginning in India and tracing the footsteps of the Buddha through Central Asia into East Asia (China, Korea, and Japan), and across mainland and insular Southeast Asia. Focus on learning to read non-textual sources and understand religious enculturation.

THEO 3715 - Saints and Friends of God: Religious Genius in Islam and Christianity (3)

Explores the phenomenon and roles of religious exemplars in Islamic and Christian traditions -- called Friends of God and Saints -- using the concept of "Religious Genius" as a way of bridging cultural and theological gaps. Students will read samples of primary sources of "hagiography" with illustrations via music and visual arts. Prerequisite: One THEO 2000 level course.

THEO 3720 - Intuition, Spontaneity, and Flow: Daoism in Comparative Context (3)

In this introductory course we will examine themes commonly perceived as central to Daoism, including spontaneity and play, transcendence from mundane life, oneness with Nature, and "feminine" qualities of nurturing and compassion. We will examine how these themes appear in a number of Daoist texts and practices. Prerequisite: One THEO 2000 level course.

THEO 3725 - Sufism, Islam's Mystical Tradition (3)

A religious studies approach to learning about Islam through the devotional-mystical-literary tradition known as Sufism. After a brief overview of fundamentals of the Islamic tradition, we will survey the global history of Sufism by major periods/regions, focusing on its main concepts, literary, artistic, and institutional developments. Prerequisite: One THEO 2000 level course.

THEO 3730 - Jewish Life: Bible to Middle Ages (3)

This course studies 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. Also included are an understanding of the holiday cycle, the life-cycle, and synagogue worship. Pre-req: 2000-level theology course.

THEO 3735 - Jewish Life: Middle Ages to Modern Times (3)

This course surveys the Golden Age of Spain, Jewish Mysticism, the Enlightenment, philosophers from Maimonides to Martin Buber, 19th-century Nationalism, Zionism, the Holocaust and the rise of Modern Israel. Students will examine how these phenomena influenced modern Judaism, including Torah, God, Israel and ritual observance. Pre-req: THEO 2000-level.

THEO 3740 - Religions of Asia (3)

This course surveys Confucianism, Daoism, and Buddhism, introducing students to the classics as well as the works of the Zhuangzi, the Mengzi, and the Lotus Sutra. Key themes include birth and life stories, sacred space, cultivation of the self, and death. Pre-req: THEO 2000-level.

THEO 3830 - African American Religious Traditions (3)

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

THEO 3900 - Seeking God: A History (3)

Studies in the major spiritual trends and key figures within the Catholic, Eastern, Orthodox, and Protestant traditions.

THEO 3905 - Marriage & Christian Vocation (3)

A study of contemporary Christian theology and ethical reflections on marriage, covering sexual, gender, parenthood, divorce and family issues.

THEO 4190 - Seminar in Old Testament/Hebrew Bible (3)

This course will cover a topic of interest relevant to the study of the Old Testament/Hebrew Bible. Prerequisite: One THEO 2000 level course.

THEO 4210 - How to Interpret Scripture: Methods and Perspectives (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 4215 - 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 4290 - Seminar in New Testament (3)

The Seminar in New Testament offers in-depth exploration of a selected New Testament topic. The course will examine an important theme, body of literature, or method related to New Testament research, with the goal of enhancing student capacities for research and for oral and written expression. Prerequisite: One THEO 3000 level course.

THEO 4410 - Theological Outsiders: Kierkegaard, Nietzsche, and Dostoevsky (3)

This course will focus upon the critique of philosophy and religion developed in the writings and thought of three important theological "outsiders": the Danish philosopher Søren Kierkegaard, the Russian novelist Fyodor Dostoevsky, and the German philologist and philosopher Friedrich Nietzsche. Prerequisite: One THEO 3000 level course.

THEO 4490 - Seminar in Constructive Theology (3)

General number for new courses in faith and reason.

THEO 4510 - 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 4525 - Freedom of Conscience (3)

This course will explore conscience in theology, psychology, law, and science and examine formation of conscience, freedom of conscience, following one's conscience, and conscientious objection. Course goals include learning the history of conscience and developing the ability to articulate and integrate varying conceptions of conscience. Prerequisite: One THEO 3000 level course.

THEO 4590 - Seminar in Christian Ethics (3)

An advanced course in Christian ethics. Topics depend on instructor (e.g. War and Peace, Good and Evil, Bioethics, Conscience). Prerequisite: One THEO 3000 level course.

THEO 4615 - Christian Iconography (3)

Examines the theological themes found in early and contemporary Christian art.

THEO 4710 - Islam and the Christian Theologian: Comparing Theological Themes (3)

Comparative study of historical, creedal, institutional, and ethical/spiritual dimensions in Islamic and Christian theological traditions. Assists students to integrate their study of religion/theology with the broader network of the humanities, while providing a framework within which to become familiar with parallel theological themes in the varied religious traditions of Islam. Prerequisites: One THEO 3000 level course. A world religions course is recommended.

THEO 4790 - Seminar in World Religions (3)

This course offers a detailed introduction to and exploration of a particular world religion. Prerequisite: One THEO 3000 level course.

THEO 4810 - Nicaragua: Theology and Culture (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 4910 - Theology Internship (3)

Students put into practice the skills they learn in the theology program while also serving needy populations in the St. Louis area and Midwestern region. Students work with the department's Director for Undergraduate Studies on the academic component of their internship, culminating in a major project. Pre-req: 3000-level theology course.

THEO 4960 - Capstone Seminar I (3)

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-4965. Prerequisite(s): THEO-1000, THEO-2000 level. Restricted to Theology majors.

THEO 4965 - Capstone 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 aim of illuminating the communal and public dimensions of theological inquiry. Required of all majors.

THEO 5000 - 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 5020 - 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 5040 - 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 5060 - The Psalms (3)

Types, literary composition and outline, liturgical and theological context. Individual psalms studied as representative of each category. Offered occasionally.

THEO 5100 - The New Testament (3)

The external and internal history of the New Testament; literary forms, main theological concerns of each New Testament writer. Offered occasionally.

THEO 5110 - 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 5120 - 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 5140 - 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 5150 - 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 5190 - Special Topics: New Testament (3)

Offered occasionally.

THEO 5200 - 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 5210 - Survey of Early Christian Hist (3)

A broad study of the figures, movements and theological themes in the development of early Christianity from the close of the New Testament to Gregory the Great. Offered annually.

THEO 5220 - Survey of Medieval Chrstn Hist (3)

A broad study of the figures, movements and theological themes in the historical period from late antiquity up to the 15th century. Offered annually.

THEO 5230 - 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 5240 - 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 5250 - 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 5260 - Comparative Theology (3)

A study of how theological change has taken place historically in the context inter-religious relations, and of the implications of serious interchange between and among religious traditions for the future of Christian theology. Offered annually.

THEO 5360 - 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 5400 - Resources and Methods in Theology (3)

Methods and presuppositions in doing theology; emphasis on exploring transcendence in human experience, grace, revelation, faith. Offered occasionally.

THEO 5420 - God (3)

Existence and nature of God in the Bible, in Christian tradition and contemporary theology. Offered occasionally.

THEO 5440 - Christology (3)

Meaning of Jesus Christ in the Bible, in Christian tradition, and contemporary theology. Offered occasionally.

THEO 5450 - Theology of the Human Person (3)

This course explores the meaning of being human from a theological perspective. It examines themes of human nature and grace, sin, free will, human knowledge.

THEO 5460 - Mariology (3)

Mary in salvation history and her relationships with fundamental themes of Christian faith. Offered occasionally.

THEO 5470 - Church (3)

Foundation, structure, marks, mission, and offices of the Church; historical development; ecumenical questions. Offered occasionally.

THEO 5500 - Sacraments (3)

Sacraments in Christian history and theology in general. Offered occasionally.

THEO 5520 - 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 5540 - Christian Anthropology (3)

Meaning of sin, grace, and justification in Christian tradition. Offered occasionally.

THEO 5590 - Catholicism Today (3)

Offered occasionally.

THEO 5600 - 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 5610 - 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 5620 - Forming of Christian Conscience (3)

Sin and guilt as both problem and mystery in relation to Christian conscience: freedom, virtue, sanctity, and sanity. Offered occasionally.

THEO 5630 - 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 5640 - Sexual Morality (3)

Nature and principles of Christian sexual morality; special contemporary questions. Offered occasionally.

THEO 5650 - 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 5660 - Death, Suffering, & Afterlife (3)

Judaean-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 5680 - 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 5690 - Sp Top: Moral or Pastoral Theo (3)

Offered occasionally.

THEO 5730 - Spirituality & Psychology (3)

Implications of psychological and developmental theories, especially those that are humanistic and existential, for an integrated spirituality. Offered occasionally.

THEO 5780 - 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 5790 - Special Topics: Spirituality (3)

Offered occasionally.

THEO 5800 - 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 5810 - Ignatian Spirituality & Pedagogy (3)

This course examines the educational enterprise developed out of the religious experience of Ignatius Loyola (founder of the Society of Jesus), focusing on the enterprise's spiritual dimension, and considering the practical issues arising from the education of the first Jesuits as it relates to today's secondary education and beyond. Offered every spring.

THEO 5820 - 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 5830 - 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 5890 - Spe Topic: Religious Education (3)

Offered occasionally.

THEO 5900 - Teaching Theology (0)

This seminar, required of all graduate students who are teaching undergraduate courses, will meet several times a semester. It is designed to initiate graduate students into the art of teaching undergraduate theology. It will focus on the pedagogy of how to help undergraduate students think, read, speak, write and research theologically.

THEO 5910 - Internship in Religious Education (3)

The basic strategies for developing and maintaining religious education programs in Catholic school and parish settings will be explored through a combination of : (1) Work with a director of Religious Education (DRE) or coordinator of religious Education (CRE); (2) Group discussion with a Master religious educator focusing on readings from professionals in the field.

THEO 5911 - Internship Preparation (0)

This course provides necessary tools and guidance for graduate students or the Religious Education concentration who will be participating in a cooperative internship the following semester by directing students as they complete archdiocesan requirements for access to schools or parishes. Offered every spring.

THEO 6010 - Methods in Historical Theology (3)

Historical Theology is an interdisciplinary project, which employs the intellectual tools and skills of historical research to examine what Anselm of Canterbury called "faith seeking understanding." Yet history and theology -- academic disciplines -- are not monolithic in structure or univocal in expression. This seminar will introduce students to issues and questions that have dominated historiographical debates over the last five centuries and explore how these have been influenced by, and have influenced, theological discourse. Knowledge of historiography, its theory and practice, is an invaluable aid to scholars studying theological discourse in its past context and current application. Offered every fall.

THEO 6020 - Survey of Early Christianity (3)

Research methods applied to primary theological sources of early Christianity. THEO-6020 serves as a general survey covering the foundational Christian thinkers and movements of the early Church. From the Apostolic Fathers through the ecumenical councils of the first few centuries of Christian thought this survey aims to introduce the doctoral student to the central research methods and scholarly tools needed to enter into the world of early Christianity. (Offered every Fall)

THEO 6030 - Survey of Medieval Christianity (3)

A broad study of the figures, movements and theological themes in the historical period from late antiquity up to the 15th century. Offered every spring.

THEO 6040 - Survey of Modern Christianity (3)

This course provides a broad introduction to Christianity in the modern period with attention to the relationship between various Christian ecclesial communities and the broader historical, cultural, political, and intellectual contexts that influenced the shape of the Church in this period. At the same time, the course offers the opportunity for deeper analysis of particular issues surrounding the Church in this period by means of individualized primary source reading plans, secondary source texts relevant to the period, and bi-weekly "special topic presentations." The various assignments in this course are crafted to encourage the professional development of students both as scholars and as teachers. Offered every fall.

THEO 6110 - Early Christianity Seminar (3)

THEO 6110 is a seminar covering major figures and movements of concern to the early Christian Church between 100 and 1000 A.D. The seminar examines those theologians, conciliar and synodal decrees, and theological insights most pivotal to the foundations of Christian thought and practice. Offered every spring.

THEO 6120 - 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 6140 - Modern Christianity Seminar (3)

This course takes up a theme in modern Christianity of the instructor's choosing. Offered every spring.

THEO 6210 - Dissertation Prospectus (3)

All PhD students must register for Dissertation Prospectus after having taken their comprehensive exams and prior to registration for THEO-6990, dissertation research.

THEO 6930 - Spec Topics in Historical Theo (3)

Offered occasionally.

Theatre (THR)

THR 1000 - Approaching the Arts: Theatre (3)

Objectives: 1. To examine some public impressions of the role of the arts in American society; 2. To demonstrate to students, through lecture and discussion, some of the key features of a play in performance which critics, fans, and theatre artists have sought in contemporary productions; 3. To introduce some of the students to the standard tasks and procedures brought to hear in play productions; 4. To apply all of these studies to the appreciation of plays by viewing several live productions during the semester. Satisfies the Arts and Science Core Requirement for non-majors.

THR 1010 - Introduction to Performing Arts (3)

The goal of this course is to introduce students to the world of the performing arts in Western culture. After a set of synthetic historical and theoretical lectures, the course will focus on single works inspired by the same subject, chosen within the main repertoire of each discipline (drama, opera, ballet, concert music, musical theatre). This will allow the students to appreciate how the same ideas can be treated differently according to the artistic medium to which they are adapted.

THR 1500 - 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-

THR 2050 - Introduction to 3-Dimensional 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 2060 - Introduction 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 2200 - 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(s): THR-1500.

THR 2400 - 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 2500 - 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 2510 - Acting I: Fundamentals (3)

Study in the principal theories of realistic acting is balanced with practice in experiencing character creation. Principles of physical and emotional character development are explored. Satisfies the Arts and Science Core Requirement for non-majors.

THR 2520 - 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 2530 - Acting II: Rehearsal & Performance (3)

An intermediate acting course designed to teach the protocol of collaboration in rehearsal and performance. Emphasis will be given to text analysis and rehearsal techniques to assist in believable character development.

THR 2540 - 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 2560 - 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 anatomic components of human movement. Emphasis will be given to individual movement awareness, movement variations for characterization and physical spontaneity.

THR 2580 - 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 2700 - Exploring U.S. Diversity in Theatre (3)

Examines cultural diversity in the U.S. through the lens of theatre as a tool to educate and enlighten. Topics may include race, ethnicity, gender, sexuality, religion, prejudice, and/or discrimination as depicted in dramatic literature and stage productions.

THR 3050 - Advanced 3D Design (3)

This course is a continuation of the issues and problems explored in Introduction to 3-D design. Further refinement of design methodologies and presentation techniques will be acquired through projects with more complex programs and scopes.

THR 3500 - Playscript Analysis (3)

Objectives: 1. To introduce students to play-reading as an act of imagining a theatrical performance; 2. To introduce the students to some fundamental concepts of Dramatic Theory with reference to certain significant plays in the Dramatic canon; 3. To give students an understanding of some aspects of contemporary playwriting aesthetics; 4. To provide students with interpretive/analytical skills which enable them to explain the performance demands implicit in certain playscripts. Activities include critical writing by students at a scholarly level.

THR 3510 - 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 3520 - 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 3530 - 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 3550 - Theatre Practicum (0)

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

THR 3560 - Theatre Workshop (1-2)

Directed participation in University theater production of plays in English or Spanish, both as actors and as crew. At least two months of rehearsals before end-of-semester performance. Note: Rehearsals held during the evening.

THR 3570 - 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 3600 - Prof. Theatre: Career Prep (3)

An overview of the American Professional Theatre, its professional organizations and operational paradigms. Portfolio and resume preparation.

THR 3610 - 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 3620 - Stage Management (3)

An introduction to the role and function of the stage manager in the theatre production process.

THR 3700 - 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(s): THR-3500.

THR 4500 - Costume Design (3)

Objectives: 1. To help students see collaborative options for uniting the choices an actor makes in creating a given character with choices a costume designer can make in visibly presenting that character to an audience; 2. To instruct students in the process of collaboration between the Costume Designer and the Director, and some standard research practices followed by Costume Designers in the theatre; 3. To guide students through the process of Costume Design from conceptualization to design presentation. Activities will include individual costume design projects.

THR 4510 - 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 4520 - Theatre History II (3)

Similar in format to THR-4510. 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 4530 - 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 4540 - Lighting Design (3)

This course introduces the essential concepts and practical consideration of lighting design for live events.

THR 4570 - Advanced Acting (3)

This course will provide introductory knowledge of the basic acting theories espoused since the late 1800's. Application of that knowledge will be given to scene work and/or monologue preparation.

THR 4590 - Advanced 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 4620 - Adv. Acting: Special Topics (2-3)

This course is structured around various topics which introduce advanced level students to particular performance techniques. Topics might include auditioning, acting for the camera, voice acting, creative dramatics, stage combat, etc.

THR 4630 - Advanced Studies in Theatre Design (1-2)

This course is directed study and studio work that builds on the foundation laid down in Scenic Design, Lighting Design, Costume Design, and Drawing for the Designer. Students select works which focus their attention on specific design problems which arise from issues of genre, style, period, and venue.

THR 4640 - 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 4700 - 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. Prerequisite(s): THR 3700 Directing I

THR 4910 - Professional Internship (1-6)

Faculty approved assignment with a Professional Theatre Company or Video Production Studio.

Women's & Gender Studies (WGST)**WGST 1900 - Introduction to Women's and Gender 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.

WGST 2100 - Introduction to Sexuality Studies (3)

This course examines the lived practices, social meanings, and cultural representations of human sexuality. This introduction to the interdisciplinary field of sexuality studies samples a variety of intellectual approaches in examining sexuality as a source of personal and community identity and as contested political and ideological terrain. No prerequisites.

WGST 2400 - Gender and Popular Culture (3)

Popular culture provides the stories and images that enable us to imagine and practice femininities and masculinities. This course explores popular culture's influence on understandings of gender and its intersections with other identity markers and focuses on how feminist concepts raise awareness of discrimination and oppression in pop culture.

WGST 2550 - Gender, Identity & Literature (3)

This course introduces literary study within the context and theme of Gender and Identity. Through the reading of a wide variety of genres - including drama, poetry, and fiction - the course engages students in literary ways of knowing. Methods include close reading, comparative textual analysis, and argumentative writing.

WGST 2700 - Multicultural U.S. Feminisms (3)

This course explores how systems of power are connected and how feminism takes on forms of resistance in multicultural contexts. The goal of the course is to learn about how feminist theory and activism make us aware of multicultural issues, to discuss them effectively, and to promote justice and equality.

WGST 2800 - Men and Masculinities (3)

The course introduces research on men and masculinity, and gender more generally, and explores from a feminist perspective the personal and political issues this research raises and the current state of our world raises for men and women. Topics include socialization, college life, media, personal relations, politics, sports, and war.

WGST 3010 - Women in Art (3)

The role of women in art as symbol/image, artist, or patron from the ancient world to the present. Examples drawn from architecture, painting, sculpture, film and television, in a discussion of images created by women that are both positive and negative.

WGST 3230 - Gender & Society (3)

Examination of the impact of large-scale forces on how gender roles are structured and enacted in our society. Particular attention to be paid to the different experiences of men and women in the labor force, politics and the family.

WGST 3240 - Female Bildungsroman (3)

The Bildungsroman has traditionally traced the intellectual, social, and moral education of a male hero. This course addresses how female artists modify this narrative genre to tell alternate stories about intellectual, social, and sexual development. Through critical examination of the female Bildungsroman, students explore how gender affects selfhood, citizenship, and authorship.

WGST 3300 - Intercultural Communication (3)

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

WGST 3320 - Mary and Her Sisters (3)

This course looks at a series of important female figures from the scriptural roots of Christianity, especially the multiple Marys of the New Testament. We will read the primary canonical and apocryphal texts describing these women and examine their depiction in art, literature and music throughout history.

WGST 3430 - Marriage and the Family (3)

Examination of theories and data on different types of families, role assignments, and definitions, pertaining to various types of societies through space and time. modern aspects of family institutions and problems, with an emphasis on the issue of equality of marriage.

WGST 3510 - The Structure of Poverty (3)

This course examines the structural causes of poverty at the global and local levels from a multidisciplinary perspective. The course focuses on the social, political, and economic structures that produce and perpetuates poverty. The global dimension of the course focuses on developing countries, while the local dimension focuses especially in the St. Louis area.

WGST 3540 - African Diaspora Writing (3)

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

WGST 3550 - Women in the United States to 1900 (3)

This course investigates the history of women in the United States from the period surrounding European settlement to the turn of the twentieth century. Themes examined include: ideal of gender and sexuality; family life; class, racial, and ethnic diversity; labor; national expansion and empire; and social and political movements.

WGST 3560 - Twentieth-Century U.S. Women's History (3)

This course surveys social, economic, and political developments to explore changes and continuities in women's lives in the United States over the course of the twentieth century. Themes include: ideals of gender and sexuality; family structures; class, racial, and ethnic diversity; labor; and social and political movements. No prerequisites.

WGST 3600 - Women in Literature (3)

Reading and analysis of works authored by and about women; studied from a feminist perspective.

WGST 3630 - Sex, Gender, & Christian Ethic (3)

An introduction to contemporary Christian thinking on sexuality. Students are encouraged to understand the diversity of the Christian tradition, debate the available alternatives, and come to their own well-reasoned positions. Issues covered include premarital sex, gender, contraception, and homosexuality. Prerequisites: Any 200 level Theology course.

WGST 3650 - 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 representation of womanhood.

WGST 3720 - Ren & Mod Political Theories (3)

Examines the works of Machiavelli, Hobbes, Locke, Rousseau, Wollstonecraft, Taylor, and Mill, among others, focusing on different notions justice, law, freedom, and community. Particular attention is paid to the public and private contexts and gendered political roles associated with modern political thought.

WGST 3770 - Postmodern Politics: Sex/Race/Class (3)

This course will examine postmodern thought with a focus on poststructuralism, semiotics, and deconstruction. The course will critically interrogate these approaches and examine the politics of the construction of self, communities, cosmologies, understandings of agency and responsibility, and issues of social justice by focusing on class, race, and sex.

WGST 3775 - 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 with feminist thought, especially as it is formed by political philosophy including liberal, radical, Marxist and postmodern feminism. Sub-field in political science is Political Thought.

WGST 3780 - Disability Theory and Politics (3)

This course applies insights from disability studies to Western political thought in order to examine the political nature of disability and the disabling nature of politics. In this course, students are exposed to varying definitions, cultural representations, social justice issues, human rights concerns, and bioethical debates related to disability.

WGST 3800 - Violence Against Women (3)

This course focuses on the causes, effects, and institutional responses to several types of gender-based violence, including sexual assault, intimate partner violence, sexual harassment, and sex trafficking. Includes examination of the psychological, legal, sociological, and political discourse surrounding these issues. No prerequisites.

WGST 3850 - Feminism in Action (3)

This course addresses feminist activism on a wide range of issues (including domestic violence, rape, education and health care), and in a variety of forms (including writing, theater, public protests and coalition building). It gives students the opportunity to study the scholarship of activism and to participate in feminist action.

WGST 4200 - Psychology of Women (3)

The study of girls' and women's development, including gender roles, gender role stereotyping, the biology of being female, psychological theories about gender, violence against women, women in families, in relationships, and in the workplace. The course addresses women's diversity by race, ethnicity, culture, age, nationality, sexual orientation, and economic condition.

WGST 4300 - 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.

WGST 4310 - Contemporary 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.

WGST 4330 - Psychology of Oppression (3)

This course uses a family-centered approach to the study of the health care needs of women, infants, children, and adolescents. Emphasis is placed on theoretical knowledge and research findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to significant health care issues within these populations.

WGST 4340 - Nursing Care of Childbearing (3)

This practicum provides an opportunity for students to apply theoretical knowledge and research findings in the care of selected women, infants, children, and adolescents. The use of a family-centered approach in the nursing process is emphasized. Learning experiences are provided in a variety of settings.

WGST 4350 - Stereotyping and Bias in Mass Media (3)

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

WGST 4380 - Early Women Writers (3)

An examination of the writings of Englishwomen in the period from 1600 to 1700, including autobiographies, tracts, letters, fiction, poetry, and plays.

WGST 4480 - Jane Austen & her Predecessors (3)

An exploration of five of Jane Austen's novels as well as fiction by Charlotte Lennox and Fanny Burney. The purpose is to develop an understanding of Austen's work in its social and cultural context.

WGST 4490 - 18th & 19th Cent Women Writers (3)

An examination of the woman writer and literary tradition in the 18th and 19th centuries, including such writers as Eliza Haywood, Fanny Burney, Jane Austen, Charlotte Bronte, and Christina Rossetti.

WGST 4580 - Studies in 19th Century Lit (3)

Focus on women writers in the Nineteenth Century. Explore the evolution of the woman writer's role in the emerging marketplace of mass culture; changing perceptions of gender and sexuality and women writers' responses to the rise of industrial capitalism and political reform.

WGST 4650 - Wolfram von Eschenbach's Parzival: Gender, Race, and Otherness (3)

In this course, student will read and critically reflect on Wolfram von Eschenbach's Parzival (ca. 1220). They will read the text in modern German. While this text is fictional, it is grounded in 'reality' and reflects upon its times and its discourses on politics, religion, race, gender, and otherness, the focus of this course. This course is taught in German, therefore knowledge of German required. Prerequisite(s): GR-3200 & GR-3250, or instructor permission.

WGST 4750 - American Political Thought (3)

From 1765 to the present. Eighteenth century consensus, nationalism versus sectionalism, nineteenth century reform movements, pragmatism and progressivism, current liberalism and conservatism.

WGST 4770 - 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, Rosalia de Castro, Concha Zardoya, Gloria Fuertes, and Maria Victoria Atencia.

WGST 4800 - Black Women in Society (3)

This course is designed to provide an interdisciplinary approach for the study of African women in the context of a changing society and the impact of the context from social, historical, cultural, political and economic perspectives. Attention will be devoted to the examination of relationships that have emerged between systems and societal conditions.

WGST 4810 - Philosophy of Feminism (3)

A critical examination of the feminist challenge to traditional conceptions of law, morality and epistemology. The philosophical and methodological assumptions underlying the feminist challenge will be explored.

WGST 4860 - Global & Transnational Feminism (3)

This course offers an advanced survey of the field of theory and political activism referred to as transnational feminism. Students are introduced to the history of feminist work in international political and economic forums (e.g. the UN and World Bank), as well as to on-going feminist efforts in the context of current social movements around the globe.

WGST 4919 - Women Leadership Internship (1-6)

Interns work with women in leadership positions in governmental or non-governmental civic organizations, or collaborate on research projects related to women leaders in the public sector. Students keep journals and write an essay relating their experiences to assigned readings on gender justice and the role of women in public policy.

WGST 4960 - Women's Studies: Capstone (3)

The synthesizing course; students do an independent study, research paper practicum. Every semester.

WGST 5010 - Feminist Theory (3)

Begins with the history of feminist scholarship from the pre-modern period a 19th century and proceeds to examine liberal, socialist/Marxist, radical, postmodern, and global feminism. Critical reviews of each theory will include issues of race/ethnicity, class, sexuality, and spirituality. Offered each fall semester.

WGST 5020 - 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.

WGST 5030 - Cultural Methods: Gender, Politics, & Power (3)

Course covers methods of studying issues of culture, gender, and power, such as focus groups, interviews, and ethnographic fieldwork, often described as qualitative methods. Emphasis on learning by completing small research exercises, considering research ethics, and writing a major research proposal.

WGST 5040 - Current Issues & Debates (3)

This course examines historical and contemporary debates about controversial issues involving women, gender, social change for equality, and sexuality. Students learn to locate, express, and evaluate arguments on multiple sides of the controversies. (Offered: Annually in the Fall)

WGST 5050 - Program Evaluation (3)

This course provides students with a basic understanding of the approaches and techniques used to evaluate human service programs. Course material also examines the degree to which systematic inequalities (gender, etc.) affect decisions about what is to be evaluated, the development of evaluation questions, and the collection, analysis, interpretation, and utilization of data. During the course, students gain practical experience by developing an evaluation plan for a local human service or educational program. Offered in spring.

WGST 5070 - Studies in Francophone Culture (3)

An analysis of the culture, history and cultural content of selected literary texts of a French-speaking country (such as Canada) or a group of French-speaking countries (such as Francophone West Africa). The 'politics' of writing and identity are discussed. Offered occasionally.

WGST 5150 - Gender and American Politics (3)

This course examines the ways in which women shape, and are shaped by, American politics and public policy. We explore the history, approaches, findings and controversy in research about women in American politics and political science from a range of theoretical and methodological approaches. Cross-listed as POLS-5150.

WGST 5210 - Women's Movements in the U.S. and Beyond (3)

The course surveys the evolution of women's movements in the U.S. from the mid-19th century to the present. Incorporating the study of both feminist and anti-feminist activism, the course investigates direct action protest efforts, mobilizations in the formal political sphere, and coalition building. Offered every fall.

WGST 5290 - Women and Global Issues (3)

In this class, we will explore how globalization is bringing to the fore issues that are affecting and shaping women's lives throughout the world. Through essays, various literary pieces and films, we will examine how dichotomies that are usually identified in feminist discourse take on a renewed life as increased interconnectedness that comes with globalization shapes religious, economic, cultural and political issues.

WGST 5310 - Women Writing Women: Latin American Women Playwrights (3)

This course focuses on the work of Latin American women playwrights from 1980 until today. Particular attention will be given to the way women represent and perform other women on the stage. . (Offered occasionally.)

WGST 5360 - Written by Herself: Latin American Women Writers (3)

This course introduces the students to the work of Latin American women writers from the Colonial period to the 21st century. The discussion will focus on the history of women's education, concepts of beauty, the role of women in society and the construction of women's identity. (Offered occasionally)

WGST 5690 - Adv Nrs Prac: Gynecologic Issu (3)

Course will focus on gynecologic health-care issues for advanced nursing practice. Health promotion, disease prevention, and management of common disorders seen in gynecologic and primary-care settings will be examined. By using nursing research and practice standards, students will analyze strategies in the physiological, psychological, sociological, and spiritual dimensions in caring for women. Trends in health-care ethical issues and the sociopolitical environment of women will be analyzed to optimize care management.

WGST 5710 - Women and Writing in Early Modern France (3)

This course introduces students to the role of women in early modern French literature as symbol/image and as writer, through a study of French literary works by and about women. Writers to be studied will include Christine de Pizan, Marguerite de Navarre, Ronsard, Lave, Racine, and Moliere. Taught in French.

WGST 5716 - Diversity and Anti-Oppression Practice (3)

This course focuses on human diversity within and between groups and anti-oppression interventions in social work practice. The content includes perspectives on discrimination and oppression based on race, gender, class, age, sexual orientation, ethnicity, mental and physical disability, and/or spiritual orientation. Course addresses how group membership affects access to resources, services and opportunities and relates to risk factors for specific population groups.

WGST 5720 - Citizenship and Social Difference (3)

This course will examine several aspects of the embodied nature of citizenship. Looking specifically at the interplay between citizenship (as an identity, legal status, and practice) and socially constructed identities predicated upon perceived bodily differences (gender, race, and disability), we will examine the following preliminary questions: Historically, how and why has the American state denied women, people of color, and people with disabilities citizenship status? Should civil, social, and political rights, which are contingent upon citizenship status, be universal rights, or group-differentiated rights? How should we expand/amend conventional definitions of citizenship and political participation to account for the lived experiences of women, people of color, and people with disabilities? How do social constructed and maintained inequalities- via sexism, racism, and ableism- influence the practice of citizenship? Overall, this course will attempt to integrate the insights from feminist theory, critical race theory, and disability studies into an analysis of what it means to be an American citizen.

WGST 5771 - Intimate Partner Violence (3)

The focus of the course is on ways to reduce the incidence and impact of intimate partner violence. Students address and examine the theoretical understandings for violence against women and other intimate partner violence as well as the need for direct services, community organizing, and public policy changes that will help end intimate partner violence.

WGST 5780 - Contemporary Spanish Women Writers (2-3)

This course introduces the student to the study of the narrative written by contemporary Spanish women authors. There will be a specific study, through selected texts, of the most representative movements and tendencies of the post-war narrative and of the various means chosen by the authors to express their literary universe from their condition as women. (Offered occasionally.)

WGST 5910 - Women Leaders Internship (3-6)

Interns work in government, nonprofit, or other organizations in the St. Louis community on issues of social justice related to gender and sexuality. Students keep a journal, complete an internship project (for example, a research paper, a grant proposal, or a policy analysis paper), and give a presentation of their work to the organization and a public presentation to the Women's and Gender Studies program.

WGST 6200 - 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.

WGST 6270 - Middle English Literature (3)

Selected issues or representative figures in Middle English literature.

WGST 6300 - Feminist Ethics (3)

Extensive examination of such questions as how ethical claims are distinctive and whether and how they can be rationally based. Offered annually.

WGST 6350 - 17th Century Literature (3)

Figures or developments in English literature of the seventeenth century.

WGST 6500 - Romanticism (3)

Selected writers and works of the Romantic period in British literature.

WGST 6590 - 19th Century English Lit. (3)

Studies in particular issues and developments in British literature of the nineteenth century.

WGST 6600 - Studies in Modernism (3)

Selected figures, movements, and developments representative of modernisms in English in the first half of the twentieth century.

WGST 6610 - Twentieth-Century Fiction (3)

Selected writers and works of fiction of the twentieth century.

WGST 6650 - Twentieth Century Postcolonial Literature (3)

This course will focus on postcolonial literature and film with attention to current critical theories and approaches. We will examine how novels, poetry, drama and films from Africa, Asia, and the Caribbean have impacted postmodern culture as a whole. We will look at the various approaches that have been used to study postcolonial literature and film, including Marxist, feminist and poststructuralist. We will discuss such questions as: how have postcolonial writers and filmmakers used literature and film as tools for social change? How have they chosen to represent their identities?

WGST 6670 - Topics in Literature of the 20th Century (3)

Particular issues and developments in literatures in English of the twentieth century.

WGST 6690 - Irish Gothic (3)

Particular issues and developments in literatures in English of the twentieth century.

WGST 6700 - 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.

WGST 6710 - 19th Century American Literature (3)

Representative writers, works, and epochs central to the development of American literature in the nineteenth century.

WGST 6780 - Topics: 20th Cent Amer Lit (3)

Particular issues and developments in American literature of the twentieth century.

WGST 6800 - School of Law Seminars (2)

Seminars involve a small number of students, usually no more than 12, who engage in extensive research and discussion under a faculty member's supervision. Seminars must include a substantial writing component, for example, a paper of 20 to 25 pages. Ordinarily, the student writing requirement must include: (1) a preliminary draft critiqued by the faculty member and returned prior to the preparation of the final written product; and (2) a final written product. See School of Law website for individual seminar descriptions.

WGST 6833 - 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.

WGST 6875 - Family Law (3)

Legal relations of husband and wife with respect to person and property; conflict of laws; ante nuptial agreements; legal consequences of annulment, separation and divorce; separation agreements; division of property; alimony and maintenance; child support; child custody.

Accounting (ACCT)

ACCT 2200 - 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 2220 - 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. Offered in fall and spring. Prerequisite(s): ACCT-2200.

ACCT 3110 - 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(s): ACCT-2200 with a grade of C or higher and a minimum 2.7 SLU cumulative GPA.

ACCT 3160 - 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.

Prerequisite(s): Grades of C or better in ACCT-2200 and in ACCT-2220.

ACCT 3220 - Cost Management (2-3)

The study of modern techniques for active management of operating costs to achieve organizational efficiency and effectiveness. Specific topics include: C-V-P analysis, J.I.T., identification of cost drivers, life cycle costing and strategic cost management issues. Prerequisite(s): ACCT- 2220 with a grade of C or higher, ITM 2500, and a minimum 2.7 SLU cumulative GPA.

ACCT 4110 - Financial Reporting II (3)

This course is the second in a three-course sequence which provides an overview of accounting and external financial reporting. Particular attention is given to the study of the generally accepted accounting principles and authoritative pronouncements concerning measurement and reporting of an entity's liabilities, equity, and cash flow. Prerequisite(s): ACCT 3110 with a grade of C or higher and a minimum 2.7 SLU cumulative GPA.

ACCT 4250 - 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. Prerequisite(s): ITM-2000 and ACCT-3110 with a grade of C or higher and a minimum 2.7 SLU GPA. 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 4300 - 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(s): ACCT-3110 with a grade of C or higher and a minimum 2.7 SLU cumulative GPA.

ACCT 4400 - 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.

Prerequisite(s): ACCT-4110 and ACCT-4250 with grades of C or higher and minimum 2.7 SLU cumulative GPA. (ACCT-4250 may be taken concurrently with ACCT-4400).

ACCT 4910 - Accounting Internship (1-6)

This course can be used as elective 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. Prerequisite(s): ACCT-3110 with a C or higher, ITM 2500, junior or senior standing, and a minimum 2.7 SLU cumulative GPA.

ACCT 4980 - Special Study (1-3)

Permission of the department chair.

ACCT 5010 - 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 5901 - Masters in Accounting Study Abroad (3)

This lecture based course focuses on international accounting topics. The course focuses on how accounting regulations and norms differ and the impact these differences have on the financial statements. The course is taught as part of the Masters in Accounting Study Abroad program and requires travel. Prerequisite: ACCT 4110. Offered in summer.

ACCT 6000 - 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 6030 - 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.

Prerequisite(s): ACCT 5010 and ACCT-4110.

ACCT 6110 - Financial Reporting III (3)

A study of advanced accounting topics including: accounting for business combinations (mergers and acquisitions), preparation of consolidated financial statements and specific issues related to intercompany investments; accounting for selected international events (e.g., foreign currency transactions, translation of financial statements of foreign affiliates, and the use of forward exchange contracts); significant coverage of accounting for not-for-profit entities; and other selected topics of current interest. Discussion of ethical implications will be included in many of these topics.

ACCT 6140 - Seminar in Accounting and Social Responsibilities (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 6160 - International Accounting (3)

Multidimensional examination of worldwide accounting principles and practices. Comparative study of the profession in response to various socioeconomic environments. Theories of national practices and progress toward uniformity of accounting auditing, reporting standards. Problems of multinational corporation, inventory methods, currency translations, consolidated statements, price adjustments, transfer prices, taxes, and treaties. Prerequisite: ACCT 501.

ACCT 6190 - 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. Prerequisite(s): ACCT-4110 and FIN-6000

ACCT 6210 - 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. Prerequisite(s): ACCT 6000.

ACCT 6310 - 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. Prerequisite: ACCT 501.

ACCT 6320 - 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. Prerequisite(s): ACCT-4300.

ACCT 6340 - 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 6350 - 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. Prerequisite(s): ACCT-4300.

ACCT 6360 - 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.

Prerequisite(s): ACCT-4300.

ACCT 6380 - 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. Prerequisite(s): ACCT-4300 and ACCT 6310.

ACCT 6390 - 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. Prerequisite: ACCT 634.

ACCT 6400 - 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. Prerequisite(s): ACCT-4400. Co-requisites: ITM 4100 or ITM 6100.

ACCT 6450 - Accounting Ethics, Fraud and Forensic Accounting (3)

This course will be a study of the various dimensions of fraud and forensic accounting with an emphasis on situational ethics. Students will be exposed case studies that will provide a framework for ethical decision-making when faced with compliance with GAAP and other standards of the accounting profession. It is intended to be an overview course that will expose students the emerging discipline of forensic accounting. Prerequisite(s): ACCT-4400

ACCT 6500 - 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 6600 - 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.

ACCT 6850 - Accounting Capstone (3)

This course is designed to prepare students for the CPA exam. The course will use Becker CPA examreview material to assist students in passing the CPA exam. The course has three objectives: (i) to help students apply and synthesize the vast amount of material in the BSBA-Accounting and MACC curricula; ii) to cover additional exam related material not covered in previous courses, and (iii) to help the student pass the uniform CPA exam on the first attempt. To meet these objectives, the course is delivered in three modules: Financial Accounting and Reporting (FAR), Regulation (REG), and Auditing and Attestation (AUD). Prerequisite: Masters in Accounting/Integrated Accounting Student in good standing.

Business Foundations (BIZ)**BIZ 1000 - Business Foundations (0-1)**

This course provides students with an overview of the nature of business and shows students how the business curriculum is designed to help prepare them for a business career. In addition, the course will address some common transition to college issues faced by freshmen. Includes a spreadsheet lab.

BIZ 1200 - Leadership, Service, and Self (0-1)

This course is designed to be the foundational module for students enrolled in the Service Leadership Program in the School of Business at Saint Louis University. Utilizing the Social Change Model of Leadership Development, students will take a critical look at themselves and their own understanding and beliefs around service and leadership. Through the module students will explore the values of consciousness of self, congruence, and commitment. Through class discussion, exercises, and small group sharing, the module will ground a student in leadership theory and reflection. Throughout the course of the semester, students will be engaged in ongoing service in the community. Offered fall and spring. Prerequisite: Service Hour Completion Requirement: 20 hours to enroll in spring of freshmen year, 57 hours if enrolling fall of sophomore year, 94 hours if enrolling spring of sophomore year. Undergraduate Business Majors Only.

BIZ 2200 - Service Leadership Level 2 Module: Leadership, Service, and Groups (0-1)

This course is designed to build on the concepts learned in the Level 1 Module. Utilizing the Social Change Model of Leadership Development, students will take a critical look at others and their group/student organizational involvement. Through the Module students will explore the values of collaboration, common purpose, and controversy with civility. Through class discussion, exercises, and small group sharing, the Module will ground a student in leadership theory and reflection. Prerequisites: Service Hour Completion Requirement: 75 hours to enroll if sophomore/150 if junior. Undergraduate Business Majors Only.

BIZ 3000 - Career Foundations (1)

This course is designed to teach and develop the skills necessary for students to: ζ Identify and select an appropriate Business concentration and career ζ Market themselves confidently to build relationships, and secure an internship and/or eventual full-time position ζ Grow personally and professionally through self-reflection and experiential learning Offered every fall and spring. Prerequisite: Sophomore standing and Business Majors only.

BIZ 3200 - Service Leadership Level 3 Module: Leadership, Service, and Society (0-1)

This course is designed to build on the concepts learned in the Level 1 and Level 2 Modules. Utilizing the Social Change Model of Leadership Development, students will take a critical look at societal issues that require action on behalf of social justice. Through the Module students will explore the value of citizenship. Through class discussion, exercises, and small group sharing, the Module will ground a student in leadership theory and reflection. Service Hours Completion Requirement: 187 hours to enroll if junior/262 hours if a senior. Undergraduate Business Majors Only.

BIZ 4000 - Business Capstone (1)

Application of knowledge and skills gained through completion of the Business Common Body of Knowledge. Also covers ethics and value-based decision making. Prerequisite(s): completion of Business Common Body of Knowledge coursework except MGT-4000 which must be taken concurrently; senior standing.

BIZ 6000 - Professional Effectiveness (1-3)

BIZ 6000 (Professional Effectiveness) is designed to introduce students to knowledge and skills related to effectiveness and leadership in professional settings. The course will cover select topics in professional effectiveness and/or leadership with an emphasis on both thinking and doing ζ improving knowledge of key skill sets in contemporary professional settings and developing these skills through experiential learning and application. The course will facilitate the development of multiple approaches to inspiring, influencing, and guiding others.

BIZ 6100 - Professional Effectiveness: Creative Leadership Skills (1)

Creative Leadership Skills is designed to introduce students to contemporary leadership skills through creative, arts-based learning. The course will cover select topics in leadership with an emphasis on both thinking and doing ζ improving knowledge of leadership skill sets through readings and discussion, developing these skills through experiential learning and application.

Offered in fall.

BIZ 6101 - Professional Effectiveness: Coaching and Mentoring (1)

Coaching and mentoring are two different methods for developing job and career skills. This course will provide students with an opportunity to learn more about, practice, and reflect upon these different methods. These methods both rely heavily on active listening and giving feedback, therefore these foundational skills will also be covered. Similarly, networking serves as both a precursor and outcome of mentoring and will therefore also be included in the course. Offered in spring.

BIZ 6102 - Professional Effectiveness: Leadership Assessment and Development (1)

The focus of this course is Leadership Assessment and Development. This course will provide students with an opportunity to better understand their leadership strengths and development opportunities, and create an individualized plan to help them improve in areas relevant to their jobs and organizations.

BIZ 6103 - : Professional Effectiveness: The Leadership Challenge (1)

This course provides a practical, hands-on experience designed to inspire, engage, and help leaders develop the skills needed to meet the leadership challenges they face. It is designed to help leaders achieve their personal best and improve their effectiveness in a leadership role.

BIZ 6200 - Professional Effectiveness: Emotional and Social Intelligence (1)

The focus of this course is Emotional and Social Intelligence. Unlike cognitive ability, emotional and social intelligence are skills that can be improved via awareness and practice. Learn how to identify and manage emotions in yourself and others to become a more effective team member and leader in this course. Through this course, students will complete an assessment of their own emotional intelligence, and learn how to evaluate and improve this critical skill through self-study and the study of others. Offered in spring.

BIZ 6201 - Professional Effectiveness: The Artful Speaker (2)

The Artful Speaker is an immersive, highly interactive, practical experience designed to sharpen participants' ζ story construction skills, image use and improve personal presence for powerful, persuasive communication even when dealing with complex concepts, information or challenging audiences.

Offered in spring.

BIZ 6202 - Professional Effectiveness: Power, Politics, Influence, and Negotiation (1)

Power, politics, influence and negotiation is designed to introduce students to the knowledge and skills for success at both the personal and organizational levels. Considering these four phenomena influence day to day decisions and directly affect interrelations of individual actions it becomes imperative to decipher the unwritten codes of conduct, to maneuver within office politics, and effectively influence others. Offered in summer.

BIZ 6203 - Professional Effectiveness: Business Model Design with the Lean Canvas (1)

In this course, students will explore how to use a one-page business plan, known as the ζ Lean Canvas ζ to design a business model. As they flow through the ζ Lean Canvas ζ modeling process, students will learn how to ask questions, generate ideas, and test assumptions around all aspects of launching a business.

BIZ 6204 - Having Difficult Conversations (1)

This course, Having Difficult Conversations, is designed to introduce students to the knowledge, skills, and abilities needed to improve communication between themselves and constituents who are resistant to feedback and change. The course will cover a step-by-step process for initiating difficult conversations and adding additional structure at the start of the feedback process for conversations that are particularly confrontational. The course utilizes, in part, the "SWAG & SHAREe" model utilized by Saint Louis University Division of Human Resources regarding having difficult conversations with employees and managers. The importance of developing these skills is critical to addressing issues in a way that helps the other person focus on the content of the feedback, rather than focusing on the emotional and defensive reactions to the feedback. By the conclusion of the class, the student will be equipped to provide comprehensive and effective evaluation of conflict with another employee and turn negative reactions into positive performance.

BIZ 6300 - Professional Effectiveness: Managing the 5 Dysfunctions of Team (1)

The focus of this course is Overcoming the Five Dysfunctions of a Team, and is based largely on Patrick Lencioni's Five Dysfunctions of a Team model. Teams are often more than the sum of their individual parts in terms of both complexity and potential. In this course, students will learn about group dynamics and team development, as well as tips for building and maintaining healthy teams. Offered in spring.

BIZ 6301 - Professional Effectiveness: Culture-Organizational, Country Origin, and Cultural Intelligence (1)

Culture: Organizational, Country of Origin, and Cultural Intelligence is designed to introduce students to the knowledge and issues that emerge at the micro (individual) and macro (organizational) levels. In this course, students will assess the culture of an organization, individual cultural intelligence, and country of origin, through cases and tools designed for this purpose. These findings will allow students to ζ see the world through a different set of eyes ζ and give them a strong base and ability to navigate the socially complexities of culturally-related idiosyncrasies faced in daily and work lives. Offered in spring.

BIZ 6302 - Professional Effectiveness: Professional Enrichment (1)

This course provides a content/process model of professional behavior. The content elements are: accountability, altruism, duty, honor, integrity, excellence, and respect for others. The process elements are: professional sensitivity, professional motivation, professional judgment and implementing professional choices. Offered in summer.

BIZ 6303 - Professional Effectiveness: Generational Differences (1)

The focus of this course is sensitizing yourself with other generations by understanding how different generations define respect, get motivated, and feel valued. While a birth year alone does not necessarily dictate generational outlook, this course will also address the real challenge younger managers face motivating older employees, how to overcome common obstacles, effectively address conflict, and how to create an environment that promotes the success of each member, no matter which generation that are in. Offered in fall periodically.

BIZ 6304 - Professional Effectiveness: Global Cultural Dexterity (1)

In this course, you will gain a basic understanding of your personal level of self-awareness within the larger context of intercultural communication effectiveness in doing business abroad. You will become familiar with basic intercultural tools and gain an understanding of cultural dexterity and why it is an essential skill in today's global working environment. The course is highly interactive and discussion based. Case studies will draw from intercultural interactions encountered while working abroad. Offered fall and spring as needed.

Economics (ECON)**ECON 1900 - 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(s): MATH-1200

ECON 3010 - Introduction to Econometrics (3)

Introduction to basic econometric techniques as preparation to analyze and interpret empirical regression and to conduct their own applied analyses. The course focuses on application of quantitative and empirical skills by using econometric software to estimate regression models, testing hypotheses and interpreting regression results. Prerequisites: ECON-1900 and OPM-2070

ECON 3120 - 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(s): ECON-1900 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 3140 - Intermediate Microeconomics (3)

The maximizing behavior of households (consumers) as constrained by income and prices; business firm behavior in price and output decisions and in factor markets; comparisons of the operation of markets under competitive and imperfectly competitive conditions; and welfare implications of marketplace performance. Prerequisite(s): ECON-1900 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 3790 - 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(s): ECON-1900.

ECON 4080 - Industrial Organization-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(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4100 - 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 3140 & ECON 3120.

ECON 4120 - Law and Economics (3)

This course broadly examines the roles of prices and markets, the causes of market failures and the criteria for legal and public-policy intervention. Specific topics include (1) the long-run and short-run economic interests of individual corporate and public sector clients in a variety of legal contexts, (2) the normative judgments that are implicit in many economic policies and the legal structures implementing such policies; and (3) the uses and limits of economic analysis and economic data in solving a variety of social problems.

Prerequisite(s): ECON-3120, ECON-3140, and MATH-1320, MATH-1510, MATH-1520 or MATH-2530 or permission from Chair. (MGT-2000 highly recommended)

ECON 4160 - History-Economic Analysis (3)

Origins and development of modern economic thought, from ancient time, through the 19th century. Prerequisite(s): ECON-3120, ECON-3140, and MATH-1320, MATH-1510, MATH-1520 or MATH-2530 or permission of department chair.

ECON 4200 - 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(s): ECON-3120 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4300 - 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. Prerequisite(s): ECON-3120, ECON-3140, and MATH-1320, MATH-1510, MATH-1520 or MATH-2530 or permission of department chair.

ECON 4310 - Exchange Rates and Global Econ (3)

Examines basic international economic principles and determinants of trade balances and exchange rate movements. The course evaluates the factors that affect real and nominal exchange rate movements in the short, medium and long-run. It is designed to ask and answer important questions of current international macroeconomic issues, particularly with respect to financial, currency, debt and banking crises. Prerequisite(s): ECON-3120 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4400 - 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(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4450 - Economics of Int'l Migration (3)

Students will apply the theoretical tools of microeconomics to the analysis of labor markets; apply statistical and econometric techniques in empirical work on wage determination; study papers at the cutting edge of economic research with an eye toward how economists define questions, marshal evidence, and present results; and grapple with issues of policy design. Prerequisite(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4500 - Sports Economics (3)

Uses tools of microeconomics and statistics to analyze the business of sports including the study of the interactions among leagues, teams, owners/managers, players, and cities. Topics include profit maximization, revenue sharing, competitive balance, collective bargaining, player salaries, cost/benefit to host cities. Prerequisite(s): ECON-3140, OPM-2070, and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4560 - 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(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4600 - 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(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4650 - Public Choice and Political Economy (3)

Public choice is the study of politics as exchange. It applies the theories and methods of economics to the analysis of political behavior, a topic traditionally explored by political scientists and sociologists. Key topics include rent-seeking, collective action, bureaucracy, voting, and political entrepreneurship. While the discipline tends to highlight sources of failure in government and the policy process, its ultimate aim is to produce change that improves government and the policy process, and thereby advances the human condition. Offered in spring. Prerequisite(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4700 - Health Economics (3)

Analyze the economics of health and health care markets using the standard tools of microeconomics and empirical analysis. The course considers three main topics: inputs to health and the demand for medical care, structure and consequences of public and private financing of health care, and the supply of health care. Current public policy topics will be highlighted. Prerequisite(s): ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4770 - Advanced Econometrics (3)

Econometrics is concerned with using empirical data and statistical methods for estimating economic models, testing economic theories and hypotheses, measuring the net marginal effect of one factor on another, and evaluating the effects of government policies. The most common application of econometrics is the forecasting of important economic and financial variables.

Prerequisite(s): ECON-2010, ECON-3120, ECON-3140 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

ECON 4910 - Economics Internship (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.

Prerequisite(s): ECON-1900, concurrent enrollment in ECON-3120 or ECON-3140; permission of the department chair and Junior or Senior standing.

ECON 4950 - Senior Residency (0)

Prerequisite(s): ECON-3120 and ECON-3140 or permission of department chair.

ECON 4980 - Special Study (1-3)

Prerequisite(s): ECON-3120, ECON-3140, and permission of the department chair.

ECON 5010 - 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 5740 - Quant Methods in Bus & Econ (3)

Matrix algebra, differentiation, optimization, integration, elementary dynamics, first order differential equations, applications to business and economic analysis.

ECON 6000 - Microeconomic Theory (3)

The focus of this course will be application of mathematical methods in economics and finance. Beginning with a review of basic linear algebra and finance, this course will develop the necessary and sufficient conditions for equilibria to exist for unconstrained and constrained optimization problems. Mathematical methods will be applied to study consumer choice, optimal behavior by firms, and optimal allocation of assets.

ECON 6050 - Econometrics I (3)

Review of probability and statistics. Classical linear regression models through generalized least squares. Econometric problems resulting from non-traditional assumptions and techniques. Prerequisite(s): ECON-5010 and OPM 5020, or MBA-6300 and MBA-6330. ECON-6000 can be taken concurrently.

ECON 6060 - Econometrics II (3)

This course is designed as a time series econometrics course with focus on applications in macroeconomics, international finance, and finance. We will cover univariate and multivariate models of stationary and non-stationary time series in the time domain. The goals of the course are threefold: (1) develop a comprehensive set of tools and techniques for analyzing various forms of univariate and multivariate time series models, and for understanding the current literature in applied time series econometrics; (2) survey some of the current research topics in time series econometrics; (3) show how to use EVIEWS, GAUSS, MATLAB, STATA and SPSS to estimate time series models.

ECON 6080 - Indus. Org. & Antitrust Policy (3)

Structure, behavior and performance of U.S. markets. The case for and against concentrating economic power in a few firms; role of mergers and acquisitions; product differentiation; economies of scale and other factors influencing the size and number of sellers in a market; pricing policies, price warping; effects of economic power concentrations on technological change, income distribution and sales expenditures. Utilizes law, economic theory and case studies. Prerequisite(s): ECON-6000.

ECON 6170 - History of Economic Thought (3)

Critical assessment of economic thought from ancient times to the 19th century.

ECON 6200 - Monetary Theory (3)

Advanced analysis of monetary economics. Examines the relation between the money supply and output and prices, and the transmission mechanism between changes in the money supply and other variables. Prerequisite(s): ECON-6000.

ECON 6300 - International Trade (3)

Determinants and effects of trade between nations and other economic groups. Efficiency and equity implications of the movement of goods and services and factors of production between economic entities. Tariffs and other impediments to the free exchange of goods and services in international commerce. Role of international capital movements including economic growth and development. Prerequisite(s): ECON-5000 and ECON-5100.

ECON 6310 - Int Ecn: Ex Rates & Int'l Adj (3)

Balance of international payments; alternative theories of adjustment to disequilibrium in the balance of payments; the role of public policy in promoting internal equilibrium (full employment and price stability) and external balance (equilibrium in the balance of payments). Prerequisite(s): ECON-6000.

ECON 6350 - Public Finance (3)

Public Finance economics examines two key functions of government: taxation and expenditures. These government functions are evaluated based on efficiency and equity criteria. Topics including externalities, public goods, Social Security, Medicare and the personal income tax are examined.

ECON 6500 - Sports Economics (3)

Uses tools of microeconomics and statistics to analyze the business of sports including the study of the interactions among leagues, teams, owners/managers, players, and cities. Topics include profit maximization, revenue sharing, competitive balance, collective bargaining, player salaries, cost/benefit to host cities.

ECON 6520 - Forecasting Macroeconomic and Financial Variables (3)

Course surveys strategies for forecasting macroeconomic and financial variables. Leading strategies are examined in detail, with focus on implementation of strategies via hands-on exercises. Students study the forecasting process from data gathering to model development to forecast evaluation, with emphasis on managing practical challenges posed by model uncertainty and parameter instability. Extensively analyze data using MATLAB for numerical computation and visualization. Key learning objective is development of technical and judgmental skills required to produce reliable forecasts that are useful inputs for economic and financial decision making. Research project provides students with the opportunity to apply forecasting skills. Prerequisite(s): ECON-6000, ECON-6050 (Offered every Spring)

ECON 6550 - Applied Optimization Methods for Financial Economics (3)

This course surveys quantitative approaches to modeling asset returns and constructing optimal portfolios. Multifactor models provide the foundation for modeling asset returns and generating forecasts of the first and second moments of asset returns. These forecasts subsequently serve as inputs for portfolio optimizers, including mean-variance and active approaches, to generate portfolio weights. Important practical problems relating to portfolio constraints, transaction costs, and rebalancing are examined, as well as tools for rigorously analyzing portfolio performance. Recently popular risk-based and market neutral portfolios are also analyzed. Students develop skills for asset return modeling, portfolio optimization, and performance measurement via extensive hands-on exercises using MATLAB, a powerful program for numerical computation and visualization. The key learning objective is for students to develop the technical and judgmental skills required to construct portfolios that are tailored to investor goals and risk tolerance.

ECON 6850 - Applied Financial Economics Capstone (3)

Capstone is an empirical research project on topic of choice as relates to the program learning objectives. Student will demonstrate knowledge of economic and financial theory and analytical proficiency in the use of rigorous quantitative techniques employed in economics and finance. Student investigates own research question by way of own empirical design and evaluation of appropriate methodologies and modeling. Prerequisite(s): ECON-6000, ECON-6050, ECON-6060, ECON-6520 (Offered as needed)

Executive Education (EXEC)**EXEC 1000 - Web Globalization Management (11)**

The Executive online Certificate in Web Globalization Management is for professionals involved with any aspect of conducting global business and e-commerce. The online program provides participants with the cutting edge skills to conduct international business in a networked global economy. Participants will learn strategies to leverage the web for tapping global markets, conducting international e-commerce, managing virtual teams, developing network alliances, getting high search engine rankings, attracting and retaining global consumers, achieving culturally consistent global communications, and much more.

EXEC 1001 - Sustainable Business Leadership (3)

Running a sustainable business is about more than considering your organization's impact on the environment. It is about ethical leadership, innovative operations, responsible profitability, and creating practical solutions to complex problems for the benefit of the company and society. The online certificate in Sustainable Business Leadership equips students with the knowledge, tools, and techniques they need to thrive as leaders in the 21st Century economy. You will learn sustainable business leadership strategies and tactics, including how to make the business case for sustainability and how you can immediately begin applying the concepts of sustainability leadership to your organization. Offered every fall, spring and summer.

Finance (FIN)**FIN 3010 - 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-3010 prior to enrolling in all other FIN courses. Prerequisite(s): ACCT-2200, OPM-2070 and ECON-1900 and Co-requisite: ACCT-2220.

FIN 3140 - Insurance (3)

Survey of the nature of risk, insurance contracts, property and casualty coverage, 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-3330 and FIN-3630.

FIN 3160 - Real Estate (3)

Study of real estate concepts, practices, institutions; specific attention given legal aspects, appraisal, market analysis, mortgage financing, realty investment, property development and marketing, government influences on programs, housing and urban problems. Co-requisites: FIN-3330 and FIN-3630, or permission of the department chair.

FIN 3330 - 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(s): FIN-3010 with a grade of B- or higher.

FIN 3630 - Equity Securities & Markets (3)

Principles of investing in equity securities; types of investments; analysis of securities, markets and the mechanics of trading; principles of diversification and portfolio analysis; and security analysis and equity valuation, including economy, industry and company analysis. Prerequisite(s): FIN-3010 with a grade of B- or higher.

FIN 4230 - Financial Management (3)

Study of principles of corporate finance and application of those principles to variety of financial management problems. Applications include capital budgeting, working capital management, capital acquisition and other aspects of financial management. Prerequisite(s): FIN-3330 and FIN-3630; or permission of the department chair.

FIN 4250 - International Financial Mgt (3)

Study of international finance with emphasis in international management of the firm, international financial institutions and markets, international finance systems and foreign investments and securities. Co-requisites: FIN-3330 and FIN-3630; or permission of the department chair.

FIN 4330 - 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. Prerequisite(s): FIN-3330, & FIN-3630.

FIN 4440 - Financial Planning (3)

This course is designed for students who are targeting careers in financial planning and wealth management. We will study the financial planning process: determining a client's financial objectives, considering alternative methods for meeting those objectives, selecting the method best suited for a client's circumstances, implementing and periodically assessing/revising the plan. Particular focus will be on retirement planning and 'big picture' issues in investing in equities, bonds and alternative investments. Prerequisite(s): FIN-3330 and FIN-3630.

FIN 4530 - 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. Prerequisite(s): FIN-3330, FIN-3630, and FIN-4230.

FIN 4630 - Applied Portfolio Mgt (3)

The objective of this course is to provide students with hands-on experience in evaluating common stocks as investments and in the fiduciary management of investment assets. Students will manage an initial allocation of \$250,000-\$500,000 in SLU endowment funds. Students will be responsible for recommending a portfolio of common stocks, sales of existing portfolio assets, and recommending replacement assets. While the performance of the portfolio will be a primary focus of the course, and will be reviewed on an ongoing basis, it is not presumed that the students will be able to beat the market on a consistent basis. Rather, the goal will be to deliver high quality practical education in an area of considerable interest to students and employers alike. In addition, the course will cover advanced topics in investments beyond those offered in FIN-3630. Prerequisite(s): FIN-3330, FIN-3630 and permission of instructor.

FIN 4650 - 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.

Prerequisite(s): FIN-3010 with a grade of B- or higher, FIN-3330, and FIN-3630; or permission of the department chair; strong math skills highly recommended.

FIN 4730 - Financial Markets and Institutions (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-3330 and FIN-3630.

FIN 4910 - Finance Internship (1-6)

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.

Prerequisite(s): FIN-3330, FIN-3630, permission of the department chair, and junior or senior standing.

FIN 4911 - Financial Analysis Track Internship (3)

The study of topics related to the Financial Analysis track in conjunction with a concurrent internship experience in the same field. The objective of the course is to exploit the connection between theory and practice, and will be reflected in the scholarly work required to earn credit. The prerequisite requirements for the course are: (1) junior standing; (2) completion of FIN-3330 and FIN-3630 with a grade of at least a C-B- in each; and (3) successful completion of twelve hours of accounting, with at least six hours at the advanced (3000) level.

FIN 4980 - Special Study (1-3)

Permission of the Department Chair.

FIN 6000 - Finance for Managers (3)

The course examines the financial concepts that are relevant to the function of a manager serving in a non-financial capacity. Topics include financial analysis, the time value of money, valuation of securities, and capital budgeting, as well as the study of financial institutions and the capital markets.

Prerequisite(s): ACCT-5010 and ECON-5010. This course serves as a prerequisite for FIN 609 and FIN 610 only. Credit is not available for students in the MACC or MS-AFE programs.

FIN 6090 - Real Estate Finance (3)

Lecture and discussion series focusing 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 6100 - 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, towards the Finance Concentration for the MBA degree. Prerequisite(s): FIN-6000

FIN 6150 - Finance Theory & Application (3)

The course covers the theory of finance and applications to corporate policy and empirical studies. Topics include valuation methods for primary and derivative securities, basic and advanced capital budgeting techniques, portfolio theory, asset pricing, capital acquisition and risk management.

Prerequisite(s): ACCT-5010 and ECON-5010. Required for all MS-AFE students and for part time MBA students who seek to earn a concentration in finance.

FIN 6160 - Equity Securities & Markets (3)

Study of equity securities and the markets in which they trade. Basics of equity valuation and market efficiency; analysis of equity trading strategies, with an emphasis on what current finance research says about the likely success of these strategies.

FIN 6200 - Securities Analysis (3)

This course explores the world of equities research and related stock selection. Students who successfully complete this course will be able to explain why it is difficult for the equities research analyst to select stocks that outperform relevant benchmarks, over time, and why, nonetheless, a given analyst's performance prospects are enhanced by dispassionate and exhaustive execution of a well-reasoned/value-added approach. Students will prepare a company analysis reflective of company and industry analysis and that also makes use of prospective valuation work in an historical context.

Prerequisite(s): FIN-6000

FIN 6210 - 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. Prerequisite(s): FIN-6000.

FIN 6220 - 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 and the methods and markets through which these risks are managed.

FIN 6250 - 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. Prerequisite(s): FIN-6000.

FIN 6340 - 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 merger and acquisitions among other topics. Prerequisite(s): FIN-6000.

FIN 6350 - 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 6360 - 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 6380 - 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. Prerequisite(s): FIN-6000 or FIN-6150.

International Business (IB)**IB 2000 - 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(s): ECON-1900 or equivalent.

IB 3020 - 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(s): IB-2000.

IB 3040 - 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(s): IB-2000.

IB 3100 - 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(s): IB-2000.

IB 3140 - International e-Business (3)

Except for counted exceptions, as a business approach that relies on the Internet, where national boundaries are inexistent, e-Commerce is to be considered "Global", per se. In the last years of the past century and during the first decade of the 2000's, after the Dot-com bubble burst, the Internet has revolutionized the way in which we conduct business, internationally. Furthermore, by rising from 16 million users (0.4% of the world population) in 1995, to 2.75 billion (38.8% of it) in 2013, according to Internet World Stats, the Internet is not just part of "how we trade" but actually represents "how we live". Businesses, entrepreneurs, marketers and, in general, managers not considering this fact, or not adapting to the broad range of cultural, demographic, technological and political issues worldwide, will not be able to succeed in their global ecommerce strategies. To help International Business Administration students prepare for these challenges and opportunities, this course introduces them to a wide range of e-Business issues and practices, particularly Global Market opportunity analysis, Business Models, and all the Strategic and Technological major aspects of e-Commerce. Prerequisites are IB-2000 and ITM 2000/2010

IB 3150 - Middle Eastern Business (3)

The focus of the course is the business environment of the Middle East and North Africa (MENA). National and corporate cultures, customs and laws, geopolitical environment, economic systems, natural resources and security supply, and other major business-related elements will be covered. This coverage is complemented by a description of the changing order in the MENA region and what it means for multinational firms. Prerequisite: IB-2000

IB 3160 - Cultural Differences in IB (3)

Ample evidence abounds that cultures of the world are getting more and more in contact as the business world becomes increasingly global. Given this globally interdependent economy, it is imperative that students understand the value of culture when conducting business across boundaries. This course examines the concept of 'culture' as it applies in an international business context. Among those topics discussed are communicating and negotiating across cultures, the impact of culture on global alliances and strategy, and multicultural teams in international organizations. Classroom discussions are based on text readings as well as specific country-based cases.

Prerequisite(s): IB-2000

IB 4120 - International 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-2000

IB 4900 - Global Immersion in International Business (3)

Locations will vary; only one may be used to fulfill IB concentration requirements. This two-week course provides business students a first-hand practical exposure to business competition in another country or region. The course combines case study, traditional classroom lecture, guest lectures from academia and commerce, and field trips. Cultural excursions and presentations are integrated into the course instruction providing the student with a comprehensive view of business activity abroad. Pre-trip coursework and a final project are required. Prerequisite(s): IB-2000; junior standing, and department approval.

IB 4910 - International Bus. Internship (1-3)

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.

Prerequisite(s): IB-2000, permission of the department chair and Junior or Senior standing.

IB 4980 - Special Study (1-3)

Permission of the department chair.

IB 5010 - Managerial Economics and Data Analysis (2)

This is an introductory course in economics designed to introduce participants to the most basic economic concepts and the application of these concepts to various situations. The course does not presume a background in economics and is, therefore, self-contained. The first half of the course is spent studying the tools of competitive analysis. The second half allows application of the tools to formulate and implement competitive strategy.

IB 5050 - 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 5110 - 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 5140 - Int'l Bus Environment (2)

This course seeks to develop an understanding of the international business environment and the issues that have to be addressed by business corporations when they operate across countries. It will discuss the role of various international organizations including the WTO, IMT, World Bank, APEC and ASEAN in shaping global competition.

IB 5150 - 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 5210 - 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 5250 - International Economics (2)

This course investigates the effects of international trade and investment policy on firms, industries and the economy with emphasis on various regions throughout the world. The course will discuss tariffs, non-tariff barriers, trading blocs, international investment and industrial policies in various countries' economies.

IB 5310 - 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 5330 - 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 5350 - 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 5410 - 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 5430 - Int'l Negotiations (2-3)

Basic negotiation techniques are discussed, with emphasis on effectively negotiating within the context of different cultures. Western and Eastern negotiation styles will be compared and contrasted. Other course subjects include high versus low context language, relationship versus transaction-based negotiation, time orientation, etc.

IB 5450 - International Accounting (2)

A multidimensional examination of the accounting problems of multinational enterprises is completed during this course. International firms are faced with two unique accounting problems in addition to the problems associated with strictly domestic operations. Among the problem areas covered are: differences in accounting standards, currencies, price-levels, performance valuations, reporting practices and taxation.

IB 5510 - Asia Pacific Business Strategy (2)

This course provides an applied study of business and economic environments of East Asia using country cases as examples. Countries of focus include Japan, China, Korea, Taiwan and Indonesia.

IB 5550 - European Business Strategy (2)

This course provides an applied study of business and economic environments of Western Europe using country cases as examples. Countries of focus include members of the European Economic Community.

IB 5610 - Latin America Business Strategy (2)

This course provides an applied study of business and economic environments of Latin America using country cases as examples. Countries of focus include Argentina, Brazil, Chile, Colombia, Mexico and Venezuela.

IB 5620 - Int'l Mktg Research/Analysis (2)

This course will cover state-of-the-art computer modeling techniques and the application in real-world business situations. Besides the tools and techniques, the class will also focus on issues that affect data procurement.

IB 5650 - 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 5660 - 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 5670 - 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 5680 - 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 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 5690 - 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 5901 - 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 5990 - Thesis Research (1-6)

All students complete a final thesis/capstone project paper to conclude the EMIB degree program. This paper is written on a subject selected by the student usually including a region of the world and a relevant topic for a corporation. It ties together the two-year curriculum and allows application of the business practice, culture and strategy knowledge they've received through the coursework, faculty and cohort group.

IB 6000 - 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 6220 - International E-Business (3)

International E-business is undeniably changing the way companies conduct and compete in the global market place. It has experienced a phenomenal growth in terms of transactions and profits, particularly in advanced economies and emerging markets. Yet, international e-business environment is complex. Businesses need to address a broad range of cultural, legal, demographic, technological, and political issues to successfully formulate and execute their e-business strategies. To help you prepare for these types of challenges and opportunities and learn the tools to gain a competitive advantage, this course will introduce you to a wide-range of global e-commerce issues and practices, particularly e-business strategy, international on-line market entry, building an international e-commerce presence, web site localization and cultural customization, e-commerce infrastructure including mobile and social media platforms, international e-business security and payments systems, global social media marketing, and global search engine marketing. This is a hybrid course with scheduled on-campus meetings and online requirements.

IB 6420 - 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 6440 - 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 6800 - 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 6820 - 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 2000 - Information Technology with Supply Chains (0-3)**

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. As more and more businesses globally adopt enterprise systems, it becomes increasingly important for students to understand how real-world business processes are managed and executed. Offered Fall and Spring.

ITM 2010 - Enterprise Systems and IT with Supply Chains (3)

The material covered in this course is identical to that covered in ITM-2000. The only difference between the two is the type of SAP software used. In this course, the students will use the full size commercial SAP as opposed to a more limited simulation version of SAP software being used in ITM-2000.

ITM 2500 - Spreadsheet & Database Productivity (3)

The purpose of this course is to help students build skills and knowledge related to the use of electronic spreadsheet software. The focus is on the use of these tools to improve decision making and efficiency in organizations. Students will learn how to properly apply techniques such as scenario analysis, goal seeking analysis, logical functions and look up 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-2000

ITM 3100 - 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. Offered in spring. Prerequisite(s): ITM-2000

ITM 3300 - 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 major DBMS package such as Oracle.

Prerequisite(s): ITM-2000

ITM 3450 - 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(s): ITM-2000

ITM 3500 - 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(s): ITM-2000

ITM 3550 - Introduction to "Big Data" (3)

Big Data is the buzzword in business today. It speaks of the great volume, velocity, variety, veracity and value of available data can be obtained in the world. The recent explosion of social media, mobile computing, and the computerization of virtually every aspect of economic activity have resulted in the creation of Big Data, and promise the discovery of new value and opportunities in businesses. In a parallel development, computers continue to become more powerful, storage space becomes increasingly more affordable, and cloud computing becomes more accessible and affordable. Today, we have the ability to reliably and inexpensively store huge volumes of data, efficiently analyze them, and swiftly extract business and socially relevant information. Prerequisite(s): OPM-2070

ITM 3600 - 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.

Prerequisite(s): ITM 2000 and IB-2000.

ITM 3700 - Business Analytics (3)

Business Analytics (BA) is the art of transforming business data into business intelligence. Business Intelligence covers strategies and technologies to achieve knowledge about status, potentials, and perspectives of a company out of heterogeneous and distributed data. The focus of this course is to provide a foundation for analytical concepts, techniques, and tools required in business decision making. BA tools are extensively used in the areas of marketing, strategic planning, and financial planning. A recent McKinsey report in BusinessWeek has projected that there will be a shortfall of 1.5 million BA analysts by 2018. Given the importance and strong demand of BA, this course will equip the future business managers on using the BA tools, strategies, and techniques in their work place. This course provides a thorough understanding of the concepts of managing BA using data

visualization, online analytical processing (OLAP) and other related topics. The course will use extensive hands-on exercises with SAP Dashboard, IBM Watson, and Tableau 9.1. PREREQUISITES: ITM-2000, OPM-2070, and a minimum 2.70 gpa.

ITM 3800 - 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. Prerequisite(s): ITM-2000 and junior standing.

ITM 4100 - 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(s): ITM-2000

ITM 4700 - Business Data Mining (3)

Data mining is about extracting meaningful information from large data sets. Organizations generate large volume of structured and unstructured data that needs to be analyzed. Data mining can increase the power of decision making by extracting insights from large data sets. In this course, students will learn the core concepts and techniques of data mining and examine how data mining technologies can be used to improve decision making. Using data mining software tools (IBM SPSS Modeler and SAP Predictive Analytics) students will apply data mining techniques on large business datasets. Students will learn the application of data mining tools in multiple business domains (e.g. Healthcare, Supply Chain, and Banking) to gain useful business insights. Prerequisite(s): OPM-2070 or ITM-3700

ITM 4900 - Enterprise Systems Practicum (3)

This course serves as an introduction to ERP and also provides a solid foundation for common business processes in many disciplines and how they are supported by modern information systems. The class examines various elements of an organization's business process and teaches students to examine and analyze business processes. The student's study is reinforced the use of SAP ERP software to support both strategic decisions and day-to-day operations of a business. Prerequisites : ITM-2000 or ITM-2010, and Junior standing.

ITM 4910 - ITM Internship (1-3)

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.

Prerequisite(s): ITM-2000 and permission of the department chair, and junior or senior standing.

ITM 4980 - Special Study (1-3)

Permission of Dept. Chair

ITM 6000 - Managing Info Technology (3)

This course describes the role of IT in organizational strategy. Topics covered include cloud base technologies, Internet applications and emerging technologies. This course emphasizes the concepts underlying enterprise systems and identifies challenges in managing security and risks in IT infrastructure.

ITM 6050 - 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 6100 - Systems Analysis & Design (3)

Systems analysis and design provides a general understanding of the system 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(s): ITM-6000

ITM 6250 - Electronic Commerce Systems (3)

This course covers the basic approach to the principles of design and implementation for electronic commerce systems. Also covered are issues in project management, underlying technologies that enable electronic commerce at the firm and market levels, and issues of security. The intent of the course is to aid individuals preparing for positions that include membership on and management of electronic commerce development teams.

Prerequisite(s): ITM-6000

ITM 6300 - 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(s): ITM-6000

ITM 6350 - 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 combination's 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(s): ITM-6000

ITM 6400 - Applied Business Analytics (3)

This course provides necessary skills for business managers to apply Business Analytics tools for data analysis and business decision making. This course focuses on developing skills and knowledge in creating analytics solutions such as Business Intelligence Dashboards. Using hands on tutorials and case studies, students will learn and demonstrate application of analytics skills in multiple business domains. Prerequisite: Six credit hours of 6000-level graduate business courses.

ITM 6450 - Business Strategy and Enterprise Systems (3)

This course serves as an introduction to ERP and also provides a solid foundation for the common business processes used in today's organizations. In this course, students will learn about common business processes and gain proficiency in the use of the SAP® enterprise system to execute those processes. Students will also learn how to manage a company that involves trading goods as well as a manufacturing enterprise. Students will have to create strategies to be successful in a competitive environment.

ITM 6500 - Managing Cybersecurity in Organizations (3)

This course will help students to develop the skills required to manage a cybersecurity program to effectively cope with rising threats. The course is designed primarily for MBA students who will become managers or business professionals in a network e-business enterprise. Offered fall and spring.

ITM 6550 - Big Data in Organizations (3)

Through lectures, guest speaking series, readings, practical techniques, real-world examples, and hands-on exercises, we will explore the Big Data landscape, its ecosystem, market players, technologies involved, open source software and programs, methodology, step-by-step approach, to begin a corporate strategy around big data. We will show how to decompose current business strategies in order to link big data initiatives to the organization's value creation processes, and identify big data use cases. This course will help students understand the essentials of Big Data, directing them to various tools that can facilitate the big data usage in their organizations, and prepare them to be valuable Big Data professionals.

MBA Administration (MBA)**MBA 5010 - Accounting for Managers (3)**

Managers must consider both financial and non-financial information in order to make rational decisions. The purpose of this course is to introduce and integrate the use of external financial statements in this decision making process. The approach taken to understanding financial statements is a 'user' rather than a 'preparer' perspective. Fundamentals of Accounting and Financial Management are integrated throughout to enable the student to understand how various types of decisions they may make will effect the financial statements of the firm. Short cases are used that integrate other disciplines such as Marketing, Strategy, etc. in order to make the learning experience as realistic and relevant as possible.

MBA 6010 - Emerging Bus Issues I (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 6020 - Emerging Bus Issues II (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 6030 - Emerging Bus Issues III (1)

Current and emerging business issues and practices that revolve around strategy. Interaction with business executives on real-life, real-time business issues. Emphasis on cross-functional analysis of rapidly changing business environments for business firm evaluations from a systems perspective.

MBA 6040 - 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 6070 - Career Management (1)

Emphasizes career success through the seven steps of career management: self-assessment, career exploration, goal setting, designing strategy, implementing strategy, evaluating and negotiating, and working. Addresses the impact of organizational culture on career success and derailment along with the importance of lifelong networking and negotiating skills.

MBA 6100 - 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 'live case' approach in which senior-level managers from a company will present an existing strategic problem to be addressed by student teams.

MBA 6150 - Global Business Ethics (3)

The course will consist of two elements. The first is based on a study of the conceptual and theoretic foundations of business ethics. Readings will be drawn from moral philosophy, business history, global culture, economics, religion and other disciplines. The second component, and effort to simulate ethical decision-making, is centered on case study and discussion. An important organizing theme for course study revolves around the tension between the standardization of global business practices and the diversity of cultural, religious, and national mores that exist.

MBA 6200 - 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 program and events.

MBA 6210 - 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) commerce and (7) emerging technologies.

MBA 6220 - Operations Management (2)

The objectives of this course are: (1) to familiarize the student with decision-making tools and models that operational managers use; (2) to present business firms' integrated operational practices in manufacturing and service sectors; and (3) to analyze and examine business strategic process planning from a cross-functional perspective using short case studies. Topics will include: facility capacity and location decisions, scheduling and control problems, aggregate planning, inventory systems, and project management and control.

MBA 6240 - 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 6250 - 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 6260 - 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 6270 - 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 6280 - 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 6290 - 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 6300 - Applied Statistics (2)

Data analysis is an everyday reality of the business world. This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the widely used statistical methods to aid in problem formulation, data analysis, and managerial decision-making. At the end of this course, students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty. This course also serves as a prerequisite for other analytical coursework in the MBA curriculum.

MBA 6310 - Legal Aspects of Business (1)

Overview of the U.S. legal system and specific areas of law such as contract law (including product liability), agency, selection of business entity, corporate governance, and intellectual property.

MBA 6320 - Financial Accounting (1)

Financial Accounting presents accounting as an information system that produces summary financial statements, primarily for users external to a business or other enterprise. Students study the forms of business organization and the common transactions entered into by businesses. The emphasis is on understanding and applying basic accounting principles and other concepts that guide the reporting of the effect of transactions and other economic events on the financial condition and operating results of a business. How to analyze and interpret historical financial statements, as well as the limitations of using these in making forward-looking business decisions, is included. The primary content emphasis will be the basic accounting cycle and the four major financial statements: income statement, balance sheet, retained earnings and cash flow. We will also learn about financial statement analysis.

MBA 6330 - Managerial Economics (2)

This course will introduce you to the core ideas and economic tools that are used for analysis of markets and of firms that produce and sell goods and services in these markets. Using simple economic models designed to simulate markets, this course will explore tools and analytical techniques that can be used to study real markets. The first section of the course will focus on competitive markets and the short and long run decision made by firms that operate within competitive markets. The latter part of the course will focus on strategic interaction between firms in markets in which firms exercise some degree of monopoly power.

MBA 6340 - Nexus I (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters, and a business etiquette lunch. Managerial Communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business Connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 6360 - Financial Management (3)

In-depth studies of principles of corporate finance to develop the theoretical knowledge and 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.

MBA 6370 - Ethical Environment of Business (1)

Special emphasis in this course is given to the analysis of ethical issues that business managers confront. A complementary objective is to focus on the implementation of ethical judgments and to formulate appropriate strategies for addressing barriers to such implementation. Throughout the course, however, the connection between reflection and action will be our chief concern. Existing norms for business practice will be studied and examined as they represent important guidelines for decision-making, but students will also be challenged to consider their adequacy, applicability, and appropriateness in various contexts. The course will consist of two broad elements. One component takes up the conceptual and theoretical foundations of business ethics. Readings, tools and perspectives will be drawn from various sources: moral philosophy, business history, economics, religion, and other disciplines. The focus in this section is on ethical analysis and moral reasoning. The second component, representing a serious effort to simulate actual ethical decision making and implementation of those decisions, is based on case study and discussion. Cases cover various functional emphases as well as highlighting the multiple roles and responsibilities that fall to business men and women. The cases portray in a realistic fashion how different but interrelated ethics issues unfold and how these dilemmas frequently resist simple classification or easy resolution.

MBA 6380 - Managerial Accounting (1)

This course introduces students to the fundamentals of management accounting. The emphasis is on the use of accounting information to satisfy specific management objectives. After taking this course, students will understand the three broad objectives of a management accounting information system: to provide information for costing out services, products, and other objects of interest to management; to provide information for planning, controlling, evaluation and continuous improvement; and to provide information for decision making.

MBA 6400 - Prof Effectiveness Series II (2)

This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 6410 - Global Business Integration I (2)

All business, whether domestic or multinational, are directly or indirectly affected by global business environments - imports, exports, foreign direct investment, foreign currency, outsourcing, and service agreements. This course offers a broad examination of how these factors impact the operation of international business from the view points of political, economic, financial, cultural, legal, and business practices.

MBA 6430 - The Organization: Governance and Compliance (3)

This course explores the governance and compliance aspects of management and their impact on an organization's operating environment. The course will consider the statutory and regulatory sources of governance and compliance as well as how shareholders, directors and management teams shape and respond to: governance structures and practices; and recognize and monitor numerous compliance requirements.

MBA 6440 - Nexus II (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters and a business etiquette lunch. Managerial Communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business Connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 6500 - Prof. Effectiveness Series III (1-2)

This three-part series provides professional development throughout the year. There are three focus areas: career management, managerial communication, and business connections. Career management includes all aspects of career plan development and execution, including gaining practical experience and completing a successful job search. Managerial communication provides methods to enhance skills in intra/interpersonal communication, small group facilitation, large group presentation, and strategic communication. Business connections provides opportunities to learn from business leaders, faculty and other academic experts on current and emerging business topics. In addition, students build their personal networks by participating in a variety of programs and events.

MBA 6510 - Study Abroad (3)

The objective of this course is to allow students to apply the key concepts of global environments to a regional economy. The course combines case discussions with guest lectures by local business executives and scholars, and company visits. Students are expected to have a practical knowledge of the complexity of the business environments of the region.

MBA 6520 - Global Business Integration II (1)

This course focuses on analyzing various national markets in key regions in terms of competitive strengths and weaknesses in different industries by integrating the various functional aspects managing international business operations and the key concepts and tools learned in global environments at study abroad courses.

MBA 6530 - Integrated Consulting Module (3)

Emphasizes cross-functional learning and team-based, experiential learning designed around the elements of a strategic plan, and specific issues identified by a 'real world' client-company. A team teaching format, involving 'live case' approach in which senior-level managers from a company will present an existing strategic problem to be addressed by student teams.

MBA 6540 - Nexus III (1)

This three-part course provides integration and professional development throughout the year. There are four focus areas in Nexus: Interlinking the MBA Curriculum, Career Management, Managerial Communication, and Business Connections. Interlinking the MBA Curriculum includes reflection, a research project on a pre-specified company, and a set of current topics presented by speakers. Career Management includes class sessions and seminars on key aspects of career development, including career, industry and company exploration; and job search strategy and skill development. Activities include networking and informational events, mock interviews with MBA-level recruiters and a business etiquette lunch. Managerial communication provides methods to enhance skills in written and oral communication, through writing and presenting an idea paper and creating an ePortfolio. Business Connections provides opportunities to learn from business leaders, faculty and other academic experts on relevant business topics. In addition, students build their personal networks by participating in a variety of programs and events.

Management (MGT)

MGT 2000 - 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 3000 - 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 3100 - 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(s): MGT-3000.

MGT 3200 - 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(s): MGT-3000. Students cannot take both MGT 3200 and MGT 3201.

MGT 3201 - Social Entrepreneurship (3)

This course is designed to introduce basic concepts and techniques of entrepreneurship applied to promote social good in all three sectors of the economy (for-profit, non-profit and government) to sophomores and juniors. The goal is to help students be better prepared for upper-level entrepreneurship and service leadership courses that build on social entrepreneurship knowledge. The course will cover the fundamentals of entrepreneurship with a particular focus on entrepreneurship in the pursuit of the greater good through charitable efforts, self-sustaining improvement efforts, and institutional efforts with a clear social benefit as part of the organization's mission. Prerequisite(s): MGT-3000. Students cannot take both MGT 3200 and MGT 3201.

MGT 3210 - 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. Prerequisite(s): MGT-3200 or MGT 3201.

MGT 3300 - 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(s): MGT-3000.

MGT 3301 - Negotiations and Conflict Resolution (3)

This course focuses on processes for conducting negotiations and resolving conflicts. The course will introduce different theoretical perspectives and help students understand their own attitudes and aptitudes regarding negotiations and conflict resolution. In addition, students will have the opportunity to put this knowledge into practice, and reflect upon the outcomes. Prerequisite: MGT 3000.

MGT 3400 - Intro to Sports Management (3)

This introductory course emphasizes basic management principles as they relate to the business of sports. Students are introduced to every aspect of sport business, which includes: ethics, management, marketing, law, media, economics, finance, events, facility management, governance, global industry and other related areas. There is an emphasis on developing and improving communication skills while interacting with senior executives from the industry. An overview is provided with regard to career opportunities in this field.

Prerequisite(s): MGT-3000 and Junior standing

MGT 4000 - 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. Prerequisite(s): Completion of the business common body of knowledge core and senior standing. BIZ 4000 and MGT 4000 must be taken concurrently.

MGT 4101 - 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(s): MGT-3100.

MGT 4102 - 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(s): MGT-3100.

MGT 4103 - 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(s): MGT-3100.

MGT 4200 - 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. Prerequisite(s): MGT-3200 or MGT-3201, and MGT-3210.

MGT 4201 - 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(s): MGT-3200 or MGT-3201.

MGT 4301 - Talent Management (3)

Addresses human resource planning, recruitment policies and practices at organizational levels, preemployment selections, interviewing and testing techniques and tools, appraisals and development of employee resources, internal personnel administration and equal employment opportunity affirmative action programs. Prerequisite(s): MGT-3300

MGT 4302 - 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(s): MGT-3300.

MGT 4400 - Integrated Sports Bus Planning (3)

The Integrated Sports Business Capstone ties together what you have learned in all previous sports business courses and in your general business studies (Marketing, Finance, etc.). It allows students to apply that knowledge to a 'real world' sports business project for a client (team, sponsor, etc.). Because of the non-traditional, project-oriented nature of the course, a heavy emphasis will be placed on team-based, experiential learning. Prerequisite(s): MGT 3400 and two sports business courses

MGT 4401 - Legal Issues Sport & Entertain (3)

This course aims to give the student an in-depth understanding of amateur and professional athletics, and the sports and entertainment industry in general, in relation to the American system of jurisprudence, statutory law, administrative law, constitutional law, and common law. It is intended to familiarize the student with legal concepts and analysis, which will be integral to the student's ability to recognize, approach and resolve sport and entertainment-related legal issues. Answers to legal questions will be pursued through critical thinking and reasoning, especially on matters of policy, legal and political philosophy, with an ultimate goal of gaining valuable insight on issues the student will be called to deal with in his/her ensuing academic and professional life. Prerequisite(s): MGT-2000 or PLS-1000.

MGT 4402 - Intercollegiate Athletics Mgmt (3)

The course will offer extensive and management legal theory background and important rules' interpretation, as well as the application on a variety of issues arising in intercollegiate athletics. The student will learn to recognize, approach, and resolve NCAA and Conference rules' related issues. The course will promote the student's ability to deal with problems in intercollegiate athletics and encourage critical thinking and reasoning. As an upper level sport business course member, the student will be called to assume a critical stance on the issues under study, and will have to support theoretically, conceptually, and practically. Prerequisite(s): MGT-3000.

MGT 4500 - 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(s): MGT-2000.

MGT 4501 - 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. Prerequisite(s): MGT-2000.

MGT 4910 - Management Internship (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.

Prerequisite(s): MGT-3000, permission of the department chair and Junior or Senior standing.

MGT 4980 - Special Study (1-3)

Permission of the department chair.

MGT 6000 - 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 6003 - 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 the business organization to the legal system, including various modes of dispute resolution. In addition, the course addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with state and federal laws and regulations.

MGT 6006 - 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 6030 - 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 the business organization to the legal system, including various modes of dispute resolution. In addition, the course addresses areas of legal risk and responsibility, encompassing how business is affected by, and interacts with state and federal laws and regulations.

MGT 6050 - Strategic Management (3)

Prerequisite(s): MGT-6050

MGT 6060 - 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 6080 - Fail Fwd: Lead/Art of Failure (3)

This course should create an awareness of the reasons why organizations experience crises and what might be done to identify problems, to avoid potential failure and to transform the organization to enable it to succeed in the future. The symptoms and, more particularly, the causes of failure will be examined in depth, as well as the techniques that may be used to identify the onset of difficulties as early as possible. Successful turnaround strategies will more likely be achieved if problems are recognized early.

MGT 6100 - Fail Fwd: Lead/Art of Failure (3)

This course should create an awareness of the reasons why organizations experience crises and what might be done to identify problems, to avoid potential failure and to transform the organization to enable it to succeed in the future. The symptoms and, more particularly, the causes of failure will be examined in depth, as well as the techniques that may be used to identify the onset of difficulties as early as possible. Successful turnaround strategies will more likely be achieved if problems are recognized early. Offered in fall. Prerequisite: MGT 6000.

MGT 6101 - Executive Decision Making (3)

Oriented toward giving the student insight into the decision-making process 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 6102 - 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 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 6103 - Value Based Organizational Design (3)

The study of organizations is integrated units and subunits that must effectively define and interact with key stakeholder groups in their internal and external environments. Topics will include organizational effectiveness, environmental scanning and management, design and structure, organizational change, communication systems, conflict and politics, stakeholder management, and organizational culture. Prerequisite(s): MGT-6000.

MGT 6104 - Strategic Management (3)

Prerequisite(s): MGT-6050

MGT 6105 - Management of Change (3)

Discover and discuss change in relation to the complexities of organizational life. In attempting to fulfill this goal, the class takes both theoretical and practical approaches as it seeks to meet both the academic and applied aims of most business and management courses.

MGT 6130 - Value Based Organizational Design (3)

The study of organizations is integrated units and subunits that must effectively define and interact with key stakeholder groups in their internal and external environments. Topics will include organizational effectiveness, environmental scanning and management, design and structure, organizational change, communication systems, conflict and politics, stakeholder management, and organizational culture. Prerequisite(s): MGT-6000.

MGT 6140 - 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 6150 - 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 6200 - 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 6201 - Corporate Entrepreneurship (3)

This course focuses on the corporate venturing process, which leverages the processes of internal entrepreneurship, working with universities and licensing new technology to promote the continued growth and learning of the organization. Topics include the strategic analysis of growth and innovation opportunities of the firm, reviewing the forms of corporate venturing (new markets, new product, commercialization, M&A, restructuring, etc.), and developing the skills of structuring and managing business innovations in complex existing systems in a manner which is exploratory, integrative, fast-paced, and resource-conscious. Prerequisite(s): MGT-6000.

MGT 6202 - 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. Prerequisite(s): MGT-6000 and MGT-6200 or MGT-6201.

MGT 6204 - 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 cross functional analysis of rapidly changing business environments to enable identification of entrepreneurial opportunities and the creation and successful management of innovative operations. Prerequisite(s): MGT-6000 and MGT-6200 or MGT-6201.

MGT 6210 - 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. Prerequisite(s): MGT-6000 and one of the following MGT-6200 or MGT-6201.

MGT 6220 - 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. Prerequisite(s): MGT-6000 and MGT-6200 or MGT-6201.

MGT 6230 - Corporate Entrepreneurship (3)

This course focuses on the corporate venturing process, which leverages the processes of internal entrepreneurship, working with universities and licensing new technology to promote the continued growth and learning of the organization. Topics include the strategic analysis of growth and innovation opportunities of the firm, reviewing the forms of corporate venturing (new markets, new product, commercialization, M&A, restructuring, etc.), and developing the skills of structuring and managing business innovations in complex existing systems in a manner which is exploratory, integrative, fast-paced, and resource-conscious. Prerequisite(s): MGT-6000.

MGT 6240 - 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 cross functional analysis of rapidly changing business environments to enable identification of entrepreneurial opportunities and the creation and successful management of innovative operations. Prerequisite(s): MGT-6000 and MGT-6200 or MGT-6201.

MGT 6280 - 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 6300 - 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 6301 - Employee Performance & Turnover Management (3)

In this course students will learn advanced conceptual frameworks and practical approaches to managing employee job performance and voluntary turnover. This is a readings-based course with an emphasis on real-world management problem-solving, which assumes some basic human resource management knowledge.

MGT 6350 - Management of Change (3)

Discover and discuss change in relation to the complexities of organizational life. In attempting to fulfill this goal, the class takes both theoretical and practical approaches as it seeks to meet both the academic and applied aims of most business and management courses.

MGT 6410 - Employee Performance & Turnover Management (3)

In this course students will learn advanced conceptual frameworks and practical approaches to managing employee job performance and voluntary turnover. This is a readings-based course with an emphasis on real-world management problem-solving, which assumes some basic human resource management knowledge.

MGT 6500 - 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.

Marketing (MKT)**MKT 3000 - 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. Prerequisite(s): Sophomore standing.

MKT 3300 - 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(s): MKT-3000.

MKT 3400 - 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(s): MKT-3000.

MKT 3500 - Sports Marketing (3)

The content of this course focus on three aspects of sports marketing: (1) the use of sports as a marketing tool for other products; (2) the marketing of sports properties; and (3) the emerging issues relevant for both marketing through and the marketing of sports. The first component addresses the various domains of the sports marketing environment and traditional sponsorship. The second focuses on the marketing of professional and amateur sports, the marketing of participation-oriented sports, and the marketing of a broad array of sports-related products such as sporting goods and apparel. The third addresses the impact of relationship marketing, technology, and controversial issues within the sports marketing industry. Prerequisite's: MKT-3000

MKT 3600 - 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. Prerequisite(s): MKT-3000.

MKT 3700 - Social Media and Digital Marketing (3)

This course focuses on digital, social, and mobile marketing applications. Topic include: Search EngineOptimization, Search Engine Marketing, Online Advertising, Web Analytics, Email Marketing, Social Media Marketing, and Reputation Management. Prerequisite: MKT 3000

MKT 4300 - 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(s): MKT-3000.

MKT 4400 - Consumer Behavior (3)

Concepts and theories explaining the cognitive, behavioral, and experiential aspects of individual and group purchasing of goods and services; analysis of a broad range of purchase and consumption situations; development of appropriate target market strategies. Prerequisite(s): MKT-3000.

MKT 4440 - 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(s): MKT-3000.

MKT 4450 - Sales Management (3)

Environment of sales management; forecasting sales; budgeting; structuring sales force; selecting, training, compensating salespeople; motivating and evaluating salespeople; and the personal selling process. Prerequisite(s): MKT-3000.

MKT 4550 - International Marketing (3)

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(s): MKT-3000.

MKT 4600 - 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 brand 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(s): MKT-3000.

MKT 4650 - Marketing Analytics (3)

A quantitative approach to effective marketing decision making; includes decision models relating to segmentation, positioning, new product design models as well as advertising and promotion; also covers pricing models and the implications of marketing decisions to costs, revenue, and profits. Prerequisite: MKT-3000.

MKT 4900 - Marketing Strategy (3)

Capstone marketing course, to be taken in the final semester of study, using case approach; emphasis on strategic and executional issues connected with marketing policy; examines managing marketing mix decisions with special attention given to communication (personal and mass), price practices, channels of distribution, and product policy. Prerequisite: MKT-3000 and Senior standing.

MKT 4910 - Marketing Internship (1-6)

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.

Prerequisite(s): MKT-3000, permission of the department chair and junior or senior standing.

MKT 4930 - Special Topics (3)

Prerequisite: MKT-3000.

MKT 4980 - Special Study (3)

Permission of the department chair.

MKT 6000 - 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 6100 - Sales Management (3)

This is an online course which introduces the student to the many complex issues faced by the individual who manages the direct selling function of the firm. Topics include, but not confined to, salesforce recruitment, deployment compensation, evaluation, and motivation. Prior to these managerial topics, the student will be provided with an overview of the selling process itself. The use of in-class case discussions is intended to enhance the applicability of course themes, and foster a dynamic classroom environment. Prerequisite(s): MKT-6000.

MKT 6120 - 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 6150 - New Product Management (3)

Prerequisite(s): MKT-6000

MKT 6200 - 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 marketing.

MKT 6250 - 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. Prerequisite(s): MKT-6000.

MKT 6260 - 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.

Prerequisite(s): MKT-6000.

MKT 6300 - 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 6460 - 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 6500 - Sports Marketing (3)

This course provides students the opportunity to study the nature and scope of marketing sports properties (e.g., teams, events, associations) as well as marketing traditional products or services with sports as a promotional tool. In essence, we study both the marketing of sports, as well as the marketing of products through sports. The course places a heavy emphasis on the case study method, student group work, and guest speakers from the sports industry.

MKT 6650 - Brand Management in the Digital Age (3)

This course will focus on how brand management can work productively in the information intensive digital era. It will examine how brand equity is defined today, and how brand managers can use an array of tools--some traditional, but most new--to achieve a range of marketing objectives. Offered every year.

MKT 6830 - 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 6840 - 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, perceptual decision making, persuasion, motivation, emotion and effect, consumption signs and symbols, post-modern perspectives on consumer research.

Operations Management (OPM)**OPM 2070 - 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. Credit not given for OPM-2070 and any of the following: MATH-1300 or STAT-1300. Prerequisite(s): MATH-1200.

OPM 3050 - 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.

Prerequisite(s): OPM-2070 and MATH-1320, MATH-1510, MATH-1520 or MATH-2530.

OPM 5020 - Applied Business Statistics (3)

This course challenges students to think about business problems in a systematic fashion by reviewing mathematical concepts and developing statistical thinking skills. Statistical thinking can lead to both a better understanding of the problem and can result in higher quality solution options. The course provides coverage of the more widely used statistical methods to aid in problem formulation, data analysis and managerial decision-making. At the end of this course students will have a more sophisticated understanding of the mathematics that underlie probability and statistical concepts, issues involving data interpretation, and decision-making under conditions of uncertainty.

OPM 5050 - Operations Management (3)

The objective of this course are (1) familiarize students with production planning and control (2) to familiarize students with the use of operations research techniques for analyzing and controlling manufacturing, inventory, and operations management systems; and (3) to train students to use computers for making production and operations management decisions.

OPM 6000 - Forecasting and Demand Mgmt (3)

Advanced topics in statistical modeling, data analysis and decision making. Extensive use of computer packages and real business databases. Topics include model building and research design; variance and experimental design; multiple regression and correlation analysis; time series and forecasting; statistical quality control; non-parametric procedures; model decision analysis.

OPM 6050 - Business Process and Operations Management (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. Prerequisite(s): OPM-5020 and OPM-5050.

OPM 6430 - Quality Improvement/Lean Sigma (3)

This course is intended to serve as an in-depth examination of quality principles applied specifically to manufacturing, service and supply chain environments. Both managerial and statistical aspects will be covered.

OPM 6440 - 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. Prerequisite(s): OPM-5000 and OPM-6050.

OPM 6460 - Global Logistics Management (3)

The objectives of this course are: (1) to acquaint the student with the use of logistics management theory and techniques for analyzing and controlling global manufacturing and operations management systems; (2) to expose the student to several of the most widely utilized models for supply chain management in the manufacturing and service sectors (financial, health care, public sectors, etc.), along with case studies; and (3) to familiarize the student with the use of computer software in facilitating logistics decisions.

Prerequisite(s): OPM-505 and OPM-6050.

OPM 6480 - Strat. Sourcing & Proc. in SCM (3)

This course acquaints students with the use of purchasing and strategic sourcing concepts and techniques to optimize supply chain operations. Total cost of ownership will be the main guideline in making procurement and sourcing decisions.

OPM 6520 - Transportation & Warehousing Management (3)

This course provides students with the fundamental concepts of managing both transportation systems and warehousing. Topics covered include modes of transportation, issues regarding transportation management, strategic warehouse decisions, warehouse network planning, and equipment used in warehouses and warehouse design. Several case studies will be introduced. Current and emerging technological issues regarding management of both transportation systems and warehousing will be described.

Sports Business (SPBZ)**SPBZ 4910 - Internship in Sports Business (3)**

The objective of the Sports Business internship is to expose the student to the sports industry or sports-related work through hands-on responsibilities in the area. This may be accomplished through an internship within a sports organization itself, or an organization which leverages sports as part of their business model. Prerequisite(s): MGT-3400, Junior standing, and permission from Sports Business Program Coordinator.

Aerospace Engineering (AENG)

AENG 1001 - Introduction to Aerospace & Mechanical Engineering (1)

This course will introduce aerospace and mechanical engineering. Through hands-on activities, students will learn the basics of engineering design and entrepreneurship. Working in teams, students will build aerospace and mechanical systems, practice entrepreneurial thinking, and develop the personal and professional skills needed to engage in lifelong learning. This course is open to non-majors.

AENG 1002 - Computer-Aided Engineering Design (1)

This course is an introduction to engineering drawing and computer aided design (CAD) and 3D solid modeling. Students will learn to interpret engineering drawings, create engineering drawings, and create 3D models of mechanical systems.

AENG 2000 - 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. Pre/Corequisite(s): AENG-1020 and PHYS-1610

AENG 2910 - 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 3000 - Performance (3)

Aircraft performance characteristics, level flight, rate-of-climb, range and endurance, take-off and landing, turn performance, energy state approximation, propeller theory and analysis, constraint analysis, carpet plots and design methodology. Prerequisite(s): AENG-2000.

AENG 3100 - Computer Aided Engineering (3)

The course outlines the principles of Computer Aided Engineering. The computer applications to structural design, kinematic synthesis and design optimization are explored. Prerequisites: ESCI3100 Mechanics of Solids, CSCI 1060 Scientific Programming

AENG 3150 - Astrodynamics (3)

Space environment; two-body problem and introduction to orbit mechanics; rigid body dynamics; satellite dynamics, rocket performance; re-entry dynamics. Prerequisite(s): AENG-2000 and ESCI-2150. Spring semester.

AENG 3210 - Gas Dynamics (3)

One-dimensional gas dynamics; normal and oblique shock waves; Prandtl-Meyer flows; Rayleigh and Fanno-line flow; method of characteristics.

Prerequisite(s): ESCI-2300 and ESCI-3200 Pre/Corequisite: MATH-3270 Spring semester.

AENG 3220 - 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(s): ESCI-3200 Pre/Corequisite(s): MATH-3270.

AENG 3910 - 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(s): Junior Standing(Offered every Fall, Spring and Summer)

AENG 3915 - 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(s): Junior standing. (Offered every Fall, Spring and Summer)

AENG 4004 - Flight Vehicle Analys & Dsgn I (3)

Application of aerospace engineering to the design methodology of a flight vehicle. Fall Semester. Prerequisite(s): AENG-3000 Pre/Corequisite(s): AENG 4400.

AENG 4014 - Flight Vehicle Analy & Dsgn II (3)

Application of aerospace engineering to the detail design of a flight vehicle, model design, fabrication testing, evaluation and analysis. Spring Semester.

Prerequisite(s): AENG-4004.

AENG 4050 - Space Mission Analysis and Design (3)

Selected topics of special interest to aerospace engineering majors.

AENG 4110 - Flight Vehicle Structures (3)

Introduction to theory of elasticity; behavior of materials including composite torsional and bending shear flows in thin walled structures; shear center; analysis of semi-monococque structures; joints and fittings; elastic and inelastic buckling; and fatigue analysis. Application of FEM methods.

AENG 4111 - Aerospace Laboratory (1)

Experimental studies in subsonic and supersonic air flows. Measurements of strains and deflections in aerospace structures under simulated loading conditions; static and dynamic measurements. Design of experiments, collection, reduction, evaluation and comparison of data. Prerequisite(s): AENG-3000 Pre/Corequisite(s): AENG-4110. Fall semester.

AENG 4140 - Hypersonics (3)

Introduction to hypersonics. Newtonian and Busemann Theory; slender body theory; shock expansion theory; small disturbance theory and supersonic similitude; blast wave theory. Thin shock layer theory. Prerequisite: AENG 3210.

AENG 4150 - 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: AENG 3150.

AENG 4210 - Propulsion (3)

Ramjet, turbojet, turbofan and turboshaft cycle analysis; component analysis and matching; turbojet off-design performance. Aircraft/engine integration.

Prerequisite(s): AENG-3210. Fall semester.

AENG 4230 - 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. Prerequisite(s): ESCI-3200

AENG 4240 - Helicopter Theory and Performance (3)

Airfoil theory as applied to propellers and rotors. Momentum and blade element theories, rotor dynamics during climb, hover, descent and autorotation; preliminary design techniques and rotor blade dynamics. Prerequisite: AENG3000.

AENG 4400 - Stability and Control (3)

Static stability and aircraft control; equations of motion, dynamic stability; closed loop control. Fall semester. Prerequisite(s): AENG-3000 and ESCI-3110.

AENG 4410 - Flight Simulation (3)

Overview of various types of simulators; introduction to major software and hardware components of state-of-the-art simulators; development of computer models of aircraft systems and performance characteristics and interfacing to models with each other to achieve high-fidelity, real time aircraft simulation. Use of reconfigurable flight simulator, whenever possible. Prerequisite(s): AENG-4400.

AENG 4530 - Composite Structures & Design (3)

Fiber and resin systems. Composite material properties and characterization of laminates, macro and micro-mechanics. Analysis and design of lamina and laminate. Prerequisite(s): MATH-3270.

AENG 4700 - Aeroelasticity (3)

Aerodynamic loads on a flexible surface. General formulation of aeroelastic problems. Control effectiveness and reversal. Wing divergence. Two - and three dimensional flutter theory. Empennage vibration and flutter analysis. Flutter prevention. Testing techniques. Prerequisite(s): ESCI-3110.

AENG 4800 - Systems Engineering (3)

Selected topics of special interest to aerospace engineering majors.

AENG 4910 - 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(s): Senior Standing(Offered every Fall, Spring and Summer)

AENG 4915 - 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(s): AENG-3915 or Senior standing.(Offered every Fall, Spring and Summer)

AENG 4930 - Special Topics in Aerospace Engineering (3)

Selected topics of special interest to aerospace engineering majors.

AENG 4980 - Independent Study (1-3)

Credit to be arranged. Independent study on an aerospace engineering topic under the direction of a faculty member.

AENG 5009 - Seminars (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters.

AENG 5050 - Space Mission Analysis and Design (3)

Basic spacecraft types and their applications. Major subsystems of a spacecraft system. Space environment, propulsion system, power system, structural design, spacecraft dynamics and attitude control, orbit mechanics, thermal control, communications, and ground segments, command and data handling. Spacecraft integration and testing. Prerequisites: Senior or graduate standing.

AENG 5060 - Advanced Space Mission Design (3)

Working in teams, students will perform a complete 'Phase A' study of a proposed space mission, culminating in an overall system description, preliminary design and subsystem-level requirements, as well as a feasibility study for developing this mission at St Louis University. The proposed mission will relate to near-term research interests of the instructor and other faculty with the intent of developing a real spacecraft. Students will be responsible for developing requirements and performing trade studies, preliminary sizing and mission analysis for all necessary subsystems (structures, power, thermal control, communications, command & data handling, attitude control, and/or navigation). Where possible, hardware prototypes and simulations will be created. Students will learn through lecture, individual research, and team projects. Prerequisite(s): AENG-5050

AENG 5150 - 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: AENG 3150

AENG 5230 - Introduction to Computational Fluid Dynamics (3)

This course is designed to establish the fundamentals of computational fluid dynamic schemes and methods to solve the governing PDEs. The students will learn how various schemes are applied to proposed model equations, and analyze the resulting solutions. Prerequisite(s): undergraduate fluid mechanics, heat transfer, and programming.

AENG 5240 - Hypersonics (3)

This course covers the history of hypersonic efforts; characteristics of hypersonic flow; slender body theory; hypersonic similitude; viscous interactions; transition to turbulence; high-temperature gas dynamics; thermal protection systems; and hypersonic propulsion systems. Prerequisites: undergraduate fluid mechanics, heat transfer, and programming.

AENG 5260 - Unsteady Aerodynamics of Bluff Bodies (3)

This course is an introduction to the aerodynamics of non-streamlined (i.e. bluff) bodies in both the steady and unsteady regimes. Topics include: aerodynamics of bodies in accelerated motion vs. steady motions; structure the near and far wakes behind flat plates (in normal flows). Several example shall be discussed in depth as well, encompassing examples from both engineering and natural worlds: 1) blimp flight and the role of apparent mass 2) parachute under descent; 3) inflating parachutes; 4) spacecraft drag during atmospheric re-entry; 5) wake re-contact during decelerating motion 6) wave generated drag on ocean piles; 7) engulfment drag by whales; 8) fast start b shrimp. Prerequisites: Undergraduate Fluid Dynamics, Aerodynamics

AENG 5280 - Applied Aerodynamics (3)

This course introduces students to analytical and numerical methods applicable to airfoils and wings. Student will be able to model two- and three dimensional flows. Student will understand how to estimate lift and drag of wings using analytically and numerically methods. Students will have an understanding of high-lift systems and of rotor aerodynamics. Prerequisites: Incompressible Flows, Programming

AENG 5400 - Guidance, navigation and Estimation for Dynamic Vehicle (3)

This course covers three aspects of advanced control of dynamic vehicles. The Estimation module is concerned with topics in automatic control theory related to the modeling of a vehicle state: observability, noise and uncertain filtering theory (Weiner Filters, Standard and Extended Kalman Filtering), an simulation. The Guidance module complements Estimation with respect to control: controllability, linear quadratic regulation, as well as a review of rotational dynamics and orbital mechanics. The Navigation module covers real world examples of sensors and actuators, including inertial systems and GP with an emphasis again on noise and uncertainty. Students will develop complete dynamic simulations of real vehicles, including state estimation and control. Prerequisite: Stability and Control, Analysis of Linear Control System

AENG 5410 - Flight Simulation (3)

Overview of various types of simulators; introduction to major software and hardware components of state-of-the-art simulators; development of computer models of aircraft systems and performance characteristics and interfacing them with each other to achieve high-fidelity, real time aircraft simulation. Field trips to area flight simulation facilities. Use of, and projects in, reconfigurable flight simulator. Prerequisites: Programming skills, Undergraduate Stability and Control

AENG 5450 - Space Dynamics & Control (3)

Motion in moving reference frames; Euler's equations; attitude dynamics; motion of a rigid spacecraft; attitude control systems and maneuvers; spacecraft and attitude feedback control; attitude determination and attitude control. Prerequisite: Undergraduate Astrodynamics.

AENG 5460 - Modern Control Systems (3)

Introduction to system theory, state variables and state space description to dynamic systems, linear vector space and dependence. Jordan canonical forms, Cayley-Hamilton theorem, system stability, controllability and observability, relation between state-space and transfer function models. A brief introduction to Nonlinear systems, Lyapunov stability theory will be provided. This course will give the basic knowledge for more advanced control courses, such as nonlinear control, robust control, optimal control, adaptive control. Prerequisite(s): Analysis of Linear Control Systems.

AENG 5470 - Advanced Control Systems (3)

Introduction to nonlinear systems. Differences between linear and nonlinear systems. Mathematical preliminaries. Equilibrium points of nonlinear system Phase plane analysis and limit cycles. Stability definitions for nonlinear systems. Lyapunov's indirect and direct methods. Stability of autonomous and non-autonomous systems. Describing function analysis. Brief introductions to modules on nonlinear control design including adaptive and nonlinear robust control. Applications of nonlinear control design. Prerequisite(s): AENG-5460

AENG 5530 - Composite Materials for Structure and Design (3)

Fiber and resin systems, Composite material properties and characterization lamina, Laminate, Micro-mechanics, Stress analysis of lamina and laminate, Design of laminate, Failure theories, and Manufacturing of laminate.

Prerequisite(s): MENG 5530

AENG 5700 - Aeroelasticity (3)

This course presents the fundamentals of Aeroelasticity involved with divergence, flutter and control surface reversal of primary lifting surfaces and empennage on aircraft and missiles. Beam vibration, aeroelastic equations and their solutions, unsteady aerodynamics, quasi-steady aerodynamics and finite state aerodynamics.. Prerequisites: Undergraduate Flight Vehicle Structures, Linear Vibrations

AENG 5750 - Parachute Systems and Design (3)

This course is an introduction to the various applications, aerodynamics and design rules of parachute systems. It is intended for engineering graduate students and professional engineers. The topics include: review of current use in aviation and space; parachute configurations and components; parachute testing techniques and facilities; parachute aerodynamics and flight dynamics; parachute inflation; gliding parachutes; non-terrestrial applications; parachute system design. Prerequisites: Undergraduate Fluid Dynamics, Aerodynamics.

AENG 5800 - Autonomous Systems Design (3)

This course introduces students to the design of autonomous systems. Student will demonstrate the ability to evaluate a system and develop a correct mathematical model of its dynamics. Student will understand the fundamentals of autonomous operation and the required integration of the various sub-systems. Prerequisite(s): CSCI 1060 and ESCI 3410

AENG 5850 - Space Mission Failures (3)

Space systems are designed to operate in the presence of multiple failures. And yet, occasionally, systems will still fail spectacularly. Reasons for failure include operator error, incorrect design, and manufacturing defects. The odds of these failures occurring can be significantly reduced through good systems engineering practice. But, in some cases, the very systems engineering practices themselves directly contribute to the failure. This course will introduce the fundamentals of good systems engineering practice. A series of case studies in failures (rockets, spacecraft, rovers, etc.) will be used to illustrate these principles and the new vulnerabilities they introduce. Prerequisite: AENG 3150: Astrodynamics and AENG 4930: Space Mission Analysis and Design

AENG 5910 - Co-op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for experiential learning session. Grading system is determined by department offering course. Offered every semester. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

AENG 5915 - Internship with Industry (1-3)

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 the course. Offered every semester. 0-3 credit hours.

AENG 5930 - Special Topics (1-3)

A one-time course on a particular topic, or a trial course that is expected to become a standard course with its own unique course number.

AENG 5964 - Masters Project (1-3)

Theoretical/computational/experimental work that leads to a Project Report and defense of the Project.

AENG 5984 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

AENG 5994 - Masters Thesis Research (0-6)

Research that leads to a Masters Thesis and final defense of the Thesis.

AENG 6910 - Co-op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for experiential learning session. Grading system is determined by department offering the course. Offered every semester. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT

AENG 6915 - Internship with Industry (1-3)

A work experience with an agency, firm or organization that employs person 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 the course. Offered every semester. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

AENG 6974 - Research Topics (1-3)

Theoretical or Computational or experimental work that is not part of the Dissertation.

AENG 6984 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

AENG 6994 - Doctoral Dissertation Research (0-6)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Aerospace Studies (AES)**AES 1010 - Found. of the U.S. Air Force (1-2)**

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-201) are basic courses designed to acquaint students with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 1020 - The Air Force Today (2)

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is mandatory for AFROTC cadets, and it complements this course by providing students with followership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-201) 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 2010 - Evo. of USAF Air & Space Power (2)

A survey course concerned with the beginnings of manned flight and the development of aerospace power in the United States, including the employment of air power in WWI, WWII, Korea, Vietnam, the Gulf War and the peaceful employment of U.S. air power in civic actions, scientific mission and support of space exploration. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing cadets with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-201) 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 2020 - The Air Force Way (1-2)

A survey course concerned with the beginnings of manned flight and the development of aerospace power in the United States, including the employment of air power in WWI, WWII, Korea, Vietnam, the Gulf War and the peaceful employment of U.S. air power in civic actions, scientific missions and support of space exploration. Leadership Laboratory is mandatory for Air Force ROTC cadets and it complements this course by providing them with their first opportunity for applied leadership experiences and prepares them for Field Training. Classroom activity, one hour per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-101 through AES-202) are basic courses designed to acquaint cadets with the United States Air Force and the opportunities available as an officer. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 3010 - Air Force Leadership & Manag. (3)

This course is a study in the anatomy of leadership, the need for quality and management leadership, the role of discipline in leadership situations and the variables affecting leadership. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts. Cadets deal with actual problems and complete projects associated with planning and managing the Leadership Laboratory. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving cadets opportunities to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 3020 - Air Force Leadership & Manag. (3)

This course continues the study in the anatomy of leadership, the need for quality and management leadership, the role of discipline in leadership situations and the variables affecting leadership. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts. Cadets deal with actual problems and complete projects associated with planning and managing the Leadership Laboratory. A mandatory Leadership Laboratory complements this course by providing advanced leadership experiences in officer-type activities, giving cadets opportunities to apply leadership and management principles of this course. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 4010 - Natl Sec. Aff. / Prep for AD (1-3)

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Air Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

AES 4020 - Prep. for Active Duty (3)

Cadets learn about the role of the professional military leader in a democratic society; societal attitudes toward the armed forces; the requisites for maintaining adequate national defense structure; the impact of technological and international developments on strategic preparedness and the overall policy-making process; and military law. In addition, cadets will study topics that will prepare them for their first active-duty assignment as officers in the Force. A mandatory Leadership Laboratory complements this course. Leadership Laboratory provides advanced leadership experiences and gives cadets opportunities to develop and apply fundamental leadership and management skills while planning and conducting corps activities. Classroom activity, three hours per week; Leadership Laboratory two hours per week. Aerospace Studies courses (AES-301 through AES-402) are advanced courses designed to improve communication and management skills required of Air Force officers. Grades earned in these courses will be computed in the student's overall grade point average. Credit hours of these courses may be included in the hours needed for graduation at the discretion of individual departmental chairpersons.

Aviation Management (AMGT)**AMGT 2600 - Airport Planning (3)**

To acquaint the student with the basic concepts of airport planning and construction, as well as investigation of various community characteristics and resources.

AMGT 2910 - 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 3600 - 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 3910 - 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(s): AMGT-2910

AMGT 3915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person 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 4050 - 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(s): MGT-3000.

AMGT 4400 - 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 economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation.

Prerequisite(s): ECON-1900. Pre/Corequisite(s): AMGT-4050

AMGT 4500 - 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(s): AMGT-4400.

AMGT 4900 - Senior Seminar (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 4915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs persons in this degree field. This experience may be full time or part-time as required by the industry sponsor. Grading system is determined by department.

Prerequisite(s): AMGT-3915 or senior standing.

AMGT 4971 - 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.

AMGT 4980 - 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 1000 - 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 1010 - Professional Orientation (2)

This course will provide an orientation to the University system, the teaching philosophy of the Department, and opportunities for professional development in specific career tracks such as professional pilot, system safety, and quality management. Opportunities such as internships, scholarships, research assistantships, and general networking and social events on campus, etc. will be discussed.

ASCI 1020 - 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 1300 - 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 1850 - Safety Management Systems (3)

Safety Management Systems (SMS) is a standard throughout the worldwide aviation industry. SMS is recognized by the International Civil Aviation Organization (ICAO) as the next step in the evolution of safety in aviation. SMS is a standards based system for the management of safety. Safety Management Systems integrate risk management and safety assurance concepts into repeatable, measurable, proactive systems.

ASCI 2010 - 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 2020 - Air Traffic Control Operations and Procedures (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.

ASCI 2050 - 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 commercial aviation. The organization and management of fixed base operation as a career field is also considered.

ASCI 2100 - 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 2200 - Concepts in Aerodynamics (3)

Aircraft types, theory of flight, aerodynamics of the airplane, aircraft performance, effects of atmospheric conditions on performance, theory of aircraft stability and control, effects of flight loads on aircraft structure.

ASCI 2400 - 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 2800 - General Aviation Operations (3)

A study of general aviation operations including fixed base operations (fuel, sales, flight training, charter, etc.) and corporate aviation (Business aviation, corporate flight departments, executive air fleets, etc.).

ASCI 2910 - 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 2930 - Special Topics in Aviation Science (Credit to be arranged) (3)

Prerequisites: Approval of the Department Chair.

ASCI 2990 - 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 3010 - Jet Transport Systems I (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(s): PHYS-1350

ASCI 3020 - Jet Transport Systems II (3)

This course includes an introduction to a typical jet aircraft currently used in commercial aviation. The systems will be covered from a pilot's perspective. Normal and emergency operating procedures will be covered as presented by the aircraft flight manual. Recommend that students take ASCI-3010 prior to this course. Prerequisite(s): PHYS-1350

ASCI 3030 - Basic Air Traffic Control: Tower and Radar (3)

This course will examine the principles, procedures, and regulations regarding the use of integrated flight and navigation systems for use in domestic, international, and oceanic flight.

ASCI 3100 - Air Carrier Operations (3)

This course includes the study of the operations of a representative air carrier in commercial aviation. All aspects of the operation important to the flight crew will be covered, including environmental, physiological, regulatory, and performance factors. Restricted to Juniors and Seniors.

ASCI 3650 - Applied Statistics (3)

In this course, the students will apply fundamental statistical analysis techniques to interpret data from their professional career interests. Discussion topics will include data collection, set-up of statistical analysis software, statistical sampling, parametric and non-parametric data analysis, report writing, and interpretation of previously published statistical reports.

Prerequisite(s): MATH-1320 or higher.

ASCI 3810 - Aviation Finance (3)

An introduction to the fiscal problems encountered in the administration of aviation facilities. The course covers the basics of budgeting, forecasting, financial management, taxation, and cost recovery. It also provides an accounting primer to allow aviation professionals to better understand accounting principles and financial reports. The financial, taxation and insurance considerations of aircraft acquisitions and ownership are presented. This course will be of good foundational value to students who are entering financial management in the air transportation industry. Prerequisite(s): MATH 1200, ACCT-2200 and ECON 1900.

ASCI 3910 - 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(s): ASCI-2910

ASCI 3915 - 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 4050 - 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(s): PSY-1010. Restricted to Juniors and Seniors.

ASCI 4200 - 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(s): ASCI-1500, ASCI-3500 and PSY-1010

ASCI 4250 - Prof Ethics and Standards (3)

Exposes the participant to various moral and ethical dilemmas inherent to business and more specifically the aviation industry. Participants will identify ethical problems, understand and evaluate differing ethical perspectives, and formulate viable policy recommendations. Prerequisite(s): PHIL-1050 and PHIL-2050.

ASCI 4350 - 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(s): ASCI-4050. Restricted to Seniors.

ASCI 4500 - Flight Crew Techniques and Procedures (1-3)

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(s): ASCI-4200 and PP-3510.

ASCI 4800 - International Aviation (3)

This course provides in-depth examination of the history and development of the international regulatory environment governing the aviation industry. Participants will gain a knowledge of the international governing bodies and resulting regulations that impact aviation companies in the global marketplace.

ASCI 4900 - Senior Seminar (2-3)

This seminar is the capstone experience for the Aviation Science Profession Pilot degree program. The student will study various aspects of the aviation industry that relates to each one's particular interest area.

ASCI 4910 - Co-op with Industry (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.

ASCI 4915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person 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(s): ASCI-3915 or Senior standing

ASCI 5010 - Analysis of Aviation Safety Data (3)

Provides the necessary strategies and tools for aviation managers to properly collect, examine, and interpret aviation operational and safety data. Special emphasis is placed on the application of statistical methods, risk management and quality assurance concepts.

ASCI 5020 - Aviation Safety Data Analysis (3)

Practical application and research of aviation and aerospace safety databases.

ASCI 5030 - Aviation Security Management (3)

The challenges of managing an aviation security program are addressed from the following perspectives: means, motives, and opportunities. Discussion topics include technical as well as behavioral science based approaches to detecting threats; the role of global political climate in influencing terrorism; and federal and international regulations as counter-terrorism measures.

ASCI 5040 - Human Factors in Avtn Safety (3)

This course will include elements of human factors theory applied to various aviation environments. Human factors theory will be reviewed and then applied to flight operations and maintenance issues. Emphasis will be placed on the management of safety programs toward a reduction of accidents caused by human error.

ASCI 5080 - Management of Avtn Safety Prog (3)

Synergistic application of five perspectives is discussed: organizational psychology, behavioral psychology, engineering, accounting, and underwriting. Discussion topics include the following: organizational risk management, hazard identification and management, failure modes and effects analysis, fault-tree analysis, values-based safety program development, and cost analysis of safety programs.

ASCI 5100 - Avtn Safety Career & Per. Dev. (3)

Aviation safety career and personal development in private and public aviation organizations.

ASCI 5120 - Aviation Safety Quality Issues (3)

A study of the practice and research involved in implementing aviation and aerospace quality issues.

ASCI 5130 - Aviation Safety Ethics (3)

A study of ethical behavior and decision making involved in implementing aviation safety philosophy.

ASCI 5150 - Avtn Incident/ Accident Analysis (3)

This course emphasizes the fundamental understanding of aircraft performance and technology, regulations governing aircraft operation, aircraft maintenance, and incident/accident investigation; incident/accident investigation techniques, and comprehensive solutions to minimize future occurrences of similar incidents or accidents are also addressed.

ASCI 5210 - Aviation Organization Theory and Management (3)

Explores the various models of organizational structure and culture including the implications for organizational leadership, project management and employee motivation. Topics include contingency theory, systems theory, group dynamics, and change management.

ASCI 5220 - Aviation Safety Programs (3)

Explores the development and administration of safety management systems (SMS) and emergency response plans. Examination of accident related case studies are used to discuss the impact of organizational culture on safety management.

ASCI 5230 - Prof Ethics and Standards (3)

Exposes the participant to various moral and ethical dilemmas inherent to business and more specifically the aviation industry. Participants will identify ethical problems, understand and evaluate differing ethical perspectives, and formulate viable policy recommendations.

ASCI 5460 - Qualitative Data Analysis (3)

Qualitative Data Analysis will introduce the student to various methods of qualitative analysis. Students will be expected to identify various types of qualitative data, develop research approaches, identify the most appropriate data collection method, and interpret and report analysis findings.

ASCI 5470 - Quantitative Data Analysis (3)

Quantitative Analysis is an introduction to the observation and application of quantitative data analysis. Students who complete this course will be capable of conducting statistical test supporting theoretical application in the current literature. Additionally, students will be capable of interpreting the results of statistical analysis found in various publications.

ASCI 6010 - Federal & International Regs (3)

This course provides in-depth examination of the history and development of domestic and international regulations governing the aviation industry. Participants will discuss the impact of domestic and international governing bodies and the resulting regulations that impact aviation companies in the global marketplace.

ASCI 6020 - Flight Op's Business & Admin (3)

A survey of aviation business strategies including, the marketing of aviation products, principles of product design and management, pricing and revenue management, advertising and promotion, and product distribution channels.

ASCI 6030 - Aviation and Public Policy (3)

This course explores the domestic and international regulatory, economic, legal and political environment that aviation companies operate within. The specific influences and relationships between the various market participants and regulating bodies are thoroughly explored.

ASCI 6050 - Lgl & Ethical Issues Aviation (3)

The exploration and analysis of selected legal and ethical issues related to aviation education regulation, the college student, and the academic institution.

ASCI 6060 - Aviation Curriculum Dev. (3)

Surveys practices and problems in the development, submission, approval and assessment of collegiate aviation curriculum in light of evolving U.S. and international pilot training considerations and requirements.

ASCI 6070 - Aviation Training Methods (3)

Provides a critical analysis of practices, expectations, strategies, and responsibilities of the aviation instructor, including an in-depth study of learner-centric pedagogy and its application to collegiate flight education.

Biomedical Engineering (BME)**BME 1000 - Introduction to Biomedical Engineering I (1)**

Introduction to the broad field of biomedical engineering. 1.000 Credit hours

BME 1010 - Introduction to Biomedical Engineering II (1)

Continuation of BME 1000. Introduction to careers in the broad field of biomedical engineering. 1.000 Credit hours

BME 2000 - BME Computing (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.

Prerequisite(s): MATH-1520 with a grade of C- or higher.

BME 2910 - 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 3100 - Signals (3)

Signal representations in the time domain and frequency domain, Fourier transforms, Laplace transforms, Z-transforms, linear systems, transfer functions, system response in time and frequency, analog and digital processing of signals. Relating signal properties to physical parameters.

Prerequisite(s): BME-2000, MATH-3550, ECE-2001 & 2002 with a grade of C- or higher. 3.000 Credit hours

BME 3150 - Biomedical Instrumentation (3)

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. Prerequisite(s): BIOL-2600, BME-3100 or ECE 3150 with a grade of C- or higher.

BME 3200 - Mechanics (3)

Topics include analyses of systems at static equilibrium; analyses of the deformation and stress of elastic and plastic materials under various loading modes; and an introduction to viscoelasticity. Prerequisite(s): PHYS-1610 with a grade of C- or higher.

BME 3300 - Transport Fundamentals (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. Prerequisite(s): BME-2000 or CSCI-1060; BME-3200; MATH-3550; PHYS-3410 or ESCI 2300, all with grades of C- or higher.

BME 3400 - 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. Prerequisite(s): BME-3200, CHEM 1120 with a grade of C- or higher.

BME 3840 - Junior Lab (1)

Laboratory to provide an experience in engineering design and experimentation. Students develop fundamental lab and analysis skills across a broad array of core BME topics, including mechanics, materials, transport, signals, and instrumentation. Prerequisite(s): BME-3200 with a grade of C- or higher, Prerequisite/Co-requisite: BME-3100, BME-3300, BME-3400.1.000 Credit hours

BME 3850 - Design of BME Lab Experiments (2)

Laboratory to provide an experience in engineering research and design at a level appropriate to the student's background. Students will work on developing their laboratory skills and ability to successfully design and implement a research plan. Prerequisites: Consent of instructor. 2.000 Credit hours

BME 4100 - 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. Prerequisite(s): BIOL-2600 & BME-2000 & either BME-3100 or ECE-3150, all with a grade of C- or higher.

BME 4200 - 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. Prerequisite(s): BME-3200 & BIOL-2600. Prerequisite/Co-requisite: BME-3400.

BME 4300 - Biotransport (3)

With the foundations of fluid, heat and mass transfer established in Transport Fundamentals, this course focuses on specific biological examples of transport including oxygen transport, blood flow and solute transport in biological systems. Additionally, discussion will include integration of fluid, heat and mass transfer in specific biomedical examples such as artificial organ development and extracorporeal devices. Prerequisite(s): BME-2600, BME-3300

BME 4310 - Advanced topics in Biotransport (3)

This course will explore advanced topics in transport phenomena, including utilizing dimensional analysis & unsteady state equations and studying multiple forms of transport simultaneously. Mathematical techniques to reduce and solve partial differential equations will be investigated to model biomedical systems more accurately. Prerequisites: BME430, BME440, BME310, & consent of instructor.

BME 4320 - Drug Delivery (3)

This course will cover various modes and engineered vehicles for drug delivery, including nano- and micro-spheres, transdermal drug delivery systems (DDS), implant drug delivery, targeted delivery, and hydrogels for controlled delivery. The class will also cover mass transport fundamentals: especially diffusion, but also convection and basic pharmacokinetics models. Offered periodically.

BME 4400 - Biomaterials (3)

Biomaterials is a multidisciplinary field requiring knowledge of biology, chemistry, materials science, mechanics, transport and medicine. In this course we will examine aspects of chemistry, biology, material science and mechanics as they apply to the interaction of a material with a biological system. Our examination of the field will lead to a general understanding of biocompatibility and how to design experiments that assess biocompatibility.

Prerequisite(s): BME-3400; BIOL-2600; PHYS-3410; MATH 4480 or STAT 3850 or MATH 3850, all with a grade of C- or higher.

BME 4410 - Tissue Engineering (3)

This course will explore quantitative topics in tissue engineering, including utilizing engineering topics such as materials science, kinetics and transport phenomena to describe biological processes in tissue engineering. Prerequisite(s): BME 3150; BME 3300; BME 4400; MATH 4480 or STAT 3850 or MATH 3850 3.000 Credit hours

BME 4500 - Numerical Methods in BME (3)

This course will explore numerical methods to characterize a variety of the major topics in Biomedical Engineering (transport phenomena, measurements, materials, mechanics and signals). Topics range from simple modeling of biosystems to steady and dynamic behavior of these systems. Various modeling tools and applications will also be explored. The course will utilize Matlab as its primary programming tool. Prerequisite(s): BME-2000 with a grade of C- or higher.

BME 4600 - Quantitative Physiology I (3)

In this course, students will quantitatively examine aspects of human physiology related to neural control and the sensory systems. The topics will cover excitable cells, the nervous system, chemical senses, hearing, vision, and the neuromuscular system. This examination of the field will lead to a quantitative understanding of how these systems work alone and integrate with one another. Prerequisites: BME 3300 Transport Fundamentals; BME 3150 Biomedical Instrumentation; BME 4400 Biomaterials 3.000 Credit hours

BME 4650 - Quantitative Physiology II (3)

In this course, students will quantitatively examine aspects of human physiology related to a number of body systems. The topics will cover cardiovascular physiology, respiratory physiology, renal physiology, gastrointestinal physiology, and endocrine. This examination of the field will lead to a quantitative understanding of how these systems work alone and integrate with one another. Offered periodically in the spring. Prerequisite: BME 4600

BME 4930 - Special Topics in Biomedical Engineering (3)

Experimental or one-time courses of special interest. Course must be approved by BME faculty prior to offering. Prerequisite: Approval of instructor.

BME 4950 - Senior Project I (3)

Capstone project; process of design; proposal development; project planning and scheduling; prototyping; quality; testing; regulatory issues; biomedical ethics; design review; teamwork; oral and written reports. Prerequisites: BME 3150; BME 3840. 3.000 Credit hours

BME 4960 - Senior Project II (0-3)

Continuation of first Senior Project I. Prerequisites: BME495 with a grade of or higher, consent of research advisor, or consent of BME Chair. (This class must normally be taken in the same academic year as BME495.)

BME 4970 - Independent Research (0-2)

Individual or small group investigation of a topic. Pass/Fail grading only.

BME 4980 - Independent Research (1-3)

Individual or small group investigation of a topic. Prerequisites: Consent of instructor.

BME 4980 - Independent Research (3)

Individual or small group investigation of a topic. Prerequisites: Consent of instructor.

BME 5000 - Seminars (0)

A biweekly departmental lecture-discussion presented by students, faculty, and invited guests. Registration required in the first semester. Seminar attendance expected in all semesters. Offered every semester.

BME 5010 - Research Analysis (2)

Introduction to scientific design, critique, communication, and analysis for biomedical engineers. Offered every fall semester.

BME 5020 - Accelerated Introduction to Biomechanics and Biomaterials (2)

Introduction to the principles of cellular, tissue, organ and whole body biomechanics; Introduction to the properties, selection, design, and testing of materials used by or in living systems. Offered every fall semester.

BME 5030 - Accelerated Introduction to Neuroengineering and Bioimaging (2)

Introduction to the principles of neuroscience and basic engineering approaches to study the human brain at cellular and systems levels. The course will also cover how brain anatomy, function and disease are evaluated using medical imaging techniques. Offered every fall semester.

BME 5050 - Data Handling (3)

This required course addresses issues of data acquisition, filtering, model fitting, analysis, and visualization. The data will include one-dimensional signals, images, and multidimensional data. The course will serve as a general overview of data handling, and some students may follow with more specialized courses that address the specific topics. Offered every spring semester.

BME 5060 - Ethics & Compromise (3)

Students and faculty will discuss the positive and negative impact of engineering and science on society. Examples and case studies will illustrate the scientific, economic, and social effects of new devices and new knowledge. The discussion will focus on the role of engineers and scientists, the ethical considerations, and the acceptable compromises. Offered every year.

BME 5200 - 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 5320 - Drug Delivery (3)

This course will cover various modes and engineered vehicles for drug delivery, including nano- and micro-spheres, transdermal drug delivery systems (DDS), implant drug delivery, targeted delivery, and hydrogels for controlled delivery. The class will also cover mass transport fundamentals: especially diffusion, but also convection and basic pharmacokinetics models. Prerequisites: BME 4400 Biomaterials and BME 3300 Transport, or equivalent. Offered periodically as needed.

BME 5400 - 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 5410 - 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 5420 - Tissue Engineering Scaffold Fabrication Techniques (3)

This course will explore various techniques for fabricating and assessing scaffolds for tissue engineering applications. This course will provide students with classroom instruction and hands-on laboratory experience with a number of scaffold fabrication techniques; such as electrospinning, various hydrogels technologies, cryogels, tissue decellularization, solvent casting, and particular leaching. Students will also learn about and perform a number of assessments for these scaffolds, and may learn about swelling and degradation testing, mechanical testing, scanning electron and atomic force microscopy imaging, and cell seeding and interaction studies. Prerequisite: BME 5410 Tissue Engineering. Offered periodically as needed.

BME 5450 - AFM Techniques and Training (1-2)

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 5500 - Experimental Technique & Design (1-2)

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 5600 - Quantitative Physiology I (3)

In this course, students will quantitatively examine aspects of human physiology related to neural control and the sensory systems. The topics will cover excitable cells, the nervous system, chemical senses, hearing, vision, and the neuromuscular system. This examination of the field will lead to a quantitative understanding of how these systems work alone and integrate with one another. Offered as needed in fall.

BME 5650 - Quantitative Physiology II (3)

In this course, students will quantitatively examine aspects of human physiology related to a number of body systems. The topics will cover cardiovascular physiology, respiratory physiology, renal physiology, gastrointestinal physiology, and endocrine. This examination of the field will lead to a quantitative understanding of how these systems work alone and integrate with one another. Offered as needed in spring.

BME 5800 - Research Rotation (1-3)

Students with or without previous research experience are provided the opportunity to carry out a research project with the guidance of a faculty member. A wide variety of topic in the fields of tissue engineering, biomaterials, biomechanics, biosignals, and biomeasurements are available. Course open to BME Graduate Students.

BME 5930 - Special Topics (1-3)

A one-time or trial course.

BME 5955 - Capstone Project 1 (3)

A capstone project for the BS degree combined with the beginning of research toward the MS degree; process of design; proposal development; project planning and scheduling; prototyping; quality; testing; regulatory issues; biomedical ethics; design review; teamwork; oral and written reports. Restricted to students in the Accelerated BS-MS Program in Engineering.

BME 5960 - Project Guidance (0-3)

For the M.S. project option.

BME 5965 - Capstone Project 2 (3)

Continuation of BME 5955. Restricted to students in the Accelerated BS-MS Program in Engineering.

BME 5970 - Research Topics (1-3)

For research other than the thesis or project.

BME 5980 - Graduate Reading Course (1-3)

An independent study with a faculty member.

BME 6930 - Special Topics (1-6)

A one-time or trial course.

BME 6970 - Research Topics (1-3)

For research other than dissertation research.

BME 6980 - Graduate Reading Course (1-3)

An independent study with a faculty member.

Civil Engineering (CVNG)**CVNG 1010 - Freshman Engineering I (1)**

An introduction to Civil Engineering profession that consists of a series of project-based learning modules designed to explore various specialty areas within Civil Engineering. Basic drafting skills are also covered. Offered every fall semester.

CVNG 1020 - Freshman Engineering II (1)

Introduction to engineering drawing and computer aided drafting techniques. Prerequisite: CVNG 101. Offered every spring semester.

CVNG 1500 - Civil Engineering Computing (3)

Introduction to computer programming tools applicable to Civil Engineering, including Matlab/MathCAD, advanced Excel, and 3-D CAD applications.

Prerequisite(s): MATH-1510; Co-requisites: CVNG-1020. (Offered every Spring)

CVNG 2010 - GIS and Surveying in Civil Engineering (3)

This course discusses the fundamental concepts of geographic information system (GIS) at different scales and resolutions. Spatial analysis methods and software are used to solve problems with data collected in the field and other sources. GIS and surveying topics are presented in the same context. The course is complemented with a database development and analysis lab that includes remote sensing data, basic and differential GPS, and traditional surveying to prepare students for today's growing business needs in the civil engineering industry.

CVNG 2017 - Spanish Civil Architectural Infrastructure: Ancient and Modern (0-3)

A study of civil engineering, architectural, and construction practices within the Spanish civilization with emphasis on comparisons of the old and the new. The course is focused on inter-relationships between human and built environment: aqueducts, canals, dams, bridges, highways. Includes a 2-week field trip in the Spanish country side; with academic seminars at the SLU-Madrid campus. Instructor approval required. [Independent study, experiential learning, 0-3 credits]

CVNG 2020 - GIS and Surveying in Civil Engineering Lab (1)

Introduction to data collection techniques used in geospatial analysis in civil engineering. Datatypes include, vector and raster imagery, LiDAR, GPS, and traditional surveying. Hands-on training of equipment [total station, GPS receivers with differential correction, LiDAR scanners (demo)] and other data collection techniques.

CVNG 3010 - Structural Analysis (3)

Analysis of statically determinate structures including influence lines. Deformations using different techniques. Analysis of statically indeterminate structures using the force method and displacement method. Prerequisite: ESCI 310. Offered every fall semester.

CVNG 3020 - Structural Analysis Lab (1)

Introduction to computational tools used for the analysis of structures. Co-requisite: CVNG 301. Offered every fall semester.

CVNG 3030 - Civil Engineering Materials (3-6)

Introduction to the characteristic properties and the fundamental behavior of the materials used by civil engineers with emphasis on concrete, steel, masonry, wood, and asphalt. Laboratory experiments and testing is used to give knowledgeable perception of the behavior when materials are subjected to various loads. Prerequisite: ESCI 310/311. Offered every fall semester.

CVNG 3040 - Sustainability and Environmental Engineering (3)

Course provides an overview of sustainability and environmental engineering principles. Topics include: population, environmental impact, and resource depletion; environmental laws; biodiversity and ecosystem functioning; climate change, air pollution, and ozone depletion; solid-waste management, hazardous and nuclear waste management; water resource and pollution management; and water and wastewater treatment and systems.

Prerequisite(s): CHEM-1110 or CHEM-1070. Co-requisite: CVNG 3041. (Offered every Fall)

CVNG 3041 - Sustainability&Environ Engr Lab (1)

Course provides an overview of environmental testing methods, including dissolved oxygen, BOD, pH and alkalinity, conductivity, plate counts, and turbidity. Prerequisite(s): CHEM-1115. Co-requisite: CVNG-3040.

(Offered every Fall)

CVNG 3070 - Engineering Project Management (2)

An introduction to basic concepts of management, business, public policy, and leadership. Topics include engineering economics and cost estimating methods, including labor, material, equipment and indirect costs; analytical techniques for project planning and scheduling; legal issues in engineering projects, including zoning regulations, proposals, and contracts; and understanding the importance of professional licensure. Offered every fall semester.

CVNG 3090 - Geotechnical Engineering (3)

This course is an introduction to soil properties and analysis techniques for geotechnical applications. Topics include soil formations, mass-volume relationships, soil classification, effective stress, compaction, seepage, soil deformation, state of stress, consolidation, strength, and failure. Prerequisites: CVNG 303. Offered every spring semester

CVNG 3100 - Geotechnical Engineering Lab (1)

Overview and use of measurements methods that can evaluate the properties of soils. Experiments include grain size distribution and soil classification, Atterberg Limits, compaction, permeability, consolidation, shear strength, and unconfined compressive strength. Co-requisite CVNG 309. Offered every spring semester.

CVNG 3110 - Transportation Engineering (3)

Introduction to transportation analysis and design. Course includes topics on road user and vehicle characteristics; geometric design of roadways, including horizontal and vertical alignment and cross-sectional elements; and signalized intersections. Also included is an Introduction to traffic engineering and transportation planning. Prerequisite(s): MATH-3850 or MATH-4880. (Offered every Spring)

CVNG 3120 - Transportation Engineering Lab (1)

Overview and use of measurement methods that can evaluate traffic flow and pavement condition and an introduction to computational methods used in transportation analysis and design. Co-requisite: CVNG 311. Offered every spring semester.

CVNG 3130 - Hydraulic Engineering (3)

Hydraulic and hydrological analysis applicable to civil engineering design. Topics include pressure pipe system analysis and design, open channel flow analysis and design, groundwater flow fundamentals and well design, hydrologic processes, storm water system analysis and design, and sanitary sewer analysis and design. Prerequisite: ESCI 322. Offered every spring semester.

CVNG 3140 - Hydraulic Engineering Lab (1)

Overview and use of measurement methods that can evaluate hydraulic and hydrologic conditions and an introduction to computational methods used in hydraulic and hydrologic analysis and design. Co-requisite: CVNG 313. Offered every spring semester.

CVNG 3150 - Intro to Structural Design (3)

Introduction to structural design codes and provisions. Loads and load combinations. Theory and design of reinforced concrete structures: beams, columns, slabs, walls and buildings. Theory and design of simple steel structural members and connection. Prerequisite: CVNG 301. Offered every spring semester.

CVNG 3160 - Structural Design Lab (1)

Companion laboratory to Introduction to Structural Design course. Focus is on the application of design codes and provisions to structural design problems

Prerequisite: CVNG 3010 Co-requisite: CVNG 3150

CVNG 3915 - Internship with Industry (1-3)

Field-based course. This course is an experiential learning course, which takes place in the place with a partner in industry. It is intended to be in partnership between the student, industry, and faculty.

CVNG 4010 - Senior Engineering (1)

Review of topics related to FE exam. Offered every spring semester.

CVNG 4030 - Foundation Engineering (3)

Application of the fundamental concepts of soil behavior to evaluate, select, and design shallow and deep foundation systems. Topics include the design and analysis of footing, mat, pier, and pile foundations. Professional development elective. Prerequisite: CVNG 309.

CVNG 4050 - Advanced Structural Analysis (3)

Direct stiffness method for analysis of two-dimensional trusses and frames, equivalent nodal forces, thermal and settlement effect, principal of virtual work, space trusses, grid structures, static condensation, Lagrange multipliers, tapered elements. Prerequisite: CVNG 301 or equivalent.

CVNG 4070 - Structural Dynamics (3)

Single degree of freedom systems, lumped-mass multi-degree systems, and multi degree of freedom systems. Numerical evaluation of system response: due to blasts, wind, and earthquake loading. Applications. Prerequisite: CVNG 301 or equivalent.

CVNG 4090 - Advanced Reinforced Concrete (3)

Advanced topics in flexural design; torsion in beams; behavior and design of slender columns; biaxial bending of columns; design of two way slabs; inelastic analysis of flexural members; use of strut and tie analysis; yield line analysis; design of mat foundations.

CVNG 4110 - Advanced Steel Design (3)

Interpretation of current codes as related to the physical behavior of steel structures. Design of structural steel members: tension, compression, flexure, and beam-columns. Design of connections. Prerequisite: CVNG 315

CVNG 4130 - Bridge Engineering (3)

Structural systems for bridges, loading, analysis by influence lines, slab and girder bridges, composite design, pre-stressed concrete, rating of existing bridges, specifications and economic factors. Prerequisite: CVNG 315.

CVNG 4150 - Prestressed-Concrete (3-6)

Theory and analysis of prestressed concrete members by various methods of prestressing; design of simple and continuous beams and slabs; prestress losses; composite beams. Extensive study of materials used in prestressed concrete. Precast concrete systems. Prerequisite: CVNG 3150.

CVNG 4190 - Sustainable Land Development Engineering (3)

Introduction to land development engineering and urban planning; site design and sediment control; transportation planning and roadway design; water resource and waste disposal issues; ecological impact analysis; application of sustainable development principles to land development projects at local and regional scales. Prerequisite: CVNG 203.

CVNG 4210 - Sustainable Water Resources Management (3)

Water Management and alternative analysis considering water resource, legal, political, and ecological issues; determination and forecasting of water demand; supply and estimating drought impacts resulting from cycle and permanent shifts in the climate. Prerequisites: CVNG 203 and 313.

CVNG 4350 - Hydraulic Modeling (3)

Hydraulic Modeling Techniques with a focus on Open-Channel Flow Applications. Offered in spring. Prerequisite: CVNG 3130

CVNG 4450 - Traffic Engineering (3)

Design, analysis and use of traffic control devices. Traffic administration, traffic flow theory, and highway capacity. An introduction to computer and traffic engineering. Acquisition, evaluation, statistical analysis and reporting of traffic engineering data used to design, evaluate and operate transportation systems.

CVNG 4500 - Capstone Design I (3)

Interdisciplinary teams working on an open-ended project. Topics include application of civil engineering principles to design problems with an emphasis on large-scale problem solving, engineering professional practice and ethics, and sustainability principles. Written, graphical and oral communications will be an integral part of the course. Offered every fall semester. Prerequisites: CVNG 3010; 3030; 3050 or 2040; 3070; 3090; 3110; 3130; and 3150.

CVNG 4510 - Capstone Design II (3)

Continuation of Capstone Design I. Prerequisite: CVNG 450. Offered every spring semester.

CVNG 4915 - Internship with Industry (1-3)

Field-based course. This course is an experiential learning course, which takes place in the place with a partner in industry. It is intended to be in partnership between the student, industry, and faculty.

CVNG 4930 - Special Topics (0-6)

A one-time course on a particular topic or a trial course that is expected to become a standard course with its own unique course number.

CVNG 5050 - Advanced Structural Analysis (3)

Direct stiffness method for analysis of two-dimensional trusses and frames, equivalent nodal forces, thermal and settlement effect, principal of virtual work, space trusses, grid structures, static condensation, Lagrange multipliers, tapered elements. Prerequisite: CVNG 301 or equivalent.

CVNG 5070 - Structural Dynamics (3)

Single degree of freedom systems, lumped-mass multi-degree systems, and multi degree of freedom systems. Numerical evaluation of system responses due to blasts, wind, and earthquake loading. Applications. Prerequisite: CVNG 301 or equivalent.

CVNG 5090 - Advanced Reinforced Concrete (3)

Advanced topics in flexural design; torsion in beams; behavior and design of slender columns; biaxial bending of columns; design of two way slabs; inelastic analysis of flexural members; use of strut and tie analysis; yield line analysis; design of mat foundations.

CVNG 5110 - Advanced Steel Design (3)

Interpretation of current codes as related to the physical behavior of steel structures. Design of structural steel members: tension, compression, flexural and beam-columns. Design of connections.

CVNG 5130 - Bridge Engineering (3)

Structural systems for bridges, loading, analysis by influence lines, slab and girder bridges, composite design, pre-stressed concrete, rating of existing bridges, specifications and economic factors. Prerequisite: CVNG 315.

CVNG 5150 - Prestressed Concrete (3)

Theory and analysis of prestressed concrete members by various methods of prestressing; design of simple and continuous beams and slabs; prestress losses; composite beams. Extensive study of materials used in prestressed concrete. Precast concrete systems. Prerequisite: CVNG 3150.

CVNG 5170 - Seismic Design (3)

Theory, analysis, and design of building structures under earthquake loading. Application of current codes and standards related to steel, concrete, masonry, and wood structures. Pre-req: CVNG 315.

CVNG 5190 - Sustainable Land Development Engineering (3)

Introduction to land development engineering and urban planning; site design and sediment control; transportation planning and roadway design; water resource and waste disposal issues; ecological impact analysis; application sustainable development principles to land development projects at local and regional scales. Prerequisite: CVNG 203.

CVNG 5210 - Sustainable Water Resources Management (3)

Water Management and alternative analysis considering water resource, legal, political, and ecological issues; determination and forecasting of water demand; supply and estimating drought impacts resulting from cycle and permanent shifts in the climate. Prerequisites: CVNG 203 and 313.

CVNG 5350 - Hydraulic Modeling (3)

Hydraulic Modeling Techniques with a focus on Open-Channel Flow Applications. Offered in spring. Prerequisite: CVNG 3130 or instructor approval.

CVNG 5450 - Traffic Engineering (3)

Design, analysis and use of traffic control devices. Traffic administration, traffic flow theory, and highway capacity. An introduction to computer and traffic engineering. Acquisition, evaluation, statistical analysis and reporting of traffic engineering data used to design, evaluate and operate transportation systems.

CVNG 5930 - Special Topics (3)

A one-time course on a particular topic or a trial course that is expected to become a standard course with its own unique course number.

CVNG 5960 - Masters Project (1-3)

Masters Project is for students in the MS Non-Thesis degree program who will conduct a small project under the supervision of their Faculty Advisor. No more than 3 hours will be devoted to the Project.

CVNG 5990 - Thesis Research (0-6)

Research that leads to a Master's Thesis and final defense of the Thesis

CVNG 6990 - Doctoral Dissertation Research (0-6)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Electrical & Computer Engr (ECE)**ECE 1001 - Introduction to Electrical and Computer Engineering (1)**

Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electric and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Fall semester.

ECE 1002 - Introduction to ECE II (1)

Continuation of the Intro to ECE I - Electrical Devices, magnetic devices, electronic devices, digital logic, computer organization, communication systems. Design concepts in electrical and computer engineering. Hands-on experience on familiar pieces of electronic gear. Introduction to software packages applicable to electrical engineering. Spring semester.

ECE 2001 - Introduction to 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. Prerequisites: PHYS 1610 & MATH 1520. Corequisite: ECE 2002.

ECE 2002 - Electrical Engineering Lab (1)

Laboratory experiments to emphasize materials covered in ECE 2001. Even semester. Corequisite: ECE 2001.

ECE 2101 - Electrical Circuits I (3)

Physical foundations of electrical circuits. Ohms' Law, Kirchhoff's Laws, nodal and mesh analysis, Thevenin's/Norton's equivalents, and the principle of superposition. Transient analysis of simple RL, RC and RLC circuits. Operational amplifier circuits. Fall semester.

ECE 2102 - Electrical Circuits II (3)

Sinusoidal steady-state analysis, sinusoidal steady-state power calculation, balanced 3-phase systems. Mutual inductance and transformers, series and parallel resonance. Applications of Laplace and Fourier transforms to circuit analysis. Spring semester.

ECE 2103 - Electrical Circuits Lab (1)

Laboratory experiments to emphasize materials covered in ECE 2101 and 2102. Spring semester.

ECE 2205 - Digital Design (3)

Number systems. Boolean algebra. Logical function. Combinational circuits. Flip-flops, registers and counters. Arithmetic, memories. Introduction to digital computers and microprocessors. Fall semester.

ECE 2206 - Digital Design Lab (1)

Laboratory experiments to emphasize materials covered in ECE 2205. Fall semester.

ECE 2910 - Co-op in ECE (0-3)

An optional supervised work experience with an agency, firm or organization which employs engineers. Grading system is determined by department offering course. Every semester.

ECE 2915 - Internship with Industry (1-3)

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.

ECE 2930 - Special Topics (1-3)

Independent study on any electrical engineering topic under the direction of a faculty member. On demand. Prerequisite: Sophomore ECE Standing.

ECE 3052 - Probability and Random Variables for Engineers (3)

The goal of this course is to introduce the principles and concepts of random experiments and illustrate the application of those to problems of an engineering nature. Topics covered include the axioms of probability, combinatorics, the random variable (RV), distribution functions, expectations and statistics, the gaussian RV, transformations, central limit theorem, confidence intervals, and hypothesis testing. Both discrete and continuous random variables will be covered. Computer programming may be used to reinforce coursework material. Offered in spring. Prerequisites: Linear Systems (ECE3150), Calculus III (MATH2530), Matlab Programming

ECE 3090 - Junior Design (1)

This is a breadth first course in system design and design group dynamics. This course is intended to prepare students for their capstone design sequence by introducing them to the design of multi-system open ended design problems. This introduction will be facilitated through several design problems. Students will work in design groups with similar objectives as are expected in the capstone design class.

ECE 3110 - 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(s): ECE-2102 and MATH-3550 or equivalent.

ECE 3130 - 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(s): ECE-2102 & MATH-3550

ECE 3131 - 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 3130

ECE 3132 - Electronic Circuit Design Lab (1)

Laboratory experiments to emphasize materials covered in ECE 3131. Spring semester. Prerequisite or Co-requisite: ECE 3131.

ECE 3140 - 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(s): ECE 2102 & MATH-3550

ECE 3150 - Linear 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(s): ECE 2102 & MATH-3550

ECE 3151 - Linear Systems Lab (1)

Laboratory experiments to emphasize materials covered in ECE 3150. Fall semester.

ECE 3205 - Advanced Digital Design (3)

Digital Design with Programmable Logic Devices (PLDs) and Field Programmable Gate Arrays (FPGAs); HDL design entry methods; Event driven simulation; Verification using simulation test benches; Timing verification using Back Annotated simulations.

ECE 3215 - Computer Systems Design (3)

Organization and design considerations of computer expansion peripherals. Analysis of expansion channel throughput and the influences that impact throughput including resource sharing and overhead. Special emphasis is placed on design concerns automating the movement of data into and out a modern PC.

ECE 3216 - Computer Systems Design Lab (1)

Laboratory investigation of microcomputing expansion covering the material ECE 315. Practical aspects of peripheral design and implementation. Design construction, programming, simulation and testing of expansion hardware at the software required to interact with them. Use of hardware description languages and software development tools.

ECE 3217 - Computer Architecture and Organization (3)

Introduction to the organization and architecture of computer systems, including aspects of digital logic, data representation, assembly level organization, memory systems, and processor architectures. Spring semester

Prerequisite(s): CSCI-1300 & MATH-1660.

ECE 3225 - Microprocessors (3)

Review of number systems. Microprocessors/microcomputer structure, input/output. Signals and devices. Computer arithmetic, programming, interfacing and data acquisition. Fall semester. Prerequisite: ECE 2205

ECE 3226 - Microprocessors Laboratory (1)

Concurrent registration with ECE 3225. Laboratory experiments to emphasize materials covered in ECE 3225. Fall semester

ECE 3910 - 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. Grading system is determined by department offering course. Offered every semester. Prerequisite: Junior EC Standing

ECE 3915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person 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: Junior standing.

ECE 3930 - Special Topics (1-3)

Independent study on any electrical engineering topic under the direction of faculty member. On demand. Prerequisite: Junior ECE Standing.

ECE 4108 - Antenna Engineering (3)

Antenna parameters. Polarization. Basic antenna types. Antenna arrays. Broadband antenna design. Antenna measurements. On demand. Prerequisite: ECE 3140.

ECE 4110 - Power Systems Analysis I (3)

The course deals with analysis and design of electrical power transmission lines and its components. Per-Unit and power systems: Transformers and power lines. RLC - Computing transmission line parameters, ABCD parameters and transmission line steady-state operation. Power flows and system protection.

ECE 4111 - Power Systems Analysis II (3)

The course builds on topics covered in part I. Study of symmetrical faults, methods of symmetrical components and basis for studying unsymmetrical faults, power system protection, power system controls, Transient operation of transmission lines and Transient stability. Prerequisite: ECE 4110.

ECE 4120 - Automatic Control Systems (3)

Linear time-invariant systems. Transfer functions, block diagrams and signal flow graphs. Stability, time and frequency response, and root locus analysis. Compensator design in time and frequency domain. Spring semester.

Prerequisite(s): ECE-3150, MATH-3550.

ECE 4132 - Analog Integrated Circuit Design (3)

The purpose of the course is to build on introductory level analog electronics design. It will cover such topics as active loads and current mirrors and then proceed to output stages of amplifiers utilizing Class A, Class B, and Class AB amplifiers. We will employ both Bipolar and MOS technologies. Multistage amplifiers will be introduced. Design of Operational Amplifiers and Differential amplifiers will be covered. Frequency response of amplifiers and stability of feedback circuit will also be covered.

ECE 4140 - Electromagnetic Waves (3)

Introduction, elementary transmission line concepts. Standing-wave AC configurations. Smith chart and matching problems. Plane waves and wave impedance. Mode theory of rectangular waveguides. Microstrips, stripline and other practical transmission lines. Fall semester. Prerequisite: ECE 3140.

ECE 4141 - Radar Systems (3)

Nature of radar, basic elements of the radar systems. Radar waveforms and applications. Tracking radar techniques and applications, radar electronic counter countermeasures (ECCM). On demand. Prerequisite: Instructor's permission or ECE 4160.

ECE 4142 - Microwave Theory & Techniques (3)

Introduction. Microwave frequencies. Microwave devices and systems. Microwave measurements. Microwave components and tubes. Measurement of microwave fields and their components. On demand. Prerequisite: ECE 3140.

ECE 4150 - Filter Design (3)

Transfer functions. Op-amp RC circuits. Design of Butterworth, Chebyshev, elliptic and delay filters. Frequency transformation and switched capacitor filters. On demand. Prerequisite(s): ECE-3131 and MATH-3550 or equivalent.

ECE 4151 - 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. Prerequisite(s): ECE-3150, MATH-3550.

ECE 4153 - Image Processing (3)

Introduction to digital images and image capture. Image transforms: DFT, FFT, Walsh, Hadamard, DCT, Hough and Hotelling transforms. Image enhancement, image restoration, image encoding and image segmentation. On demand. Prerequisite(s): ECE-3150, MATH-3550.

ECE 4160 - Communication Systems (3)

Review of signal analysis and probability theory. Amplitude modulation systems. Frequency and phase modulation systems. Pulse modulation systems. Noise in CW modulation. Spring semester Prerequisite(s): ECE-3150 and MATH-4880.

ECE 4161 - Satellite 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, pre-assigned FDMA, demand-assigned FDMA, spade system, TDMA, CDMA. On demand. Prerequisite: Instructor's permission.

ECE 4162 - Cellular Communications (3)

This course covers the basic elements of Cellular communications include propagation phenomenology, multipath, frequency reuse and fading. Include are important aspects of cellular system performance including Grade-of-Service, cellular coverage, and cellular capacity. The course also covers select topics in current cellular system standards including digital modulation and error correction coding schemes.

ECE 4170 - Energy Technologies I (3)

The course is to introduce current energy consumption of the United States and the World. It is to review/study various energy sources and energy consumption portfolio of the United States and major industrial nations. It is then to consider the impact of various alternative renewable energy sources and energy conservation methods on overall energy consumption equation. this course several major renewable energy sources such as wind, solar, geothermal as well as energy conservation methods will be studied.

ECE 4225 - Hardware/Software Co-Design (3)

This course provides an understanding of hardware and software co-design. Topics include type of processors (software), types of integrated circuits (hardware), types of memory and memory architectures, interfacing and system design for real-time operation. This course will emphasis design spa exploration and have a capstone project requiring the integration of real-time system into communicating hardware and software pieces.

ECE 4226 - Mobile Robotics (3)

This course is an introduction to robot kinematics, sensor technology and basic machine control. This course will develop the low level tools required to move robots in an environment and an appreciation of the requirements for doing so in an autonomous fashion. This course will have a capstone project requiring the design or development of a robot platform to meet a goal drawn from current topics.

ECE 4229 - Microcomp-Based System Design (3)

Study of 16-bit microprocessors architecture, programming, and interfacing. On demand.

ECE 4235 - 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 2205 and ECE 3131.

ECE 4800 - ECE Design I (3)

Principles of engineering experimentation and design. Development of engineering design proposal. Fall Semester. Prerequisite: Senior ECE standing

ECE 4810 - ECE Design II (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 4800.

ECE 4910 - Co-Op with Industry (0)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. Grading system is determined by department offering course. Offered every semester. Prerequisite: Senior Standing

ECE 4915 - Internship with Industry (1)

A work experience with an agency, firm or organization that employs person 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: Senior standing.

ECE 4930 - Special Lecture (1-3)

Selected topics of special interest to electrical engineering majors. On demand. Prerequisite: Senior ECE standing.

ECE 4931 - Special Lecture (3)

Selected topics of special interest to electrical engineering majors. On demand. Prerequisite: Senior ECE standing.

ECE 4980 - Independent Study (1-3)

Credit to be arranged. Independent study on an electrical & computer engineering topic under the direction of a faculty member. 1-3 credit hours. Restricted to ECE majors at the senior level.

ECE 5000 - Seminars (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters.

ECE 5055 - Stochastic Processes (3)

Introduction to probability theory, stochastic processes, statistical inference, and probabilistic models used in science, engineering, economics, and related fields. The course covers the fundamentals of probability theory (probabilistic models, discrete and continuous random variables, multiple random variables, and limit theorems), which are typically part of a first course on the subject. It also contains, a number of more advanced topics, from which an instructor can choose to match the goals of students. These topics include transforms, sums of random variables, a fairly detailed introduction to Bernoulli, Poisson, and Markov processes, Bayesian inference, and an introduction to classical statistics.

ECE 5110 - Power Systems Analysis I (3)

The course deals with analysis and design of electrical power transmission lines and its components. Per-Unit and power systems: Transformers and power lines. RLC - Computing transmission line parameters, ABCD parameters and transmission line steady-state operation. Power flows and system protection.

ECE 5111 - Power Systems Analysis II (3)

The course builds on topics covered in part I. Study of symmetrical faults, methods of symmetrical components and basis for studying unsymmetrical faults, power system protection, power system controls, Transient operation of transmission lines and Transient stability. Prerequisite: ECE 4110.

ECE 5120 - Modern Control Theory (3)

State-space representation (discrete and continuous) of linear systems. Observability and controllability. Controller design, estimator design and stability concepts. Digital control: continuous and discrete design. Hardware characteristics - A/D, D/A, prefilters. Quantization and sampling effects in digital control. On demand.

ECE 5130 - Advanced Semiconductor Devices (3)

This course will focus mostly on MOSFET and CMOS, but also some advance topics in BJT and photonic devices. First non-ideal characteristics of MOSFETs will be discussed, like channel-length modulation and short-channel effects. Threshold voltage modification by doping will be covered. Issues with MOS scaling will be covered. A combination of an n-channel and p-channel MOSFET is used for CMOS devices that form the basis for current digital technology. Fundamentals of the CMOS inverter operation will be discussed. The Operation of a CMOS inverter will be explained. Silicon on Silicon and Silicon on Insulator issues will be covered. Prerequisites: ECE

ECE 5131 - Low Noise Electronics Design (3)

This course is an introduction to the area of low-noise electronic design. It presents an overview of noise fundamentals, a description of noise models for passive devices and active devices, methods of calculating the noise performance of circuits, and techniques for minimizing noise in circuit design. Prerequisite: ECE 3131

ECE 5132 - Analog Integrated Circuit Design (3)

The purpose of the course is to build on introductory level analog electronics design. It will cover such topics as active loads and current mirrors and then proceed to output stages of amplifiers utilizing Class A, Class B, and Class AB amplifiers. We will employ both Bipolar and MOS technologies. Multistage amplifiers will be introduced. Design of Operational Amplifiers and Differential amplifiers will be covered. Frequency response of amplifiers and stability of feedback circuit will also be covered.

ECE 5141 - Radar System (3)

Basic radar definitions; transmitter power, antenna coverage and gain; target cross-section, receiver noise and system losses; radar equations; pulsed radars; reflection of radar waves and weather conditions; synthetic array radars and pulse compression techniques; track-while scan and electronic scan; millimeter wave and laser radar systems. Prerequisites: ECE 3140 & 4880.

ECE 5142 - Microwave Theory & Techniques (3)

Introduction to: microwave Transmission lines; microwave network analysis; microwave resonators; microwave components; active microwave circuits; and introduction to microwave systems. Prerequisite: ECE 4140.

ECE 5143 - Antenna Theory and Design (3)

Antenna fundamentals and definitions; some simply radiating systems; antenna arrays; wire antennas; broadband antennas; and aperture antennas. Prerequisite: ECE 4140.

ECE 5150 - Advanced Filter Design (3)

Frequency transformations, high-pass and low-pass band elimination filters, sensitivity. Passive ladder, ladder design with simulated elements, leap frog simulation of ladders. Switched-capacitor filters, delay filters, delay equalization. The Z-transform, IIR and FIR digital filters. On demand. Prerequisite: ECE 4150.

ECE 5151 - Digital Signal Processing (3)

This course includes IIR and FIR discrete-time filter theory, mapping from continuous-time to discrete-time filters, bilinear-Z transform, Impulse Invariance method, implementation structures such as Direct form I & II, and numerical precision effects. Prerequisites: Linear Systems, Probability & Statistics, and programming

ECE 5153 - Image Processing (3)

Introduction to digital images and image capture. Image transforms: DFT, FFT, Walsh, Hadamard, DCT, Hough and Hotelling transforms. Image enhancement, image restoration, image encoding and image segmentation. On demand.

ECE 5160 - Communication Systems (3)

Review of signal analysis and probability theory. Amplitude modulation systems. Frequency and phase modulation systems. Pulse modulation systems. Noise in CW modulation. Additional topics at graduate level. Spring semester Prerequisite(s): ECE-3150 and MATH-4880.

ECE 5161 - Satellite Communications (3)

Overview of satellite systems; orbits and launching methods; the geostationary orbit; radio wave propagations; the space segment; the earth segment; the space link; interference; satellite access; satellite services and the internet. Prerequisites: Senior status and permission of the instructor.

ECE 5162 - Cellular Communications (3)

This course covers the basic elements of Cellular communications include propagation phenomenology, multipath, frequency reuse and fading. Include are important aspects of cellular system performance including Grade-of-Service, cellular coverage, and cellular capacity. The course also covers select topics in current cellular system standards including digital modulation and error correction coding schemes.

ECE 5170 - Energy Technologies I (3)

The course is to introduce current energy consumption of the United States and the World. It is to review/study various energy sources and energy consumption portfolio of the United States and major industrial nations. It is then to consider the impact of various alternative renewable energy sources and energy conservation methods on overall energy consumption equation. This course several major renewable energy sources such as wind, solar, geothermal as well as energy conservation methods will be studied.

ECE 5225 - Hardware Software Co-Design (3)

This course provides an understanding of hardware and software co-design. Topics include type of processors (software), types of integrated circuits (hardware), types of memory and memory architectures, interfacing and system design for real-time operation. This course will emphasize design space exploration and have a capstone project requiring the integration of a real-time system into communicating hardware and software pieces. Recommended prerequisite: ECE 3215.

ECE 5226 - Mobile Robotics (3)

This course is an introduction to robot kinematics, sensor technology and basic machine control. This course will develop the low level tools required to move robots in an environment and an appreciation of the requirements for doing so in an autonomous fashion. This course will have a capstone project requiring the design or development of a robot platform to meet a goal drawn from current topics. Prerequisites: ECE 3225 & 3150

ECE 5235 - Digital IC Design (3)

The course covers the whole range of basic issues related to digital integrated circuit design and development. The course will be mostly based on CMOS technology. It will cover some of the timing issues. Students are expected to carry out term project. Prerequisites: ECE 3130

ECE 5910 - Co-Op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. Grading system is determined by department offering course. Offered every semester. 0-3 credit hours.

ECE 5915 - Internship with Industry (1-3)

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. 0-3 credit hours.

ECE 5930 - Special Topics (3)

Special topics course is based on faculty and students interests. This would be an avenue to develop new courses on a trial basis.

ECE 5960 - Masters Project (1-3)

Theoretical/ computational/ experimental work that leads to a project Report and defense of the Project.

ECE 5970 - Research Topics (1-3)

Theoretical or experimental work that is not part of the Thesis or Project.

ECE 5980 - Independent Study (1-3)

An individualized study course, in which students explore topics related to their graduate work and career goals. Students work with faculty members on a specific topic compatible to master's level and produces a report.

ECE 6910 - Co-Op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. Grading system is determined by department offering course. Offered every semester. 0-3 credit hours.

ECE 6915 - Internship with Industry (1-3)

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. 0-3 credit hours.

ECE 6970 - Research Topics (1-3)

Theoretical or experimental work that is not part of the Dissertation.

ECE 6980 - Independent Study (1-3)

An individualized study course, in which students explore topics related to their graduate work and career goals. Students work with faculty members on a specific topic compatible to master's level and produces a report.

Engineering Sciences (ESCI)**ESCI 1010 - Freshman Engineering I (1)**

An introduction to the philosophy of engineering and engineering design. Introduction to the various laboratory and computing facilities on campus. Introduction to engineering drawing and computer aided drafting techniques.

ESCI 1020 - Computer Aided Design (1)

Prerequisite(s): ESCI-1010. Further topics in the philosophy of engineering and engineering design. Further topics in skills and tools used in engineering.

ESCI 2100 - 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. Pre/Corequisite(s): PHYS-1610

ESCI 2150 - 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(s): MATH-1520 Pre/Corequisite(s): ESCI-2100

ESCI 2300 - Thermodynamics (3)

Properties, characteristics and fundamental equations of gases, application of first and second laws of thermodynamics in evaluation of engines, cycles and processes. Pre/Corequisite: MATH-2530.

ESCI 3100 - 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: ESCI 2100 Pre/Corequisite: MATH 2530

ESCI 3101 - Mechanics of Solids Lab (1)

Laboratory experiments to emphasize material covered in lectures of ESCI-3100. Corequisite(s): ESCI-3100

ESCI 3110 - 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: ESCI 2150, MATH 3550.

ESCI 3200 - Fluid Dynamics (3)

Fluid mechanics, conservation of mass, momentum and energy, stream function; dimensional analysis and similitude; application to problems of inviscid and viscous flows, drag, flow measurements. Pre/Corequisite: MATH 2530.

ESCI 3201 - Fluid Dynamics Laboratory (1)

Corequisite: ESCI-3200

ESCI 3300 - 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: ESCI 2150, MATH 3550.

ESCI 3410 - Analysis & Cntrl of Linear Sys (3)

Linear vibration theory; control system block diagrams; analog and digital simulation; frequency and time domain analysis techniques; state space; an introduction to optimal control theory. Spring semester. Prerequisite(s): ESCI 3110.

ESCI 4300 - Analysis & Cntrl of Linear Sys (3)

Linear vibration theory; control system block diagrams; analog and digital simulation; frequency and time domain analysis techniques; state space; an introduction to optimal control theory. Spring semester. Prerequisites: ESCI 3110.

Flight Science (FSCI)**FSCI 1150 - Flight 1 (0-2)**

This course will provide the fundamental knowledge required for the student successfully learn the maneuvers and procedures for pre-solo flight, dual and solo local operations, and an introduction to VFR cross-country operations. (requisite: FSCI 1250.

FSCI 1155 - Flight 1 Supplemental (1-2)

This course will provide the supplemental coursework necessary for the student to perform the maneuvers and procedures for pre-solo flight, dual and solo local operations, and an introduction to VFR cross-country operations. Offered in spring. Prerequisite: FSCI 1150.

FSCI 1250 - Basic Flight Foundations (3)

This course will provide the fundamental knowledge of the pilot's role in operations including aircraft design, aircraft operating characteristics, aircraft maintenance, airports, airspace, air traffic control, VFR and IFR communications and aircraft performance.

FSCI 1300 - Aviation Weather (3)

This course will provide the fundamentals of meteorological theory with a specific application to aviation and flight. Appropriate weather services that are available to the pilot will be covered.

FSCI 1550 - Flight 2 (0-2)

This course provides the fundamentals of cross-country flight from solo pilot command to the Private Pilot Certificate; introduction to commercial maneuvers. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Prerequisite: FSCI 1150.

FSCI 1555 - Flight 2 Supplemental (1-2)

This course provides the supplemental coursework necessary for the student to perform cross-country flight from solo pilot in command to the Private Pilot Certificate; introduction to commercial maneuvers. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Offered in spring. Prerequisite: FSCI 1550.

FSCI 1560 - Flight 2 Transition (0-1)

This course provides a transition for holders of a Private Pilot Certificate into the curriculum and will introduce them to commercial maneuvers. This will include the elements of airmanship, practical weather, and other cross-country skills.

FSCI 2150 - Flight 3 (0-2)

This course provides instruction for the application of previously learned commercial maneuvers; introduction of instrument flying and navigation skills in the flight environment. Prerequisite: FSCI 1550.

FSCI 2155 - Flight 3 Supplemental (1-2)

Instrument Flying Handbook, Instrument Rating Practical Test Standards (PTS), IFR Low Altitude Enroute Chart, Terminal Procedures Publication. Offered in spring. Prerequisite: FSCI 2150.

FSCI 2250 - Instrument Flight Foundations (3)

This course will provide instruction in the advanced knowledge areas of aviation law for instrument flight, mass & balance, flight planning, and radio navigation for high performance aircraft as pilot in command. Prerequisite: FSCI 1250

FSCI 2550 - Flight 4 (0-2)

This course will provide the principles of flight to qualify for the Instrument Rating for Single engine. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning. Prerequisite: FSCI 2150.

FSCI 2555 - Flight 4 Supplemental (1-2)

This course provides the supplemental coursework necessary for the student to provide the principles of flight to qualify for the Instrument Rating for Single engine. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning. Offered in spring. Prerequisite: FSCI 2550.

FSCI 2650 - Navigation Foundations (3)

This course will provide instruction in the advanced knowledge areas necessary of general and global navigation for high performance aircraft as pilot in command. Prerequisite(s): FSCI-2250 and MATH-1200.

FSCI 2750 - 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(s): ASCI-2200 and PHYS-1350.

FSCI 3062 - Turbine Aircraft Transition (2)

This course utilizes classroom and/or lab based training to introduce turbine aircraft operations and autopilot usage. Topics include: turbine aircraft systems, FAR part 121 regulations, airline operational specifications, advanced aircraft avionics, crew resource management and airline operating procedures. Offered in spring. Prerequisites: FSCI 2550 Flight 4 and FSCI 2650 Navigation Foundations and Junior standing.

FSCI 3550 - Flight 5 (0-2)

This course will provide the principles of flight to qualify for the Commercial Certificate with the Single and Multi engine rating. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning.

FSCI 3555 - Flight 5 Supplemental (1-2)

This course provides the supplemental coursework necessary for the student to provide the principles of flight to qualify for the Commercial Certificate with the Single and Multi-engine rating. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning. Offered in spring. Prerequisite: FSCI 3550.

FSCI 3750 - Flight Instructor Prep I (0-3)

This course will provide the appropriate knowledge and skill to expertly control the airplane from the right seat while teaching a student. Prerequisite: FSCI 3550 or permission of the Chief Instructor. Co-requisite: FSCI 3700.

FSCI 4012 - Jet Flying Techniques I Lecture (3)

This course emphasizes effective management of technology and people in modern flight deck through an understanding of aircraft systems, airline operating procedures, and aviation human factors under normal, extended duration, and emergency conditions. Line Oriented Flight Training (LOFT) contained in FSCI 4013 Jet Flying Techniques I Laboratory is used to relate content from this course to actual line operations. Offered in fall. Prerequisite: FSCI 2650 Navigation Foundations and FSCI 3062 Turbine Aircraft Transition and Senior standing.

FSCI 4013 - Jet Flying Techniques I Laboratory (1)

This course emphasizes effective management of technology and people in modern flight deck through an understanding of aircraft systems, airline operating procedures, and aviation human factors under normal, extended duration and emergency conditions. Line Oriented Flight Training (LOFT) is used to relate content from FSCI 4012 Jet Flying Techniques I Lecture. Offered in fall. Prerequisites: FSCI 2650 Navigation Foundations and FSCI 3062 Turbine Aircraft Transition. Corequisite: FSCI 4012 Jet Flying Techniques I Lecture and Senior standing.

FSCI 4022 - Jet Flying Techniques II Lecture (3)

This course emphasizes effective management of technology and people in modern flight deck through the application of advanced aircraft systems, air carrier operating procedures, and crew resource management principles to airline flight operations. Line Oriented Flight Training (LOFT) contained in FSCI 4023 Jet Flying Techniques II Lecture is used to relate content from this course to real world airline line operations. Offered in spring. Prerequisites: FSCI 4012 Jet Flying Techniques I Lecture and FSCI 4013 Jet Flying Techniques I Laboratory and Senior standing.

FSCI 4023 - Jet Flying Techniques II Laboratory (1)

This course emphasizes effective management of technology and people in modern flight deck through the application of advanced aircraft systems, air carrier operating procedures and crew resource management principles to airline flight operations. Line Oriented Flight Training (LOFT) scenarios contained in this course are used to relate content from the FSCI 4022 Jet Flying Techniques II course to real world airline line operations. Offered in spring. Prerequisites: FSCI 4012 Jet Flying Techniques I Lecture and FSCI 4013 Jet Flying Techniques I Laboratory. Corequisite: FSCI 4022 Jet Flying Techniques II Lecture and Senior standing.

FSCI 4450 - 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: Senior standing.

FSCI 4650 - 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 economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation.

Prerequisite(s): ECON-1900

FSCI 5230 - 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 economic operation, passenger service and cargo operations as they are integrated with the overall economics of efficient air operation.

Inter-Disciplinary Engineering (IDE)

IDE 2000 - Energy in the City (3)

With focus on energy efficiency and sustainability in an urban environment, students will identify energy sources, examine the use of energy, determine the costs of energy, and explore how oil-based energy can be conserved and eventually replaced. Students will conduct experiments for better understanding of basic energy concepts.

Mechanical Engineering (MENG)**MENG 1001 - Introduction to Aerospace & Mechanical Engineering (1)**

This course will introduce aerospace and mechanical engineering. Through hands-on activities, students will learn the basics of engineering design and entrepreneurship. Working in teams, students will build aerospace and mechanical systems, practice entrepreneurial thinking, and develop the personal and professional skills needed to engage in lifelong learning. This course is open to non-majors.

MENG 1002 - Computer-Aided Engineering Design (1)

This course is an introduction to engineering drawing and computer aided design (CAD) and 3D solid modeling. Students will learn to interpret engineering drawings, create engineering drawings, and create 3D models of mechanical systems.

MENG 2000 - 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.

Pre/Corequisite(s): PHYS-1610 Engineering Physics I and MENG 1002 Comp. Aided Eng. Design

MENG 2300 - 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. Prerequisite(s): ESCI-2300

MENG 2600 - Manufacturing Process (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. Prerequisite(s): ESCI-2011

MENG 2910 - 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 2913 - 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 3001 - Mechanical Engineering Lab (1)

Pre/Corequisite(s): MENG 3430; MENG 3510

MENG 3010 - 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. Pre/Corequisite: MENG 3100

MENG 3100 - Computer Aided Engineering (3)

The course outlines the principles of Computer Aided Engineering. The computer applications to structural design, kinematic synthesis and design optimization are explored. Prerequisites: ESCI 3100 Mechanics of Solids and CSCI 1060 Scientific Programming

MENG 3430 - 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 an experiment and error analysis using statistical data analysis. Prerequisite: ECE 2001 Electrical Engineering and ECE 2002 Electrical Engineering Lab (co-requisite).

MENG 3510 - Material Science (3)

A study of the material properties, atomic structure and bonding, mechanical failure theory, dislocation, phase diagrams, polymer structure, and ceramics. Prerequisite: ESCI 3100; CHEM 1070 or CHEM 1110

MENG 3910 - 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: Junior Standing

MENG 3915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person in this degree field. This experience may be full time or part-time as required by the industry sponsor. This course is used for the first experiential learning session. Grading system is determined by department offering course. Offered every semester. Prerequisite: Junior standing.

MENG 4004 - Design I (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: MENG 2600 and MENG 3010

MENG 4014 - Design II (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: MENG 4004 Design I.

MENG 4300 - Heat Transfer (3)

Prerequisite(s): CSCI-1060 or CSCI 1300; ESCI-2300; ESCI 3200

MENG 4450 - Principles of Mechantronics (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. Co-requisite: ESCI 3410.

MENG 4910 - 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: Senior Standing

MENG 4915 - Internship with Industry (0-3)

A work experience with an agency, firm or organization that employs person 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: Senior standing.

MENG 4980 - Independent Study (0-3)

Credits to be arranged. Independent Study on a topic in Mechanical Engineering under the direction of a Faculty member.

MENG 5009 - Seminar (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters.

MENG 5100 - Advanced Mechanics of Solids (3)

Elasticity relations, linear elasticity assumptions, St. Venant's principle, transformation of stress, principal stresses in 3D, plane elasticity, Airy stress function, polynomial solutions, thermal stresses, relations in polar coordinate point load solutions, stress concentration, axisymmetric problems, stresses in disks & cylinders, energy methods, Rayleigh Ritz, Buckling. Emphasis on advanced applications. Prerequisite(s): ESCI 3100 Undergraduate Mechanics of Solids

MENG 5110 - Fracture Mechanics and Plasticity (3)

Advanced elasticity topics: plate theory, stress singularities at re-entrant corners, intro to fracture mechanics, mechanics of bonded interfaces, elastic contact mechanics; Plasticity topics: yield criteria in metal plasticity, deformation and incremental plasticity, elastic-plastic stress-strain relations, strain hardening, small-strain elastoplasticity (bending, torsion, buckling, disks and cylinders). Prerequisite(s): MENG-5100, MENG-5150

MENG 5120 - Structural Reliability (3)

Fundamentals of reliability theory (factor of safety vs. reliability, modeling uncertainty, random variable distributions, design process uncertainty), Simulation methods and integration, computational issues for large scale problems, expansion techniques), second moment methods, reliability of structural systems (response surfaces, FFT approach, series and parallel systems, system reliability). Interdisciplinary engineering applications included. Prerequisite(s): MENG-5150

MENG 5150 - Finite Element Analysis I (3)

Variational forms for 1D and 2D, Rayleigh Ritz, Galerkin, element matrices and assembly, formulation of axial/truss/beam/plane-frame structural elements, 2D field problem formulation, linear and triangular elements for heat transfer/irrotational flow, torsion of noncircular sections, elasticity, higher order and mapped elements, numerical integration. Lab applications and project included. Prerequisite(s): Undergraduate Mechanics of Solids.

MENG 5160 - Finite Element Analysis II (3)

Review of the finite element method and elasticity, variational methods, derivation of stiffness and mass matrices, isoperimetric element formulation, 3D beam elements, plates and shells, Guyan reduction, constraints, statically equivalent loading, eigenvalue problems, modal superposition, dynamic transient response, nonlinear finite element analysis (large deformation, plasticity, contact) Prerequisite(s): MENG 5150

MENG 5200 - Advanced Fluid Dynamics (3)

Introduction to the physical concepts and mathematical analysis of fluid flow. Kinematics, stress, and thermodynamic properties of a fluid. Integral and differential equations for conservation of mass, momentum and energy. Applications in potential flow, viscous flow and compressible flow. Fluid flow measurements. Prerequisite(s): ESCI 3200

MENG 5220 - Experimental Methods in Fluid Dynamics (3)

This lab-based course introduces students to the modern techniques used to investigate fluid dynamic problems, including pitot-static tubes, wake rakes, thermal anemometry, laser Doppler anemometry, particle image velocimetry, and pressure and temperature sensitive paints. Prerequisite(s): MENG 5200

MENG 5230 - Viscous Flows (3)

This course covers the development of the Navier-Stokes equations; laminar and turbulent boundary layers and associated similarity laws; introduction to stability; analytical and numerical solutions of engineering problems will be emphasized. Prerequisite(s): ESCI 3200 and MENG 4300

MENG 5240 - An Introduction to Turbulence (3)

This course introduces the nature and origins of turbulence, transition mechanisms, turbulent transport of momentum and heat, dynamics of turbulence, wall-bounded and free shear flows, spectral dynamics, and statistical description of turbulence. Prerequisite(s): ESCI 3000 and MENG 4300

MENG 5530 - Composite Materials for Structure and Design (3)

Fiber and resin systems, Composite material properties and characterization, lamina, Laminate, Micro-mechanics, Stress analysis of lamina and laminate, Design of laminate, Failure theories, and Manufacturing of laminate.

Prerequisite(s): ESCI 3100 Undergraduate Mechanics of Solids and AENG 5530 Composite Materials for Structure and Design

MENG 5700 - Multidisciplinary Optimization (3)

Linear and nonlinear programming, unconstrained optimization, constrained optimization, structural optimization of large-scale systems with constraint approximations, analytical and numerical sensitivity analysis, design variable linking, optimization techniques for finite element problems, surrogate modeling techniques, shape and topology optimization. Interdisciplinary engineering applications emphasized. Prerequisite(s): MENG 5150 Finite Element Analysis I

MENG 5810 - Technology Entrepreneurship (3)

The course is intended as a general introduction to the models and applications of entrepreneurship. The course provides the basis for technology entrepreneurship mindset. The course will introduce the three major forms of entrepreneurship-independent (as in self-employment), corporate entrepreneurship and social venturing. In addition, the course will educate students about the three key elements of modern entrepreneurship: the recognition and creation of opportunities, the development of strategies to realize those opportunities, and the packaging of those opportunities for maximum impact in intended markets. Prerequisites: None

MENG 5902 - Numerical Methods Using Matlab and Labview (3)

This course will introduce students to the Matlab and Labview programming packages while teaching how to use software and numerical methods to solve engineering problems. Problems of interest to Aerospace, Mechanical, Civil, Electrical, and Biomedical Engineering programs will be addressed.

Prerequisite(s): Undergraduate programming coursework.

MENG 5909 - Seminar (0)

Presentations of current research by students, faculty, and guests. Registration required in the first semester. Seminar attendance expected in subsequent semesters.

MENG 5910 - Co-op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for experiential learning session. Grading system is determined by department offering course. Offered every semester. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

MENG 5915 - internship with Industry (1-3)

A work experience with an agency, firm, 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. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

MENG 5930 - Special Topics (1-3)

A one-time course on a particular topic, or a trial course that is expected to become a standard course with its own unique course number

MENG 5964 - Master's Project (1-3)

Theoretical/computational/experimental work that leads to a Project Report and of defense of the Project.

MENG 5984 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

MENG 5994 - Master's Thesis Research (0-6)

Research that leads to a Master's Thesis and final defense of the Thesis.

MENG 6910 - Co-op with Industry (1-6)

A full-time supervised work experience with an agency, firm or organization that employs persons in this degree field. This course is used for experiential learning session. Grading system is determined by department offering course. Offered every semester. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

MENG 6915 - Internship with Industry (1-3)

A work experience with an agency, firm, 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. 0-3 credit hours. DEPARTMENT PERMISSION NEEDED FOR ENROLLMENT.

MENG 6974 - Research Topics (1-3)

Theoretical or Computational or experimental work that is not part of the Dissertation.

MENG 6984 - Independent Study (1-3)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

MENG 6994 - Doctoral Dissertation Research (0-6)

A non-classroom course in which a student explores a topic that is related to the student's doctoral work and career goals.

Aviation Science (Prof Pilot) (PP)**PP 1000 - 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 1010 - 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 1100 - 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. Co-requisites: PP120, FSC130.

PP 1130 - 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 1140 - 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 1200 - Fundamentals of Flight I (2)

This course will provide the fundamental knowledge required for the student to successfully learn the maneuvers and procedures for pre-solo flight; dual & solo; local operations; introduction to VFR cross-country. Co-requisites: PP110, FSC130.

PP 1210 - 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 1530 - Basic Flight II (2)

This course provides the fundamentals of cross-country flight from solo pilot in command to the Private Pilot Certificate. This will include the elements of airmanship, night flight, practical weather, and other cross-country skills. Prerequisites: PP110 and all associated pre/co-requisites. Co-requisite: PP160.

PP 1600 - Fundamentals of Flight II (2)

This course will provide the fundamental knowledge for conducting VFR cross-country flights as pilot in command. The course will also provide an introduction to the fundamentals for instrument navigation. Prerequisites: PP120 and all associated pre/co-requisites. Co-requisite: PP153.

PP 2000 - 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. Co-requisite: PP201.

PP 2020 - 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 2030 - 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 2100 - 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 qualify the student for the Instrument rating practical test. Prerequisites: PP153 and all associated pre/co-requisites, PP160 and all associated pre/co-requisites. Co-requisite: PP220

PP 2160 - Aeronautical Science II (3)

Federal Aviation Regulations and flight procedures as outlined in the Airman's Information Manual; aircraft engine operation, aircraft/engine performance; flight instrumentation and systems; airplane operations. The student is prepared to take the FAA commercial pilot knowledge test upon successful completion of this course.

PP 2170 - Aeronautical Science III (3)

Attitude instrument flying, parts 61 and 91 of the Federal Aviation Regulation along with the Instrument Flight Procedure set forth in the Airman's Information Manual; introduction to IFR charts and approach plates; theory and operation of flight instruments; radio navigation; theory and analysis of weather reports, forecasts and weather charts. The student is prepared to take the FAA instrument knowledge test upon successful completion of this course.

PP 2200 - Prin. of Intermediate Flight I (2)

This course will provide instruction in the fundamental knowledge areas necessary for safe and successful instrument flight. At the conclusion of this course, the student will be ready and qualified to take the FAA written test for the instrument rating. Prerequisite: PP153 and all associated co/prerequisite PP160 and all associated co/prerequisites. Co-requisite: PP210

PP 2500 - Aeronautical Science III (3)

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Commercial single and multiengine certificates. Students will be introduced to high performance and multiengine airplanes through the study of advanced knowledge areas. Prerequisite: PP200. Co-requisite: PP251.

PP 2510 - Flight Operations III (2)

This course is the third in the flight training sequence. Instruction to complete the Instrument Rating and the Commercial Pilot Certificate is included. This involves a transfer of knowledge and skills from the ground trainer to the airplane for instrument procedures. Advanced VFR maneuvers and complex operations for the Commercial Pilot Certificate are included. Prerequisite: PP201. Co-requisite: PP250.

PP 2540 - Intermediate Flight II-SE (2)

This course will provide the principles of flight to qualify for the Commercial Certificate with the Single engine rating. These principles will include airmanship, complex aircraft systems, high altitude operations and weather, and flight planning. Prerequisites: PP 210 and all pre/co-requisites. Co-requisites: PP 260.

PP 2600 - Prin. of Inter. Flight II (3)

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Commercial single and multiengine certificates. Students will be introduced to high performance and multiengine airplanes through the study of advanced knowledge areas. Prerequisite: PP 220. Co-requisite: PP 254

PP 3010 - Flight Operations IV (1)

This course is the fourth and final course in the flight sequence. The safe operation of a multiengine airplane, including normal and emergency operations in visual and instrument conditions, is included.

PP 3040 - 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 3050 - 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 3060 - 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 3080 - Flight VIII (1)

Instruction leading to the addition of an instrument rating to a flight instructor certificate; minimum of 10 hours instructor training including 5 hours dual flight instruction on analysis and performance of instrument flight training maneuvers; 5 hours practice instrument flight instruction with flight instructor aboard the airplane; and 5 hours practice instrument ground instruction. Prerequisite: flight instructor certificate. Co-requisite: PP320 or approval of the Department Chair.

PP 3090 - Flight IX (1)

Instruction leading to the addition of a multiengine class rating to a flight instructor certificate; minimum of 10 hours ground training, 15 hours instructor training including 7 hours analysis of flight training maneuvers and 8 hours practice flight instruction. Prerequisite: flight instructor certificate.

PP 3100 - Flight Instructor Prep I (0-2)

This course will provide the appropriate knowledge and skill to expertly control the airplane from the right seat while teaching a student. Prerequisite: PP2540, PP2600 or permission of the Chief Instructor. Co-requisite: PP3200.

PP 3100 - 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: PP2540, PP2600 or permission of the Chief Instructor. Co-requisite: PP3200.

PP 3180 - 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 3190 - 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 3200 - Principles of Flight Instruction I (3)

Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Prerequisites: PP 2540 and PP 2600 OR FSCI 2550 and FSCI 2650.

PP 3500 - 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. Co-requisite: PP360

PP 3510 - Intermediate Flight III - SE (1)

This course will provide the principles of flight to qualify for the addition of Single Engine rating to a Commercial Certificate. Prerequisites: PP 253 and all associated pre/co-requisites.

PP 3520 - Intermediate Flight III - ME (1)

This course will provide the principles of flight to qualify for the addition of Multi Engine rating to a Commercial Certificate. Prerequisites: PP 254 and all associated pre/co-requisites.

PP 3600 - Prin. of Flight Instruction II (3)

This course will provide the appropriate knowledge to understand the elements of teaching instrument and multiengine flight. The student will prepare lesson plans and practice various methodologies appropriate for advanced flight instruction. Prerequisite: PP 3200.

PP 4100 - CFI Practicum I (3)

This course will provide a practical experience in flight education. The student will conduct flight training for at least one flight student. The student will also participate in directed group sessions emphasizing the delivery of quality flight instruction through the development of teaching skill, including, demonstration and the analysis of student performed maneuvers. Prerequisites: Senior Standing, PP310, PP320, or approval of the Department Chair

PP 4500 - CFI Practicum II (3)

This course will provide advanced practical experience in flight education. The student will conduct flight training for at least one flight student. The student will also participate in directed group sessions emphasizing the delivery of quality flight instruction. Prerequisite: PP410

Health Care Ethics (HCE)

HCE 2010 - Found in Clinical HC Ethics (3)

This course introduces students to the ethical dimensions of clinical medicine and offers them the basic language and methodology with which to critically examine these dimensions. The course format integrates lecture and active case discussion to provide both the necessary theoretical grounding and the real-world skills sought by students.

HCE 2020 - Foundations in Catholic Health Care Ethics I (3)

This course examines ethical issues in health care through the lens of Catholic moral thought. The course will engage specific teachings of the Catholic Moral tradition that bear directly on issues of health care ethics using lecture and active case-discussion.

HCE 2030 - Found in Public Health Ethics (3)

This course will focus on a broad theoretical survey of the most common systems of moral inquiry in public health. Students will learn what various ethical systems have to offer the public health dialogue, and engage in critical analysis of the already-dominant ethical perspectives within public health.

HCE 2210 - Superheroes and Social Justice (3)

The great ethical issues in health care today can be dauntingly unfamiliar to new students. Ethical questions of medical research, the limits of technology, enhancement, reproduction, disability, personhood, and social justice have all been fruitfully discussed in the great American narrative medium of comics. Far from being a necessarily shallow medium, comics allows for a suspension of disbelief that renders philosophical thought experiments about morality not only accessible but also riveting. This course examines some of the best and most pertinent morality plays that the medium has to offer and uses these to introduce the student to the fundamentals of bioethics, and illuminate the practical implications for a modern health care ethics.

HCE 3010 - Ethics in Clinical Medicine (3)

This course examines ethical issues encountered medicine, specifically by physicians and residents. It employs a case-based approach with supplementary readings on the general principles of biomedical ethics. Clinical problems related to the practice of medicine will be examined contextually, with attention to institutional, cultural, and moral issues that undergird controversies in clinical ethics.

HCE 3020 - Foundations in Catholic Health Care Ethics II (3)

This course examines ethical issues in health care through the lens of Catholic moral thought. The course will engage specific teachings of the Catholic Moral tradition that bear directly on issues of health care ethics using lecture and active case-discussion.

HCE 3030 - Disability Studies: Medicine, Ethics, and Policy (3)

This course will introduce undergraduates to disability studies. We will begin by detailing studies as an outgrowth of disability rights. We will then discuss contemporary topics in the field. We will conclude by analyzing disability in bioethics. Students will learn to apply disability studies in medicine, ethics, and policy. Offered fall and spring.

HCE 3040 - Mindfulness & the Ethics of Healthcare (3)

This course discusses research findings in the field of mindfulness, specifically, as it relates to health care ethics and education. We will study mindfulness as both an emerging science and embodied practice. Students will explore critically the impact of mindfulness on various health professions. Through collaboration with campus partners from the SLU School of Medicine and the Doisy College of Health Sciences, mindfulness meditation and resiliency training will be practices in an effort to create balance within the pre-health pathway, and to prepare ethically conscious future healthcare providers. Ultimately, their grounding in mindfulness will allow students to more critically and comprehensively engage their own development as future healthcare providers. This class will be of particular interest to students contemplating futures in medicine, physical therapy, physician assistance, nursing, etc. Course offered in fall and spring.

HCE 3100 - Public Health & Social Justice (3)

Health has special moral importance for the well being of individuals and populations. We will discuss ethical issues associated with economic measures, resource allocation, priority setting, and human rights. The course is designed to evoke thoughts on personal and institutional responses to the questions of social justice and health.

HCE 3200 - Freaks and the Medical Body (3)

In this course, students will consolidate their coursework and demonstrate their mastery of professional remote sensing and/or GIS competencies through ongoing research projects. Depending on whether students' interests are in remote sensing or GIS, topics will cover spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, InSAR, and various applications of techniques. (Offered as needed.)

HCE 3210 - Superheroes & Social Justice (3)

The great ethical issues in health care today can be dauntingly unfamiliar to new students. Ethical questions of medical research, the limits of technology enhancement, reproduction, disability, personhood, and social justice have all been fruitfully discussed in the great American narrative medium of comics. Far from being a necessarily shallow medium, comics allows for a suspension of disbelief that renders philosophical thought experiments about morality not only accessible but also riveting. This course examines some of the best and most pertinent morality plays that the medium has to offer and uses these to introduce the student to the fundamentals of bioethics, and illuminate the practical implications for a modern health care ethics.

HCE 3220 - The Desire to Dissect: Philosophical History of Anatomical Dissection (3)

This course explores the historical and philosophical underpinnings of anatomical dissection in Western medicine. It begins with a comparative history of ancient Greek and Chinese medicine, proceeds to examine the medical and cultural development of anatomical dissection, and concludes with anatomical thinking as the root of modern medical knowing. Prerequisite: HCE 2010 or Junior or Senior Standing.

HCE 3300 - Bioethics + Human Nature Film (3)

This interactive course uses the medium of film to explore how medicine and biotechnology challenge definitions and conceptualizations of being human. The course will examine the social and cultural dynamics that influence approaches to bioethics in Spain and the United States. Students will consider the ethical dilemmas posed by such diverse practices as abortion, euthanasia, cognitive enhancement/manipulation, and genetic enhancement. The course includes field experiences in Madrid, Spain.

HCE 4110 - Health Ethics, Race + Identity (3)

This course engages issues of health populations, considering the possible unintended but still untoward effects that certain narrative and cultural constructions have for people. The course will attempt an appropriately rich consideration of the cultural constructions of the health professions and examine the ethical issues that arise. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4200 - Warriors and Medics (3)

The course studies the thought and lives of warriors and medics in order to understand their values, virtues, and wisdom - not only as these pertain to the struggle with mortality, but also to the human condition generally. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4220 - Controversies in Reproductive and Pediatric Ethics (3)

This course examines controversial ethical issues surrounding the use of reproductive technology and medicine. Both pro and con perspectives are critically discussed. Topics include: the moral status of the human embryo, maternal-fetal conflicts, contraception, sterilization, in vitro fertilization, surrogate motherhood, prenatal screening, cloning, and the derivation of embryonic stem cells for research purposes. This course has a Pre/Corequisite of a HCE-2010 OR Junior or Senior standing.

HCE 4230 - Controversies in Research Ethics (3)

This course examines the current state of research ethics in light of the resolution of historical controversies and the emergence of current ones. The course will explore the ethical and regulatory norms that govern research today as well as particular cases that push their boundaries. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4240 - Ethics and Geriatric Care (3)

This course is designed to introduce undergraduate students to the ethics and practice of geriatric medicine and the spiritual dimensions of end-of-life care. In addition to weekly seminar discussions, students will spend three hours each week volunteering, shadowing and engaging with residents at Beauvoir Manor on the Park. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4250 - Law and Bioethics (3)

This course will examine the ethical and jurisprudential issues related to areas of health care typically included in the field of bioethics. The course will introduce students to the leading ethico-legal approaches in analyzing cases and examining the judicial history and politics that gave rise to these. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4270 - Organ Procurement + Transplant (3)

This course will examine controversies surrounding organ donation and transplantation. Topics will include: the significance (or insignificance) of ensuring donors of vital organs are dead; appropriate criteria for determining death; the significance (or insignificance) of explicit authorization of donors for donation after death; the appropriateness (or inappropriateness) of incentives for living donation and for donation after death; the ethical character of organ marketing; appropriate treatment of potential donors who are minors or who lack decision-making capacity; and appropriate allocation of organs. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 4500 - Ethics in Nursing& Health Care (3)

This course offers an overview of ethical theory, principles, and norms which should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases which arise in the practice of nursing are analyzed and evaluated in light of the identified ethical theory, principles, and norms. Restricted to nursing students who have completed their junior year of nursing studies.

HCE 4870 - Ethics in Clinical Nursing (3)

This course explores ethical issues encountered by nurses and nursing students, and critically examines positions regarding these issues. Students gain familiarity with the Code of Ethics for Nurses, and analyze ethical dilemmas in light of its tenets and related ethical principles. This course has a Pre/Corequisite of a 2000-level HCE course OR Junior or Senior standing.

HCE 5020 - Ethical Issues in Public Hlth (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.)

HCE 5330 - Research Ethics for Health Outcomes (1)

This course provides students with an understanding of the principles of ethics in scientific research. Students will gain an understanding of responsible conduct of research including the importance of ethical decision-making and identification of rules, responsibilities, and resources for responsible conduct. Topics include informed consent, research misconduct, policies in human subjects research, data management and data sharing, and dealing with conflicts of interest.

HCE 5400 - Race in Science and Medicine (3)

In order to understand the complex role of race in medicine and medical research today, this course will examine race from an interdisciplinary standpoint. It will begin by looking at the historical trajectories of the concept of race in different fields, including sociology, anthropology, genetics and law, and how these have interacted with our folk understandings of race. We will then examine how this evolving concept of race has shaped the medical study of race and health, including research regulations, journal requirements, and assumptions and categories of research studies themselves. Third, we will look at how race manifests in medical practice today, including general treatment, identification and treatment of mental illness, and race-based/personalized drugs and screening. We will conclude with an examination of how all of these interactions with race relate to the experience and practice of raced doctors and patients in the healthcare system today.

HCE 5500 - Ethics in Nursing& Health Care (2)

This course offers an overview of ethical theory, principles, and norms which should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases which arise in the practice of nursing are analyzed and evaluated in light of the identified ethical theory, principles, and norms.

HCE 5960 - Masters Capstone Project (0)

This course is a highly individualized normative research project, culminating in master's-level paper in health care ethics.

HCE 6010 - Methods in Philosophical Ethic (3)

A study of the methodological issues in philosophy concerning the nature and justification of fundamental ethical norms, including: philosophical ethics and non-philosophical disciplines; philosophical methods of justifying ethical norms; Kantian ethics; contractarian ethics; virtue ethics; ethics and psychobiology; different methods of justification; epistemological status of ethics.

HCE 6020 - 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 6040 - Interdisciplinary Research in Health Care Ethics (3)

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 6070 - Foundatns of Catholic Morality (3)

This course explores basic themes of the Catholic moral tradition such as the human person as a moral agent, human freedom, the role and rights of conscience, the importance of virtue in the moral life, natural law, the use of Scripture in moral theology and the importance of human experience in the moral life. Particular attention will be given to the development of the moral tradition. Only available to Health Care Ethics PhD program.

HCE 6110 - Intro-Medicine for Ethicists (1)

A study of the principles and practice of medicine as a framework for ethical discourse, including: the classification and etiology of diseases (e.g. genetic diseases); their clinical manifestations and complications (e.g. the use of imaging techniques); and principles of medical and surgical treatment (e.g. I support systems).

HCE 6120 - Bioethics and the Law (2)

This course examines legal issues in health care decision making in areas typically considered a part of bioethics, such as organ transplantation, genetic medicine, end-of-life care, determination of death, and experimentation with human subjects. While the course focuses on cases, statutes and regulation 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 6130 - Clinical Ethics (3)

A study of fundamental skills and core areas of knowledge essential for ethical consultation, integrating process and outcomes, to identify, analyze, and resolve ethical dilemmas, cases and issues, that emerge in the context of patient care.

HCE 6140 - 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 6150 - 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 6310 - 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 6320 - 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 6330 - 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 6340 - 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 6350 - Pediatric Ethics (3)

This course is a study of the ethical and legal issues that arise in the care of children and adolescents. The course will begin by examining functional issues related to medical decision-making for children, including standards of decision-making and the roles of the parent and the state. Special attention will be given to feminist perspectives on bioethics. The course will then explore particular topics of interest in pediatric ethics, including: issues in perinatology and neonatology, vaccinations, pediatric organ donation and pediatric research ethics. Offered in spring.

HCE 6360 - 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 6370 - 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 6400 - Foucault and Biopolitics (3)

Foucault's interests were broad, including psychiatry, medicine, economics, politics, penal systems, and sexuality. This course will examine several works, place him in philosophical and historical context, and explore how his philosophical methods for critical engagement-genealogy and archaeology-might be used to engage questions of embodiment, medicine, psychiatry, politics, & ethics.

HCE 6510 - Interdisciplinary Research 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 6520 - Quantitative Rsch in Dscrp Eth (3)

Prerequisites: Enrollment in the quantitative track of the certificate program and RMET650 Multivariate Statistical Analysis. This course provides the opportunity to design and carry out directed, quantitative research in descriptive ethics. The course fosters the development of skills necessary to secure grant funding, to gain Institutional Review Board approval, and to do empirical research that can be integrated into the doctoral dissertation in health care ethics.

HCE 6530 - Qual Rsch in Dscrp Ethics (3)

Matriculation in and in the second year of the J.D.-PhD program. Course fosters the development of research skills needed to conduct legal and ethical research on topics related to healthcare. Through close mentoring, students will also develop expertise on a specific topic in health law and ethics and a publishable manuscript.

HCE 6540 - Advanced Clinical Ethics Practicum (3)

This course provides an extended and immersive clinical ethics experience during which students will obtain the knowledge and skills necessary for ethical consultation. The course consists of two primary components: (1) extended experiential learning within an institutional clinical ethics service and (2) the development of a clinical ethics portfolio, both of which are overseen by an on-site clinical ethics mentor and a CHCE faculty member. This course typically takes place over a summer at a pre-arranged internship site. Offered in summer. Prerequisite: HCE 6130

Nursing (NURS)**NURS 4814 - Ethics in Nursing and Health Care (2-3)**

This course offers an overview of ethical theory, principles, and norms that should inform professional nursing practice. The meaning of nursing as a profession is studied as a source of ethical obligation for the nurse. Cases that arise in the practice of nursing are analyzed and evaluated in light of the identified theory, principles, and norms. Offered periodically in spring.

Biomedical Laboratory Science (BLS)

BLS 1100 - Foundations of Medical Laboratory Science (1)

The purpose of this course is to describe and illustrate career options available to the Clinical Laboratory Science (CLS), Investigative and Medical Sciences (IMS) and Cytotechnology (CYTO) graduates. The course incorporates a combination of lectures, and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

BLS 1150 - Foundations of MLS Laboratory Discussion (0-1)

This laboratory course incorporates a combination of lectures and hands-on laboratory sessions to present both knowledge and basic skills associated with medical and laboratory sciences.

BLS 1700 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Prerequisite(s): Freshman; determined individually based on project; Permission of the instructor

BLS 1850 - Research (1-3)

This experiential course provides the opportunity to familiarize students with basic principles of research design, data collection, data analysis, and hypothesis testing. In consultation with a faculty mentor, the student selects a research project and begins the preliminary activities associated with developing a research question to include searching the literature, participation in grant, IRB and animal control protocols, procedure writing and training in research techniques. Experimentation and data collection may begin as time permits. Students are required to meet with their faculty mentor on a regular basis during the semester. No prerequisites required. Permission of the instructor.

BLS 2100 - Microbiology (3)

This course is an introduction to the basic concepts in Microbiology. Emphasis on bacterial and viral diseases.

BLS 2700 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Sophomores; determined individually based on project; Permission of the instructor

BLS 2850 - Research (1-3)

This experiential course provides the opportunity to apply the basic principles of research design, data collection, data analysis, and hypothesis testing to a research study. In consultation with a faculty mentor, the student will begin performing research technique and data collection on the research project selected. Students are required to meet with their faculty mentor on a regular basis during the semester. Pre-requisite(s): BLS 1850. Permission of the instructor.

BLS 3110 - Urinalysis & Body Fluids (2)

Course focuses on the basic physiology of the kidney, mechanism of urine formation, and urine composition. The formation, function, analysis and evaluation of various other body fluids will be discussed to include cerebrospinal fluid (CSF), synovial fluid, (SF), pleural, pericardial, peritoneal, and seminal fluids. Content will focus on the principles and clinical significance of the various procedures used in testing urine and body fluids and their role in disease diagnosis. Prerequisite(s): BIOL-1040 and CHEM-1120

BLS 3700 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Juniors; determined individually based on project; Permission of the instructor

BLS 3850 - Research (1-3)

This experiential course provides the opportunity to apply the basic principles of research design, data collection, data analysis, and hypothesis testing to a research study. In consultation with a faculty mentor, the student performs experiments and collects data to test the research hypothesis associated with the research project selected. Students are required to meet with their faculty mentor on a regular basis during the semester. Pre-requisite(s): BLS 2850. Permission of instructor.

BLS 4110 - Medical Chemistry I (3)

Part one of a two-part course to study the biochemical principles as applied clinical investigation of disease. Topics include: protein structure and function, enzyme kinetics; carbohydrate and lipid metabolism; hormonal regulation; pathophysiology of water, electrolyte, and acid-base balance. Medical chemistry testing will be applied to the evaluation of organ systems for disease. Lecture includes presentations of recent molecular diagnostic approaches to detect the pathophysiology of diseases and biomarkers used current cancer diagnosis. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): CHEM-2425; BIOL-3020 recommended; Permission of the instructor

BLS 4120 - Medical Chemistry II (2)

Continuation of BLS-4110 focusing on biochemical principles and their application to the clinical investigation of disease. Topics include: endocrinology, therapeutic drug monitoring and toxicology investigative techniques. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): BLS-4110; Permission of the instructor

BLS 4130 - Principles & Techniques in Molecular Biology (1)

Course provides an introduction to principles and applications of molecular biology to include nucleic acid biochemistry as well as basic molecular techniques to include but not limited to isolation and analysis of DNA and RNA, hybridization, amplification, sequence analysis, mutation detection, gel electrophoresis and array technology. Course includes the application of concepts and principles to the diagnosis of human disease. Prerequisite(s): BIOL-1240 & CHEM-1120. BIOL-3020 recommended

BLS 4210 - Hematology (4)

Content emphasizes the physiology of the blood forming organs and the maturation and function of their cellular products. Routine and confirmatory laboratory testing will be discussed to include purpose of test, performance of test and interpretation of results. Discussions will involve the pathophysiology evaluation and diagnosis of blood dyscrasias to include anemias, leukemias lymphomas, myeloproliferative and myelodysplastic conditions and other blood diseases using laboratory test results. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): BIOL-1040 and CHEM-1120; BIOL-3020 recommended; Permission of the instructor

BLS 4220 - Hemostasis and Thrombosis (2)

Principles and laboratory analysis of normal hemostasis and fibrinolysis will be presented to include blood vessel, platelet, and coagulation protein function. Discussions will include the pathophysiology of bleeding conditions, thrombotic disorders, and thrombophilia, and their diagnosis using laboratory results. The physiology and laboratory monitoring of anticoagulant therapy will be discussed. Honors Section: In addition to the above course requirements students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): BIOL-1040 & CHEM-1120; Permission of the instructor

BLS 4310 - Immunohematology (3)

This course introduces basic immunologic and genetic principles governing blood groups and blood transfusion practice. Blood group systems (including ABO and Rh), antibody identification, compatibility testing, and transfusion therapy are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): BLS-44100 and Permission of the instructor

BLS 4410 - Medical Immunology (4)

Course focuses on the theories of innate, humoral and cellular immunity, development and functions of T-cells and B-cells, the antibody response, the genetics of antibody diversity, hypersensitivity, immune deficiencies, transplantation and tumor immunology. Lecture presentations of the recent advances in immunology that are relevant to transplantation, infectious disease, tumor immunology and nutrition. Course also involves case study discussions. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): BIOL-1040 & CHEM-1120; BIOL-3020 recommended; Permission of the instructor

BLS 4510 - Medical Microbiology (4)

Content focuses on microorganisms of pathologic importance to include bacteria and viruses with an overview of parasites and fungi involved in human disease. Included are discussions on structure, molecular biology, molecular diagnostics, metabolism, growth, replication, food borne illnesses, current topics and emerging concerns. Pathogenicity, epidemiology, diagnosis and laboratory identification of important groups of human pathogenic bacteria are emphasized. Modes of action of selected antimicrobics and chemotherapeutic agents are also discussed. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): (BIOL-1040 or BIOL-1100) and CHEM-1120; Permission of the instructor. BIOL-3020 is recommended.

BLS 4610 - Research Design, Critique & Presentation (3)

Course focuses on the processes involved in biomedical research, evaluation of published literature, and presentation methods. Topics include an overview of procedures involved in human research, the Institutional Review Board (IRB), animal care concerns, and principles of effective presentations. Additionally, steps in the research process from proposal development to presentation of the final product will be discussed. Critical evaluation of published literature will serve as a basis for developing one's own research project. The course culminates in the development of a research proposal, a research protocol, and a research-focused presentation. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): MATH 1300; Restricted to MLS, Cytotechnology & IMS Juniors; Permission of the instructor

BLS 4620 - Senior Synthesis (3)

This is a contracted course that may incorporate a variety of educational modalities. All options will serve to allow junior and senior level investigative and medical sciences (IMS) students an opportunity to integrate courses taken in relation to their degree and area of concentration with postgraduation goals. One component of the course is experiential learning through the participation in an intern/shadowing experience. Students may also choose to develop a case study, participate in a creative investigation, or co-op experience. Students will give a formal verbal presentation on their Senior Synthesis experience. This course is optional for MLS and Cytotechnology students. Restricted to IMS Junior & Senior students; Permission of the instructor. Co-requisite: BLS-4630

BLS 4630 - Senior Seminar (1)

Course will focus on providing the required content, support, and documentation for students performing research or synthesis projects to include: safety training (fire, electrical, biohazard, etc.), development and delivery of a formal presentation, and preparation for graduates to enter their chosen profession. The course culminates in the presentation of results of the research or senior synthesis project selected. Restricted to MLS, IMS Junior & Senior, & Cytotechnology Junior students Co-requisite(s): BLS-4620 or BLS-4850

BLS 4700 - Special Studies (1-3)

Qualified students interested in doing a focused project in an area of medical laboratory science or related field who wish to amplify their knowledge may pursue an individualized course of study. Pre-requisite(s): Seniors; determined individually based on project; Permission of the instructor

BLS 4850 - Research (3)

This experiential course provides the opportunity for students to apply the basic principles of research design, data collection, data analysis, and hypothesis testing to a research study. In consultation with a faculty mentor, the student performs experiments and collects data to test the research hypothesis associated with the research project selected. The course culminates in a publication ready manuscript. Students are required to meet with their faculty mentor on a regular basis during the semester. Pre-requisite(s): BLS 3850. Permission of instructor.

BLS 4900 - Introduction to Clinical Laboratory Medicine (2)

The purpose of the course is to discuss the most common laboratory tests ordered, performed, and interpreted in the areas of Clinical Chemistry, Hematology, Immunology, Transfusion Medicine (Blood Bank), Hemostasis, Medical Microbiology, and Urinalysis. Discussions will include the purpose of each test, test ordering practices, relationship to disease pathophysiology, result interpretation, and how test results are included in diagnostic algorithms. Physician Assistant majors only.

Comm Sci & Disorders (CSDI)**CSDI 1000 - Intro to Comm Sci & Disorders (3)**

A survey course designed to provide an introduction to the areas of study in 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 2000 - 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 2200 - Anatomy and Physiology of the Speech Mechanism (3)

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

CSDI 2400 - Foundations of Language (2)

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

CSDI 2600 - Counseling (2)

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

CSDI 3000 - Chara. Multicult Popultrn (3)

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

CSDI 3200 - Speech Science (3)

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

CSDI 3400 - 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 3420 - 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 3430 - Advanced Sign Language (1)

A continuation of the study of sign language from CSDI-3420 (Beginning Sign Language). Offered each Spring.

CSDI 3600 - 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 3700 - Speech and Language Development (4)

A study of the typical development of speech and language across the lifespan. Issues related to linguistic and cultural diversity will be explored. CSD majors only. Prerequisite(s): CSDI-2000 and CSDI-2400, both may be taken concurrently. (Offered every Fall)

CSDI 3800 - 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 4000 - 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 4050 - 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 4060 - Research Practicum (1)

Research experience based on the completion of CSDI-4050. Offered each Spring.

CSDI 4100 - Survey of Language Disorders (2)

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

CSDI 4150 - Survey of Speech & Language Disorders (3)

Speech and language disorders may arise from a variety of causes and may affect individuals of any age, from birth through geriatric age. This course will investigate etiologies, characteristics, developmental, and linguistic/cultural correlates of speech and language disorders across the lifespan.

Prerequisite(s): CSDI-3700, offered every fall.

CSDI 4200 - Audiology: Basic Audiometry (3)

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

CSDI 4300 - 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 4350 - Clinical Observation (0-1)

This course provides students with supervised observation including a variety of techniques, methods and procedures used in CSD to prepare for service provision. The department requires 25 observation hours prior to clinical practicum/graduation. Typically 12 of those hours are acquired through this class. Prerequisite(s): CSDI-4300

CSDI 4400 - Aural Rehabilitation (3)

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

CSDI 4500 - Neurol Basis of Communication (3)

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

CSDI 4600 - Advanced Audiology (2)

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

CSDI 4700 - Clinical Practicum (1)

This course will provide an introduction to clinical skills and an opportunity to learn about related clinical practice. Students may participate in supervised clinical practicum experiences including assessment and remediation of a variety of communication disorders, where available, under a co-treatment model with a graduate level student. Prerequisite(s): CSDI-4300.

CSDI 4750 - Neurol Bases of Communicatn (3)

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

CSDI 4800 - 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 5010 - Clinical Practicum Lecture (0-3)

This course is a component of the overall Clinical Practicum experience designed to address non-academic issues presented in a seminar format. Classes are designed to supplement direct client intervention relative to professional issues that impact provision of diagnostic and therapeutic services across the lifespan of individuals with communication disorders. Offered every semester.

CSDI 5012 - Practicum - Campus Clinic (0-3)

Clinical practicum CSDI-5012 is a hands-on experience which addresses screenings, diagnostics, treatment and counseling for children or adults presenting with a variety of speech-language disabilities or diagnoses in the areas of articulation, hearing, language and social aspects. The setting for the experience is the Saint Louis University Speech-Language-Hearing Clinic, which includes some school and Head Start opportunities. (Offered every Fall, Spring and Summer)

CSDI 5015 - Practicum - Offsite Clinic (0-3)

Clinical practicum CSDI-5015 is a direct clinical experience which addresses screenings, diagnostics, treatment and counseling for children and/or adults presenting with a variety of speech-language disabilities or diagnoses in the areas of speech, language, hearing, swallowing and social aspects. Student assigned to CSDI-5015 will be placed in off campus clinical settings with an ASHA-certified clinician serving as their clinical supervisor. Offered Summer and Fall.

CSDI 5020 - Hospital Practicum (0-3)

Supervised experience in a hospital setting. Offered every semester.

CSDI 5030 - Student Teaching in Comm Dis (3-5)

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

CSDI 5050 - Experimental Design (2)

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

CSDI 5060 - Research Practicum (1)

Offered every semester.

CSDI 5440 - Linguistics (2)

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

CSDI 5450 - Phonological Dev. & Disorders (2)

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

CSDI 5510 - Assessment / Management of Social Communication Disorders (2)

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 5530 - 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 5550 - 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 5560 - 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 5580 - Language Based Literacy Disorders (2)

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

CSDI 5600 - 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 5630 - Dysphagia (3)

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

CSDI 5650 - 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 5700 - 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 5710 - Cleft Palate & Cranofacial Ano (2)

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

CSDI 5720 - Neurogenic Communication Disorders in Adult (3)

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

CSDI 5730 - Neuropathologies in Children (2)

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

CSDI 5760 - Motor Speech Disorders (3)

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

CSDI 5770 - Assessment/Management of Communication Disorders Multi (2)

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

CSDI 5800 - Professional Issues in Speech-Language Pathology (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 5820 - Cognitive Communication 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 5880 - 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 5890 - Institute in Communication Disorders (1-3)

Various topics in the field. Offered every Summer.

CSDI 5910 - 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 5970 - Research Topics (1-3)

Permission of Instructor of department chair required.

CSDI 5990 - Thesis Research (0-6)

Permission of department chair required.

Cytotechnology (CYTO)**CYTO 4000 - Introduction to Cytology (3)**

This lecture/laboratory course provides an orientation to the profession of Cytotechnology. Content includes but is not limited to 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. Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4100 - Female Genital Tract I (3)

This lecture/laboratory course introduces the student to the morphogenesis of malignancy with emphasis on the cellular changes of squamous and endocervical epithelium of the uterine cervix. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite(s): CYTO-4000; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4110 - Female Genital Tract II (1)

This lecture/laboratory course is a continuation of CYTO-4100. Prerequisite(s): CYTO-4100; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4200 - Female Genital Tract III (3)

This lecture/laboratory course emphasizes the malignant and disease processes of the uterine corpus, metastatic lesions, and lesions of the vulva and vagina. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite(s): CYTO-4110; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4300 - The Processing Laboratory (2)

This lecture/laboratory course covers routine procedures for receiving, processing, staining, cover slipping, and filing specimens. Students perform associated laboratory experiences under the supervision of a certified Cytotechnologist. Prerequisite(s): CYTO-4000; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4400 - Respiratory and Oral Cytology (3)

This lecture/laboratory course introduces the anatomy and histology of the upper and lower respiratory tract. Epithelial appearances and changes associated with normal, benign, and malignant processes are emphasized. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite(s): CYTO-4200; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4600 - Body Fluid Cytology (3)

This lecture/laboratory course examines the cytology/pathology of effusions, cerebrospinal fluid, and other body fluids. Cytologic changes associated with benign and malignant processes are emphasized. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite(s): CYTO-4400; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4700 - Gastrointestinal and Genitourinary Cytology (3)

This lecture/laboratory course reviews the anatomy and histology of the breast, thyroid, lymph nodes, salivary gland, bone, and soft tissue with emphasis on cytologic patterns associated with normal, benign, and malignant processes. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and report. Prerequisite(s): CYTO-4600; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4800 - Fine Needle Aspiration Cytology (4)

This lecture/laboratory course reviews the anatomy and histology of the breast, thyroid, lymph nodes, salivary gland, bone, and soft tissue with emphasis on cytologic patterns associated with normal, benign, and malignant processes. Prepared slides are used to screen for the associated cellular changes and develop accuracy in recognition and reporting. Prerequisite(s): CYTO-4700; Restricted to Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

CYTO 4900 - Advanced Practices in Cytology (8)

Cellular investigation of human samples from all body sites performed in a clinical cytotechnology laboratory setting using advanced techniques and state of the art computer integrated screening tools to screen, accurately recognize, and differentiate normal, benign, and malignant processes. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): CYTO-4800; Cytotechnology Seniors or Cytotechnology Post-Baccalaureate students.

Nutrition & Dietetics (DIET)**DIET 1000 - Hot Topics in Nutrition (1-2)**

Students will learn how to evaluate nutrition claims related to health and fitness. Nutrition topics of interest to the class will be explored. The basics of healthy eating will also be addressed. Fall semester.

DIET 1900 - Bar and Beverage Management (3)

This is an introductory course in how to set-up, operate, and manage a bar. Students will learn about wines, spirits, and beers and how they are served. Additional material covers layout and design, equipment, marketing, and staffing. The students will be exposed to the legal issues relevant to a food service manager with a particular focus on those issues related to alcohol service. Spring Semester.

DIET 2080 - 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. Prerequisite(s): CHEM-1110/1115 (pre) and 1120/1125 (May be taken concurrently)

DIET 2100 - 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.

Prerequisite(s): DIET-2080 or DIET-380; BIOL-1040, PPY-2540.

DIET 2510 - Ethnic Meal Management (4)

Prerequisite(s): DIET-2080

DIET 2750 - Foundations in Classical Cuisine (3)

Prerequisite(s): DIET-2510

DIET 3030 - Sustainable Food Systems (3)

This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

DIET 3050 - Food Processing: Farm to Institution (3)

With the goal of establishing a robust local and sustainable food system, students will explore and think critically about each link in the food supply chain from farm to institution as they develop a value added product based upon locally sourced ingredients. Prerequisite(s): DIET-2510 and DIET-2750(Offered every Fall and Spring)

DIET 3080 - 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(s): CHEM-3600 may be taken concurrently.

DIET 3140 - 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. Prerequisite(s): DIET-3190 (May be taken concurrently), DIET-2510

DIET 3190 - 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. Prerequisite(s): DIET-3140 (May be taken concurrently), DIET-2510

DIET 3200 - Garde Manger Lab (2)

Introduction in garde manger work including sandwiches, salads, sausage production, vegetable carving, canapés, aspic, chaud froid, and buffet presentation. Fall semester. Prerequisite(s): DIET-3140 (May be taken concurrently), DIET-2510

DIET 3600 - Food Science (3)

Lab included. The study of food chemistry and the role of ingredients in food products. The study of the chemical and physical factors that influence food quality and food products. Fall and Spring semesters. Prerequisite(s): DIET-2510

DIET 3700 - 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(s): DIET-2510, DIET-3140, and DIET-3190.

DIET 3750 - Adv Cooking & World Cuisines (2)

Students will explore advanced culinary techniques and ingredients used in cuisines around the world. Particular attention will be paid to flavor profiles, indigenous cooking techniques, and the history of spices. Students will discover how common ingredients are used differently in various cultures. Fall semester. Prerequisite(s): DIET-3700.

DIET 3850 - 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. Prerequisite(s): BIOL-1040 or BIOL-1100, CHEM-3600 or BIOL-3020, PPY-2540, and DIET-2080.

DIET 3890 - 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 3900 - Culinary Intercession I (1)

Limited to Culinary Emphasis students. This class is an introduction to the operation of a food service establishment. In this class, students will learn purchasing requirements and receive hands on experience with soup, salad, and entrée production. All cooking techniques will be reinforced, as well as organization, plate presentation, and proper mise en place. This course will begin 2 weeks prior to regular Fall semester courses of Junior year.

Prerequisite(s): DIET-3700.

DIET 4010 - 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.

Prerequisite(s): DIET-4900 (May be taken concurrently) and ACCT-2200.

DIET 4060 - Maternal & Child Nutr & Health (3)

This course will look at maternal and child health and nutrition through a public health lens. It will focus on both domestic and international health and nutrition issues as they relate to women and children. It will include service learning, for both undergraduate and graduate students, with a community agency that serves women and children. Additionally, graduate students in this course will also develop and lead a discussion on a related evidence-based research effort dealing with domestic or international maternal or child nutrition and health.

DIET 4070 - Culinary and Medicinal Herbs (3)

This class will be divided into three sections. Section one will include techniques for the identification of the most common classifications of herbs, as well as a history of their uses. This section will focus on the culinary properties of herbs. The second section will focus on medicinal herbs with an evaluation of the indications for use, side effects, and drug/herb interactions. The third section is integrated laboratory experiences throughout the course, including culinary and medicinal preparations and garden design and planting. Spring semester. Prerequisite(s): DIET-2080

DIET 4100 - 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(s): DIET-4870 (May be taken concurrently), DIET-3850

DIET 4110 - Clinical Practicum Lab I (2)

Lab that coordinates clinical and problem-based learning experiences with DIET-4100: Medical Nutrition Therapy I, the nutritional management of different disease states. Fall semester. Co-requisite: DIET-4100.

DIET 4150 - 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(s): DIET-4100

DIET 4250 - 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. Prerequisite(s): DIET-3600, DIET-3700

DIET 4260 - Baking Lab (2)

Introduction in fundamental baking - including breads, cookies, and Danish. Principles and procedures of theory and practice of high quality crafted bakery items. Prerequisite(s): DIET-3600, DIET-3700

DIET 4270 - 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(s): DIET-4250

DIET 4280 - Pastry Lab (2)

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(s): DIET-4250

DIET 4300 - Foundations in Comm. Nutrition (3)

This course explores the foundations of public health as well as current governmental programs, policies and administrative offices which address health, hunger and food safety issues at local, state, and national levels. Priority health issues relating to the promotion of good nutrition and preventive health care for each life stage are examined. Students learn basic skills for designing, implementing, evaluating and marketing nutrition intervention programs. Students also learn about food insecurity and sustainability. Fall semester. Prerequisite(s): DIET-2080

DIET 4350 - 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 food-service facilities. Prerequisite(s): DIET 3700, BLS 4510, MGT 3000 and ECON 1900 or ACCT-2200(Offered every Fall)

DIET 4360 - Food Systems Management II (0-3)

Lab included. Advanced preparation of students involved in foodservice management with emphasis placed upon management of financial and human resources. Operational budget preparation, strategic planning, marketing for customer satisfaction, and quality improvement projects will apply the concepts taught during this course. Spring semester. Prerequisite(s): DIET-4350

DIET 4400 - Nutrition Education (3)

Study of principles and practices of nutrition education of groups, including aspects of public speaking and lesson planning. Spring semester.

Prerequisite(s): DIET-2510, DIET-4100, and PSY-1010

DIET 4500 - Nutrition Counseling (3)

Fall semester. Prerequisite(s): DIET-2100 and DIET-3850

DIET 4750 - Gastronomy (3)

Gastronomy is the study of the relationship between food and culture. Food is an expression of culture but how we experience that food also creates culture. How, when, and where we eat shape our lives and create the experience of living within a particular culture. With this perspective in mind, we will delve into the relationship between various cultures and their distinct cuisine that arose within that context. As we face increasing homogeneity in world culture and cuisines due to globalization and the spread of western pop culture, how can distinct ingredients, cuisines, techniques, and flavor profiles remain vital and preserved? How does the concept of 'terroir' extend beyond wines to include a culture's cuisine? We will also look at food taboos around the world, cultural and religious. How did these taboos develop, what are the modern forms/incarnations of those taboos, and what purpose do they serve?

DIET 4800 - Sustainable Food Innovation Ext (3)

Prerequisite(s): DIET-3050

DIET 4850 - Mediterranean Diet / Lifestyle (3)

In depth experience in Farm to Fork cooking in both USA and Italy. Ingredients, cooking styles, culture, and lifestyles will be examined. Particular attention given to the Mediterranean Diet, traditional Mediterranean cooking traditions, organic farms, and markets. Offered every fall.

DIET 4870 - Crit Read of Res Material I (1)

Prerequisite(s): DIET-4100 (May be taken concurrently) and DIET-3850

DIET 4880 - Crit Read of Res Material II (1)

Assessment and critical analysis of current research papers in various areas of nutrition and dietetics. Emphasis is on examining more complex papers with an analysis of design and advanced statistics of research in the clinical setting. Spring semester. Prerequisite(s): DIET-415 (May be taken concurrently) and DIET-3850

DIET 4900 - 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. Prerequisite(s): DIET-3900, DIET-3140, DIET-3190, and DIET-4250.

DIET 4950 - Culinary Philosophy & Practice (3)

Limited to Culinary Emphasis students. This course is designed to integrate students culinary training, academic studies, and cooking experiences into various practical applications. Students will plan, prepare, and execute even 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(s): DIET-3750, DIET-4900, DIET-4010 & DIET-4270.

DIET 4980 - Independent Study (1-3)

Qualified students interested in doing work in specific areas of dietetics or wishing to amplify their knowledge of dietetics may pursue an individualized course of study. Department approval is required. Prerequisites: To be determined individually.

DIET 5010 - Survey of Nutrition for AHP (3)

This course offers a condensed presentation of the foundations of human nutrition, incorporating some of the biochemical and physiological aspects. The role of nutrition in normal growth, development and maintenance of body functions will be investigated. Additionally, of nutrition in the management of disease, disease prevention, and physical performance will be addressed with guidelines for referral. Popular dietary supplements, including sport supplements will be reviewed for cost, effectiveness, and side effects. Projects will reinforce application of nutrition concepts. Offered every Spring semester.

DIET 5030 - Sustainable Food Systems (3)

This course provides students with a clear perspective on the principles, history, and practices of sustainable food systems in local and global communities.

DIET 5040 - Edible Wild Foods (2)

Wild food is the ultimate in 'local' and 'seasonal' produce, and historically has always been a resource for nutrition and medicine. Students will be shown how to identify wild edible plants, as well as learning the different plant stories, their nutritional values, therapeutic purposes, historical context, and culinary applications. This class will also examine the beneficial role of bacteria within our bodies, the food system, food preparation, and food preservation. Offered in summer.

DIET 5050 - Food Processing: Farm to Institution (3)

With the goal of establishing a robust local and sustainable food system, students will explore and think critically about each link in the food supply chain from farm to institution as they develop a value added product based upon locally sourced ingredients. Prerequisite(s): DIET-2510 and DIET-2750 (Offered every Fall and Spring)

DIET 5060 - Maternal & Child Nutr & Health (3)

This course will look at maternal and child health and nutrition through a public health lens. It will focus on both domestic and international health and nutrition issues as they relate to women and children. It will include service learning, for both undergraduate and graduate students, with a community agency that serves women and children. Additionally, graduate students in this course will also develop and lead a discussion on a related evidence-based research effort dealing with domestic or international maternal or child nutrition and health.

DIET 5100 - 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 5130 - 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 5220 - 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.

Prerequisite(s): DIET-4150 (Offered every Fall and Summer)

DIET 5350 - Clinical Systems Management (3)

A systems approach to clinical nutrition services management, including the human dimensions of management, management tools and techniques for assessing accountability, cost containment, productivity and marketing plans. Includes development of a personnel and operational budget to expand nutrition services. Offered every Fall semester.

DIET 5400 - Nutrition Education (3)

Educational theories and principles as applied to nutrition education in a variety of settings. Students will design materials, become familiar with various types of media, and demonstrate skills learned. Review of recent research. Offered every Fall semester.

DIET 5450 - Public Health Nutrition Practicum (0-3)

Field experience in patient/client nutritional management at various sites under professional supervision (20 hours per week). Research component required as part of the practicum. Practice experience carried concurrently with theory. Offered every semester.

DIET 5500 - Nutrition Counseling (3)

Course will cover counseling theories as they relate to nutrition counseling including Stages of Change, Health Belief Model and Motivational Interviewing. Students will apply lecture material in a lab and community setting where they will practice their counseling skills on volunteers and clients seeking nutrition counseling.

DIET 5690 - Bioenergetics of Exercise (3)

This course provides a comprehensive survey of the bioenergetics of acute and chronic exercise in humans, with foci on the biochemical and physiological responses of skeletal muscle and the cardiovascular system to acute and chronic exercise. The course focuses on research literature and emphasizes theory (i.e., principles and concepts).

DIET 5700 - Exercise Testing And Prescription (3)

An introduction to physical fitness assessment and exercise prescription with a focus on preparation for the American College of Sports Medicine Personal Trainer Certification. Includes assessment methods for cardiovascular and muscular fitness, body composition and flexibility, and an examination of the principles for prescribing cardiovascular, strength, and flexibility exercise. Also addresses emergency procedures and planning, risk stratification, and special needs for pediatric, pregnant, and older individuals. Includes a practicum laboratory. Spring semester. Prerequisites: cardiopulmonary resuscitation (CPR) certification, ANAT 1000 (or suitable equivalent), PPY 2540 (or suitable equivalent), and DIET 5690 (or suitable equivalent).

DIET 5750 - Gastronomy (3)

Gastronomy is the study of the relationship between food and culture. Food is an expression of culture but how we experience that food also creates culture. How, when, and where we eat shape our lives and create the experience of living within a particular culture. With this perspective in mind, we will delve into the relationship between various cultures and their distinct cuisine that arose within that context. As we face increasing homogeneity in world culture and cuisines due to globalization and the spread of western pop culture, how can distinct ingredients, cuisines, techniques, and flavor profiles remain vital and preserved? How does the concept of 'terroir' extend beyond wines to include a culture's cuisine? We will also look at food taboos around the world, cultural and religious. How did these taboos develop, what are the modern forms/incarnations of those taboos, and what purpose do they serve?

DIET 5800 - CARDIOVASCULAR & METABOLIC ASPECTS OF EXERCISE PHYSIOLOGY (3)

Designed to acquaint the student with advanced principles and concepts regarding cardiovascular physiology. The course examines in detail the various parameters of the cardiovascular system, the implication of disease and structural abnormalities to these parameters, and the relationship of resting cardiovascular function to exercise adaptation. Offered every Summer semester.

DIET 5850 - Mediterranean Diet / Lifestyle (3)

In depth experience in Farm to Fork cooking in both USA and Italy. Ingredients, cooking styles, culture, and lifestyles will be examined. Particular attention given to the Mediterranean Diet, traditional Mediterranean cooking traditions, organic farms, and markets. Offered every fall.

DIET 5870 - Seminar in Dietetics Research (0-1)

Define a problem for in-depth research. Review of the research process and University and departmental requirements. Offered in fall.

DIET 5880 - Research in Nutrition and Dietetics I (1)

Conduct in-depth research, data collection, and statistical analysis, including completion of full IRB requirements. Offered every fall and spring.

Prerequisite(s): DIET-5870

DIET 5890 - Research in Nutrition and Dietetics II (2)

Interpretation and discussion of research results presented in written format, submitted for publication in a refereed journal and a professional poster presentation. Prerequisite(s): DIET-5880(Offered every Spring and Summer)

DIET 5900 - Culinary Practicum (3)

Practical entrepreneurial experience or research in culinary arts and nutrition under professional supervision with a focus on sustainability. (20 hours per week).

DIET 5910 - Dietetic Internship (1-6)

Required of all students participating in the American Dietetic Association accredited internship.

DIET 5910 - Dietetic Internship (2-3)

Required of all students participating in the American Dietetic Association accredited internship.

Physical Therapy (DPT) (DPT)**DPT 1111 - Student Development I (1)**

This course is designed to prepare the first-year student to be successful at Saint Louis University and assist in the transition to college for first year students. This interactive course will cover topics including introduction to the Jesuit mission of Saint Louis University, academic and time management skills, values and career exploration, on-campus resources, and awareness of self and others. Students will be introduced to resources at Saint Louis University as well as the policies and procedures of the physical therapy program and Saint Louis University. (Offered fall only)

DPT 1212 - Student Development II (1)

This interactive course is designed to further assist in the transition to college for first year students. Much time will be spent on the choice of PT as a career and the types of PT practice and other health care career alternatives to physical therapy. Stress management will also be discussed. (Offered spring only)

DPT 2113 - Student Development III (1)

This course is designed to move the student from thinking about the profession of physical therapy to thinking about him/herself as a future professional and a successful physical therapist. Students explore the Generic Abilities for Physical Therapists and practice self-evaluating using the Generic Abilities. The topics of time management and study skills are revisited. Students are introduced in more detail to the physical therapy faculty. The concept of the Jesuit Mission is expanded to include looking at the generic abilities and curriculum themes of the physical therapy program. (Offered fall only)

DPT 2214 - Student Development IV (1)

This course furthers the development of the student by exploring the concepts of physical therapy core values and physical therapy as a vocation. Students are asked to examine the mission of Saint Louis University as it relates to the physical therapy core values. They are also asked to compare/contrast the physical therapy core values with the generic abilities for physical therapists. Practicing physical therapists will share their experiences of PT as a vocation. They also apply concepts included in the generic abilities and PT core values in a service learning situation. (Offered spring only)

DPT 3200 - Junior Residency (0)

The purpose of this zero credit hour course is to show that the student is in residence as a spring semester junior student in the Program in Physical Therapy. This class is an avenue for the dissemination of program information and is important to overall student development because it prepares the student for entry into the Professional Phase of the Program in Physical Therapy. (Offered spring only)

DPT 3230 - 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. (Offered spring only)

DPT 4001 - Professional Residency I (0)

The purpose of this zero credit hour course is to show that the student is in residence as a summer semester professional year I (senior) student in the Program in Physical Therapy. This class is an avenue for the dissemination program information, review before and after exams, and can be used as an avenue to provide course material prior to labs for certain DPT courses. (Offered summer only)

DPT 4021 - Kinesiology I (0-2)

Kinesiology I emphasizes the application of biomechanical principles to human movement. Kinematics, kinetics, mechanical properties of biological tissue, muscle actions, and joint structure and function are examined along with an introduction to movement analysis. The course helps prepare student to observe, describe, and discuss human movement and alignment using biomechanical terms. In the final unit of the course, biomechanical principles and movement analysis are applied to the shoulder region. (Offered summer only)

DPT 4102 - Professional Residency II (0)

The purpose of this zero credit hour course is to provide an avenue for the dissemination of program information, review before and after exams, and provide targeted information from outside sources to the PYI class. (Offered fall only)

DPT 4122 - Kinesiology II (0-3)

Kinesiology II builds on concepts introduced in Kinesiology I. Biomechanical principles and movement analysis are applied to the elbow, wrist/hand, spine/temporomandibular, pelvis/hip, knee, and ankle/foot regions. The course assists in student understanding of optimal human motion and alignment and the contributions and interactions of the muscular, skeletal, and nervous systems. Students use foundational knowledge and principles of movement analysis to begin to understand appropriate intervention strategies. (Offered fall only)

DPT 4125 - Therapeutic Modalities (0-3)

This course covers the mechanical, physiological, and therapeutic aspects of thermal, electromagnetic, electrical, and mechanical agents used as adjunctive interventions in the management of neuromusculoskeletal injuries. Included in the course are the theoretical and practical knowledge of specific modalities and the integration of these treatment procedures into an overall rehabilitation plan. This course also emphasizes verbal, non-verbal, and written communication; optimum positioning and draping during treatment procedures; safety during application of physical agents; and proper equipment usage and maintenance. Clinical decision making is supported by use of the best available evidence and understanding normal soft tissue healing and pain mechanisms. (Offered fall only)

DPT 4127 - Basic Examination (0-3)

Basic Exam in classroom and laboratory sessions covers knowledge of foundational physical therapy exam measures. Essential concepts of measurement issues will be presented from a theoretical and practical viewpoint. Upon completion of the course, the student will be expected to perform the essential physical therapy examination skills of subjective history taking, review of systems, palpation, range of motion, muscle length testing, manual muscle testing, basic neurological screens, and specified anthropometric measurements. In addition, the student will be expected to perform each specific physical therapy examination or measurement within an acceptable range of accuracy defined by the instructors. (Offered fall only)

DPT 4131 - Survey of Disease (3)

This course will present an overview of human diseases and the change in body tissues and organs that cause or are caused by disease. The pathogenesis of disease of all major systems, risk factors, clinical manifestations and implications of medical management is covered. (Offered fall only)

DPT 4146 - Developmental Biology (3)

The focus of this course is basic science knowledge necessary for physical therapists. Topics covered include histology, embryology and genetics. (Offered fall only)

DPT 4203 - Professional Residency III (0)

The purpose of this zero credit hour course is to show that the student is in residence as a spring semester senior student in the Program in Physical Therapy. This class is an avenue for the dissemination of program information, review before and after exams, and can be used as an avenue to provide course material prior to labs for certain DPT courses. (Offered spring only)

DPT 4226 - 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 interventions based on patient examination will be included. (Offered spring only)

DPT 4228 - Basic Procedures (0-2)

The purpose of this course is to offer the physical therapy student opportunities to develop their observation, examination and evaluation skills and perform treatment interventions in both a theoretical and practical application framework. This material acts as a foundation on which the student will build throughout his/her professional career. Treatment interventions include therapeutic patient positioning, patient transfers, safe patient handling, patient transport, gait with assistive devices, and infection control. Basic wheelchair types, components, and measurements, American Disability Act, basic nursing procedures, and appropriate therapist emergency response are discussed. There is an emphasis on communication skills as well as therapist-patient safety. (Offered spring only)

DPT 4241 - Clinical Research and Design (2)

This course will introduce students to several types of clinical research designs including designs for group studies, epidemiological studies, and qualitative studies. Interpretation of selected statistical methods also will be included. (Offered spring only)

DPT 4247 - Human Growth and Development (3)

This course provides students with a comprehensive approach to pediatric patients with congenital, developmental, and/or neurological conditions. Emphasis is placed on examination skills and intervention strategies. Patient demonstrations are included. Labs where students practice their skills with peers as well as with children with developmental challenges are integral course components. This course includes a lab component. (Offered spring only)

DPT 4276 - Documentation (1)

The focus of this course is the development of competency in documentation skills with consideration of the International Classification of Functioning, Disability, and Health Model of Disablement (ICF) and the Guide to Physical Therapist Practice. Students will practice defensible documentation for patient/client physical therapy initial, progress, and discharge visits. The course will include opportunities to document in an electronic health record through a web-based program. (Offered spring only)

DPT 4290 - Skills Practicum (0-1)

Skills Practicum is the student's first opportunity to practice basic physical therapy skills in a clinical setting under the supervision of a physical therapist/clinical instructor. The course is comprised of two components: didactic and clinical. 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 facility with close supervision by a clinical instructor (CI). The student practices communication, examination and intervention skills. (Offered spring only)

DPT 4770 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

DPT 5104 - Professional Residency IV (0)

The purpose of this zero credit hour course is to show that the student is in residence as a fall semester professional year II student in the Program in Physical Therapy. This class is an avenue for the dissemination of program information, review before and after exams, and can be used as an avenue to provide course material prior to labs for certain DPT courses. (Offered fall only)

DPT 5115 - Professional Development I (1)

The focus of this course is the nature of professionalism and the professionalization of physical therapy. This course will provide the learner with the opportunity to practice development of expected professional behaviors with emphasis on ethical decision making. The professional issues facing physical therapy are presented in the context of the goals of the American Physical Therapy Association. (Offered fall only)

DPT 5123 - Clinical Gait (2)

Clinical Gait is intended to provide the entry-level Doctor of Physical Therapy student with the foundational knowledge and practical skills necessary to analyze human gait, identify causes of pathologic gait, and begin to design appropriate intervention. Upon completion of this course, the student will be prepared to fully describe the characteristic gait pattern of a healthy adult and to identify abnormal (pathologic) gait patterns. In addition, students will be able to discuss potential causes of pathologic gait and begin to formulate treatment ideas to address these factors. Finally students will develop observational skills to accurately perform normal and pathologic gait assessment. This course includes a lab component. (Offered fall only)

DPT 5132 - Pharmacology (1)

This course will present an introduction to pharmacological management in the physical therapy setting. Emphasis will be placed on application of pharmacological information to clinical practice. Students will learn pharmacokinetics, pharmacodynamics, how to find and utilize drug information, and the positive and negative effect of drugs and drug side effects on physical therapy management. (Offered fall only)

DPT 5133 - Lab Studies & Imaging (2)

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound. (Offered fall only)

DPT 5134 - Multi System Management (0-3)

This course will cover physical therapy examinations, interventions and expected outcomes for integumentary disorders and selected disease processes with multi-system implications. Specific topics include post-surgical and acute care, diabetes, peripheral vascular disease, oncology, lymphedema, HIV/AIDS, wounds, and burns. (Offered fall only)

DPT 5135 - Cardiopulmonary Conditions (0-3)

This course examines the pathogenesis and pathophysiology of cardiovascular and pulmonary disorders as well as renal disease. Cardiopulmonary examination, goal setting and intervention methodologies are included. (Offered fall only)

DPT 5137 - Aspects of Nutrition in PT (2)

Role and relationship of nutrition in the treatment of specific populations treated by physical therapists; nutritional principles related to exercise. (Offered fall only)

DPT 5142 - Evidence Based Practice (2)

This course examines how research is used to practice in an evidence-based manner. Practitioners of evidence-based clinical practice are able to put what he or she needs to know into an answerable question, efficiently search the literature, critically appraise the findings, integrate the evidence with clinical judgment and the patient's values, and bring the process full circle by evaluating the effort. (Offered fall only)

DPT 5149 - Applied Neuroscience (0-2)

This course will introduce basic concepts of motor learning principles and motor control theories. These theories and principles will be applied to health individuals and patient populations. Principles of neuroanatomy and neurophysiology are reviewed and applied to patient case examples. A framework for working with patients with neurological deficits will be presented. (Offered fall only)

DPT 5162 - Musculoskeletal Conditions II (0-3)

Musculoskeletal Conditions II is focused on physical therapy management of patients with spinal, sacroiliac, or temporomandibular joint conditions that affect their ability to move normally. Each regional unit includes examination (history, systems review, and tests and measures), evaluation of examination data, establishing diagnosis and prognosis, designing and implementing intervention, and assessing outcomes. Classroom sessions focus on the presentation and classification of common regional musculoskeletal conditions with an emphasis on the evidence to support examination and intervention decisions. Lab sessions focus on learning psychomotor aspects of examination and intervention as well as case examples to develop clinical reasoning strategies. (Offered fall only)

DPT 5205 - Professional Residency V (0)

The purpose of this zero credit hour course is to show that the student is in residence as a spring semester professional year student in the Department of Physical Therapy. This class is an avenue for the dissemination of program information, review before and after exams, and can be used as an avenue to provide course material prior to labs for certain DPT courses. (Offered spring only)

DPT 5218 - Effective Comm & Teaching (3)

This course provides an opportunity for the learner to apply verbal and nonverbal communication skills required in the clinical environment using learning, personality, and developmental theories. The learner will have the opportunity to explore the components and skills of the interview including appropriate questioning technique. The learner will practice culturally sensitive and patient/client centered communication skills in lab and in the community. The course introduces the concepts of teaching methods including provision of feedback and self-assessment of teaching skills through reflection. Additionally, the learner will engage in peer assessment of a group teaching project. (Offered spring only)

DPT 5250 - Neuropathology (2)

This course provides the student with current information on the medical and/or surgical 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. (Offered spring only)

DPT 5251 - Neurological Conditions I (0-4)

The purpose of this course is to provide the student with a comprehensive approach to select patients with neurological conditions. Emphasis is placed on examination skills, writing patient evaluations and developing approaches to interventions. Patient demonstrations will be presented when available. Labs are an integral component for the students to practice and refine their skills. (Offered spring only)

DPT 5261 - Musculoskeletal Conditions I (0-2)

Musculoskeletal Conditions I presents information necessary to participate in the medical management of patients with primary musculoskeletal disorders and/or medical disorders that affect multiple systems or regions. Pathology, etiology, and epidemiology of specific disorders and discussion of clinical signs and symptoms, the interpretation of tests, and medical management discussed. Osteoporosis, arthritis, and connective diseases will be explored in depth from a physical therapy perspective, including examination, evaluation, assessment, and intervention. Labs allow students to apply skills, clinical reasoning for systems differential diagnosis based on the Cyriax soft tissue model, and soft tissue mobilization as an intervention. (Offered spring only)

DPT 5263 - Musculoskeletal Conditions III (0-4)

Musculoskeletal Conditions III is focused on physical therapy management of patients with hip, knee, foot/ankle, shoulder, or elbow conditions that affect their ability to move normally. Each regional unit includes examination (history, systems review, and tests and measures), evaluation of examination data, establishing diagnosis and prognosis, designing and implementing intervention, and assessing outcomes. Classroom sessions focus on the presentation and classification of common regional musculoskeletal conditions with an emphasis on the evidence to support examination and intervention decisions. Lab sessions focus on learning psychomotor aspects of examination and intervention as well as case examples to develop clinical reasoning strategies. (Offered spring only)

DPT 5271 - Patient Management I (0-3)

Clinical decision-making for patients with orthopedic impairments throughout the life-span and determination of disposition of the patient's care necessitates integration of a vast array of knowledge and skills. This course emphasizes thorough data collection and interpretation through the integration of knowledge in determining possible diagnosis stemming from the various organ systems which mimic musculoskeletal pathologies. Students will participate in the differential diagnosis process and in discerning the provisional label responsible for the patient's concerns, and learn efficient and effective communication with the patient during the patient interview and with the other health team members via a diagnostic statement. (Offered spring only)

DPT 5291 - Clinical Rotation IA (0-2)

Clinical Rotation IA is comprised of two components: didactic and clinical. 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 includes the first 5 weeks of a full 10 week assignment in a clinical setting. Students are directly supervised by clinical instructors during clinical portion of the course. Students will practice all elements of the patient/client management including all tasks required to manage at approximately 25% of a caseload at the clinic site. (Offered spring only)

DPT 5770 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

DPT 5890 - Special Topics: Clin Rot IV (0)

In this course students remediate didactic and or clinical work from Clinical Rotation IV

DPT 5930 - Special Topics (1-3)

This registration shows that the student is in residence as a student in a semester after Professional Year II in the Department of Physical Therapy.

DPT 5980 - Independent Study (1-3)

This course will be a contracted course for the Radiation Therapy Program. Radiation therapy students must have the approval of the program director and clinical coordinator prior to enrolling in this course. Upon meeting with the faculty, a learning contract will be drafted and signed by the student and faculty, outlining the details of the requirements for successful completion of this independent study course. The contract will also include the meeting time, location, textbooks or references, evaluation methods, outcomes, and expected completion date of the course. Students will be allowed to enroll in this course ONLY ONE TIME. If the course work required is not completed during the contracted semester, graduation requirements of the radiation therapy program will not have been met and the degree will not be awarded.

DPT 6006 - Professional Residency VI (0)

The purpose of this zero credit hour course is to show that the student is in residence as a summer semester professional year student in the Program in Physical Therapy. This class is an avenue for dissemination of program information and review of exams/courses. (Offered summer only)

DPT 6072 - Patient Management II (1)

This course emphasizes and builds on prior attained knowledge of the physical therapist's participation in the differential diagnostic process utilizing a multimedia online teaching approach for patient cases. Based on clinical cases, students will make appropriate recommendations regarding physical therapy intervention and/or referral to other health care professionals. For those patients determined to be appropriate for physical therapy, the immediate disposition of the patient's care will be planned and discussed with appropriate evidence to support the decision making process as available. Discussion topics include progression/regression of the plan of care dependent upon emerging data from the patient's scenario. (Offered summer only)

DPT 6077 - Department Administration (2)

This course covers the basic administrative, management, and ethical 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 business, marketing, organizational structure, professional communication, workplace issues, and billing. Students will utilize concurrent experience in the clinic to understand these foundations of health care operations. (Offered every summer)

DPT 6091 - Clinical Rotation IB (2)

Clinical Rotation IB is comprised of the final 5 weeks of the 10 week clinical assignment started during DPT 580. Students are supervised by clinical instructors while in the clinic. Students will practice all elements of the patient/client management including all tasks required to manage at least 50% of a caseload at the clinic site. (Offered summer only)

DPT 6092 - Clinical Rotation IIA (2)

Clinical Rotation IIA is comprised of the first 5 weeks of a full 10 week assignment in a different clinical setting than students were assigned for DPT 580 and 581. Students are assessed by clinical instructors while in the clinic. Students will practice all elements of the patient/client management including all tasks required to manage approximately 25% of a caseload at the clinic site. (Offered summer only)

DPT 6107 - Professional Residency VII (0)

The purpose of this zero credit hour course is to show that the student is in residence as a fall semester professional year III student in the Program in Physical Therapy. This class is an avenue for the dissemination of program information, review before and after exams, and can be used as an avenue to provide course material prior to labs for certain DPT courses. (Offered fall only).

DPT 6116 - Professional Development II (2)

The focus of this course is the development of expected professional behaviors with emphasis on ethical decision-making and preparation for employment decisions. The organization's structure, governance, priorities, concerning legislative, practice and educational aspects are explored. The student will participate in self-assessment and reflection in order to explore his/her beliefs about professional behaviors, ethical decision-making and the core values of the profession. The professional role of the physical therapist as clinical teacher, researcher and consultant is discussed. The student will have the opportunity to apply teaching theories to clinical education. (Offered fall only)

DPT 6124 - Biomechanical Interventions (0-3)

Biomechanical Interventions is focused on physical therapy management of patients with amputations or pathology that requires management through an orthosis or soft tissue taping/wrapping. Students practice examination techniques, evaluate examination data, design appropriate interventions, fabricate hand splints and foot orthotics, and practice various taping and wrapping techniques, along with discussing when and why they are applied. Common prosthetic and orthotic components are discussed, with emphasis on the biomechanics of utilization. During the course the student is expected to recall and use patient management principles, measurement concepts, and a clinical reasoning framework that were introduced in previous courses. (Offered fall only)

DPT 6138 - Concepts of Wellness (1)

This course builds on the concepts of the biopsychosocial model of health; change theories, and health promotion learned in earlier courses and provides the student the opportunity to apply the concepts to special populations. Physical fitness and prevention of injury/illness is considered for well populations, obese persons and populations with disabilities. The focus of the course is to increase knowledge of health, wellness and prevention, including lifestyle changes and attention to mind-body-spirit connections and supportive environments. The influence of the spiritual domain on health, wellness and on healthcare is addressed and applied to physical therapy practice. (Offered fall only)

DPT 6152 - 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. (Offered fall only)

DPT 6164 - Musculoskeletal Conditions IV (0-3)

This course is designed to be progressive in pedagogical style with increase use of self-directed learning activities as the semester progresses. Management of patients with a neuromusculoskeletal pathology of the wrist and/or hand concludes the regional approach. Additional practice areas are addressed including: orthopedic topics within the pediatric lifespan from a surgical perspective, industrial rehabilitation/occupational health and ergonomic assessment, and gender related health issues will be highlighted. The special challenges of treating patients with chronic pain syndromes, hematologic disorders, and post-polio syndrome are addressed with interactive learning activities. (Offered fall only)

DPT 6173 - Patient Management III (2)

This course builds on Patient Management I and II and adds the management of patients with complex neurologic diagnoses to the student's clinical reasoning process. The creation and modification of intervention programs is emphasized, including referrals to other health care providers and discharge planning. The student has the opportunity to improve visual postural and kinematic evaluation skills through video patient cases. The complex patient task analysis results in the creation of a comprehensive intervention program to improve a particular activity/participation which is outcome and evidence based. This course emphasizes an integration of problem-solving skills based on all previous coursework. (Offered fall only)

DPT 6178 - Applied Administration & Mgmt (2)

This course covers the more advanced business operations of clinic operations, as well as understanding the concepts of leadership and management in the health care industry. The principles of leadership and entrepreneurship will be discussed using cases and discussion. This will evolve into more specific issues related to clinic management including the following: financial reporting, strategic planning, risk management and legal issues, and quality assurance. Students will be asked to draw upon previous clinical settings to serve as points of reference. (Offered every fall)

DPT 6180 - Geriatrics Seminar (1)

This course explores the causes of frailty in older adults and the financial burden in the U.S. of obtaining healthcare for this population. The course explores services available to help frail older adults maximize their physical and psychosocial independence within the community and within institutions. The course consists of lectures, interviews, and site visits in the St. Louis area.

DPT 6181 - Manual Therapy of the Spine and Extremities (1)

This seminar course focuses on the psychomotor skill of manual therapy and the accompanying clinical reasoning skills for utilization for effective patient management. The course emphasizes a lab session style of teaching to provide ample opportunities for each student to practice their psychomotor skills while also receiving/providing formative feedback from/to peers and instructors. (Offered fall only)

DPT 6182 - Sem in Adult Neurologic PT (1)

This seminar provides experience clinics and community organizations that serve adult patients with neurological disorders/diseases. Students will have the opportunity to work in small groups with at physical therapy, clinician of different disciplines and their patients. Additionally, students will have 3 sessions with the course coordinator to discuss their clinic experiences and relate their coursework from DPT527 and DPT507 to the patients seen in the clinic. (Offered fall only)

DPT 6183 - Seminar in Physical Therapy - Pediatrics (1)

Seminar in pediatrics includes to interrelated components, group discussion and clinic participation. Each group discussion follows preparation of pre-cla readings (basic review articles and current evidence-based research). Students review the pathophysiology associated with the selected neurological, congenital, developmental, and/or musculoskeletal disorders in pediatric patients. Medical, surgical, and pharmacological management strategies are considered. Videotapes or paper case studies may be incorporated to enhance discussion. The clinical component focuses on observation, examination, and evaluation of children with chronic disorders, primarily neurological or genetic in origin, and occurs at Southview School, Special School district, St. Louis County. While all students in Neurological Conditions I have labs at Southview School, seminar participants have additional small-group lab hours. Additionally, students complete one observation in the NICU at Cardinal Glennon Hospital.

DPT 6184 - Sports Physical Therapy (1)

This seminar is designed to give student the opportunity to further explore topics related to sports physical therapy. The perspective of the sports medicine team and the roles of the different professions in the care of athletes will be examined. The involvement of the physical therapist in the prevention and treatment of the injured athlete will be emphasized.

DPT 6192 - Clinical Rotation IIB (0-2)

Clinical Rotation IIB is comprised of the final 5 weeks of the 10 week clinical assignment started during DPT 582. Students are assessed by clinical instructors while in the clinic. Students will practice all elements of the patient/client management including all tasks required to manage at least 50% of a caseload at the clinic site. (Offered fall only)

DPT 6208 - Professional Residency VIII (0)

The purpose of this zero credit hour course is to show that the student is in residence as a spring semester Professional Year III student in the Program in Physical Therapy. This class is primarily an avenue for the dissemination of program information. (Offered spring only)

DPT 6217 - Professional Development III (1)

The focus of this on-line course is to assist the student in making a transition from the academic environment to the clinical workforce. Class activities are designed to assist the student in determining individual needs for continued professional development and life-long learning. The student will participate in on-line discussions as well as self-assessment and reflection activities. (Offered spring only)

DPT 6243 - Applied Evidence-Based Clinical Practice (2)

In this course clinical interns use principles of evidence-based clinical practice to answer clinical questions which arise during their internship experience. (Offered spring only)

DPT 6293 - Clinical Internship A (0-4)

Clinical Internship A is a 10 week full time clinical internship at a clinical setting. Students are assessed by clinical instructors while in the clinic. Students will perform all elements of the patient/client management including all tasks required to manage a full entry-level caseload at the site independently. (Offered spring only)

DPT 6294 - Clinical Internship B (0-3)

Clinical Internship B is a 10 week full time clinical internship at a setting different than the one assigned for DPT 584. Students are assessed by clinical instructors. Students will perform all elements of the patient/client management including all tasks required to manage a full entry-level caseload at the site independently. (Offered spring only)

Health Informatics (HI)**HI 5100 - Medical Vocabularies and Classification Systems (3)**

The representation of clinical data through the use of medical vocabularies and clinical classification systems. Emphasis is on developing expertise in identifying appropriate clinical classification systems and medical vocabularies, identifying their appropriate uses and sources, and applying them within and among health information systems to promote effective communications and achieve full integration of its health information management system.

HI 5200 - Intro to Health Informatics (3)

This course surveys the fundamental concepts and activities on information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, telehealth, decision theory and decision support, human-computer interfaces, consumer health informatics, e-Health, and the personal health record. Department-specific applications are discussed.

HI 5300 - Information Security (3)

This course addresses information security from a policy perspective. The components of information security, the need for security, and the legal, ethical, and social challenges of information privacy and security will be discussed. The regulatory environment, HIPAA, ARRA, privacy, security and accountability will be discussed.

HI 5400 - Clinical Decision Making (3)

This course allows students to explore the history, evolution, and current applications of clinical decision support. The course emphasizes the unique challenges of clinical data representation and information retrieval techniques that are foundational to clinical decision support systems. Students will evaluate the value of clinical decision support systems in contrast with the complexities of implementation in the current medical, legal, financial, technological and cultural context.

HI 5600 - Financial Resource Management (3)

This course addresses topics such as cost analysis, justification, capital purchasing, leasing strategies, risk-sharing models, purchase agreements, contracts, corporate compliance, charge master, prospective payment systems, healthcare organization revenue cycle, leveraging health care information to drive strategic decision making.

HI 5900 - Applied Informatics Project I (3)

The goal of the applied informatics project I is to prepare students in the area of inferential statistics, the research process, study/project design and outcome analysis.

HI 5910 - Applied Informatics Project II (3)

The goal of the applied informatics project II is for the student to use the skill they acquired over the course of their studies in informatics to analyze, develop and implement research plans that produce a pilot project, a proof of concept or a prototype system that has the potential to impact and/or promote knowledge discovery and dissemination.

Health Information Mgmt (HIM)**HIM 1100 - Introduction to Health Informatics and Information Management (1)**

This course is an introduction to the disciplines of health informatics and health information management. It is designed to familiarize the student with the various careers and opportunities available in both professions. Students will participate in different activities and discussions to learn and understand the range of elements, nuances, and importance of health informatics and health information management. Offered in fall. Open to all SLU students.

HIM 3000 - Foundations in Health Information Management (3)

This course is an introduction into the profession of health information management. We will explore the origin, uses, and content of health records. The accreditation, certification and licensure standards applicable to health records will also be discussed. After a basic foundation of health information management has been established, we will discuss the evolution of the paper medical record to electronic healthcare, the role technology plays in that evolution, the use of a personal health record in healthcare delivery, ethical and the legal issues surrounding e-health. In addition, we will explore and discuss the importance in determining the user's needs, and evaluating risks, benefits and barriers to the system. Restricted to undergraduate major and minor students in Health Information Management.

HIM 3100 - Medico-Legal Aspects (3)

This course examines the US court system, legal terminology and legal procedures. Specific emphasis will be on the healthcare legislation/regulations, including the Health Insurance Portability and Accountability Act (HIPPA), highlighting confidentiality, privacy, security and use of protected health information; professional and practice related ethical issues, informed consent, torts, negligence and the legalities of the electronic and other health related documentation. Offered in fall.

HIM 3200 - Health Data Management (3)

This course focuses on the principles of healthcare statistics with emphasis hospital statistics, analyzing results to facilitate decision-making and report generation. An overview of descriptive and inferential statistics and their use in healthcare, the presentation of data and basic research principles will be included. Offered in fall. Restricted to undergraduate major and minor students in Health Information Management.

HIM 3300 - Classification Systems I (0-3)

This course focuses on the ICD-9-CM coding system and its use in the health care industry. Students will apply ICD-9-CM coding principles to exercises, assignments and health records in a classroom laboratory setting. An introduction to ICD-10-CM, ICD-10-PCS and how to transition to the new system will be addressed. Restricted to majors only or by approval of instructor.

HIM 3600 - HIM Theory & Practice (0-3)

This class builds on the content of HIM 3000, Foundations of Health Information Management, by providing students an opportunity to synthesize knowledge for the design, maintenance, retrieval and uses of health data and health information. Students will learn the importance of managing health data such as data elements, data sets and databases as well as clinical indices, databases and registries. Emphasis is placed on ensuring documentation in the health record supports the diagnosis and reflects the patient's progress, clinical findings, and discharge status. Compliance and organizational survey readiness for accreditation, licensing, and certification is emphasized. Offered in spring. Restricted to undergraduate major and minor students in Health Information Management. Prerequisites: HIM 2500, 3000, & 3100. This course is taught in two parts. Both parts must be registered for and taken simultaneously. Both parts are taken for credit and are assigned grades. MW lecture (1 hour/day) and 2 credit hours; Friday is reserved on student schedule from 8 a.m. - noon, 1 credit hour. Linked on Banner, so that registration of MW automatically registers for a Friday site visit (lab) and the total of 3 credit hours.

HIM 4150 - Quality Improvement (3)

This course focuses on basic elements to achieve safe, efficient and quality health care in the US. Processes for reviewing, monitoring and evaluating health care services will be analyzed. Quality indicators will be assessed along with opportunities to monitor improvement. Identifying and utilizing analytical and graphic quality and performance tools will assist in the evaluation of improvement. Other quality tools will be introduced and applied, including critical pathways, minimum data sets, and core measures. Risk management and utilization management will be highlighted. Various standards, including Joint Commission and CMS, will be discussed for performance improvement. Restricted to undergraduate major and minor students in Health Information Management. Offered in spring.

HIM 4200 - Research Design, Critique (3)

This class serves as an introduction to research. One of the purposes of the course is to enable students to become informed consumers of research published in health care and give students the skills to conduct research in their future careers. Critical evaluation of published literature serves as a basis for developing one's own research proposal. The course will pursue the planning phase of a research project including, culminating in the development of an IRB proposal for the planned study of an oral presentation of the planned project.

HIM 4300 - Classifications Systems II (3)

This course is an introduction to nomenclatures and classification systems utilized in collecting, maintaining and retrieving specified clinical data in a variety of healthcare settings. Focus of course is using Current Procedural Terminology (CPT) and Health Care Finance Administration Common Procedure System (HCPCS) for coding hospital outpatient and physician office records. Ethical concerns in the application of coding and reimbursement principles will be emphasized. Management of Coding Services will be discussed. Restricted to undergraduate <u>majors</u> in Health Information Management. Prerequisite: HIM 3300

HIM 4400 - Clinical Data Analytics (3)

This course is an introduction to big data in healthcare from a practical perspective. The course will include experience with databases and statistical software for data extraction, normalization, transformation, visualization, and statistical analyses. Prerequisite(s): HIM 4200 or HSCI 3700. Restricted to undergraduate <u>majors</u> in Health Information Management.

HIM 4500 - Human Resource Management in Healthcare (3)

This course focuses on the fundamental concepts that will help healthcare managers manage their workforce. This includes attention to job descriptions; staffing and scheduling; performance appraisals; productivity; counseling; training needs; wage and salary administration; interviewing techniques; as well as the laws related to human resources; and labor organizations in healthcare. Offered in fall. Restricted to undergraduate students in Health Information Management. Prerequisite: HIM 3000 or permission of advisor.

HIM 4510 - Health Care Financial Mgmt (3)

This course provides an introduction to healthcare finance and the financial environment in which the healthcare industry functions. Topics include an overview of the healthcare industry, insurance and reimbursements as well as revenue cycle. This course also includes a review of accounting principles, such as revenue and costs analysis, operating and capital budgeting, financial statement review and financial analysis. Offered in fall. Restricted to undergraduate <u>majors</u> in Health Information Management.

Prerequisite(s): HIM-3000 or permission of advisor.

HIM 4530 - Professional Practice (3)

An experience in approved health care facilities and/or related sites, projects are structured to process, design, implement, and evaluate patient-related information system needs and departmental or other operations and service. Restricted to undergraduate <u>majors</u> in Health Information Management.

HIM 4610 - Electronic Health Systems Management (3)

This course will allow students to apply computer technology and information concepts to the decision making process in the health care environment. Acquisition of systems, systems analysis, design, implementation and evaluation will be explored along with issues relating to system security. Health information systems found in health information departments will be reviewed. Present problems, limitations and future trends will be discussed. Throughout the course, the role of the health information manager in the analysis, development and implementation of systems will be emphasized. Restricted to undergraduate major and minor students in Health Information Management. Prerequisite(s): HIM-3000.

HIM 4750 - Fundamentals of Clinical Medicine (3)

This course is designed to acquaint the student with the basic concepts of diagnosis and management of common physical and mental illnesses. The effects of cultural issues on health, healthcare quality and costs of treatment will be assessed. Students will correlate signs and symptoms documented in the health record with medical conditions. They will learn to identify common required procedures and tests needed to arrive at a given diagnosis. Commonly used pharmacological agents and their indicators for use will be introduced. Offered in fall. Restricted to undergraduate major and minor students in Health Information Management.

HIM 4950 - Senior Seminar (3)

This is the capstone course for HIM majors. The purpose of this course is to assist the student in synthesizing the knowledge and skills developed during their course of study through the use of case studies and project work. Students will prepare for the credentialing exam. Alternative career opportunities will be presented. Restricted to undergraduate <u>majors</u> in Health Information Management.

HIM 4980 - Special Studies (1-3)

A concentrated area of study in the field of health information management agreed upon by the student and advisor.

Health Sciences (HSCI)**HSCI 1000 - Introduction to Health Sciences (1)**

Introduction to health sciences is designed to familiarize students with the healthcare system and various careers in the medical professions. This course will cover the health care industry and careers, special consideration in healthcare, working in the healthcare industry, and health care basics. Offered fall and spring.

HSCI 2000 - The U.S. Health Care System (3)

The purpose of this course is to introduce the U.S. Healthcare system and identify the impact historical and current healthcare policies have had or may have on healthcare delivery.

HSCI 2500 - Human Development across the Lifespan (3)

This course will explore the developmental process throughout the life span including physical, motor, social and some personality development.

HSCI 3200 - Health Law and Policy (3)

This course will provide the student with a study of law and legal concepts as they apply to the practice of health. Emphasis will be on HIPAA regarding privacy and confidentiality; health record documentation standards; informed consent and ethical issues in healthcare. Offered in fall. HSCI 2000 prerequisite.

HSCI 3500 - Healthcare Technology (3)

This course will discuss how a student can assist healthcare providers to choose, implement, train and maintain an electronic health records system. Emphasis will be on the essential components of the electronic health record and health information exchange essentials; system selection and implementation; project management and fundamentals of change and human factors. The course will also explore the current and proposed technology being used in patient care and treatment. Offered in fall. HSCI 2000 prerequisite; HSCI 3200 taken previously or concurrently.

HSCI 3700 - Research Methods (3)

This introductory course will define research methods and its importance for improving the health care of society. This course will also focus on the research process and the relationship between theory, data and statistical methods. Offered in fall. CMM 1200 prerequisite; MATH 1300 or equivalent should be taken previously or concurrently.

HSCI 4000 - Neuroscience in Everyday Life (3)

This course will explore the translation of neuroscience into understanding our behavior and actions in daily life. Broad applications for life decisions such as education, employment, sexuality, health and lifestyle will be explored, in addition to understanding adverse health events such as a stroke, traumatic brain injury, dementia, developmental defects, and mental health disorder in the context of neuroscience as it is applied to life choices. Offered in fall. Prerequisites: (HSI 2200) AND (either HSI 3300, HSI 3400, PPY 2540, or ANAT 1000).

HSCI 4100 - Healthcare Technology (3)

This course will discuss how a student can assist healthcare providers to choose, implement, train and maintain an electronic health records system. Emphasis will be on the essential components of the electronic health record and health information exchange essentials; system selection and implementation; project management and fundamentals of change and human factors. The course will also explore the current and proposed technology being used in patient care and treatment. Offered in fall. HSCI 2000 prerequisite; HSCI 3200 taken previously or concurrently.

HSCI 4500 - Hot Topics in Health Care (3)

This course will focus on examining key issues confronting health care today. The course will reflect on current issues and trends within the health care industry. Offered in spring. Prerequisites: HSCI 4000 and HSCI 4100 and Senior status.

HSCI 4600 - Consumer Health (3)

This course will teach how to bridge the gap between patients and their health resources. It will review technologies focused on patients as the primary users to health information - remote monitoring, videoconferencing and telepresence. The students will determine the consumer's needs for health information, and will include health literacy issues to understanding that information. Offered in spring. Prerequisite: HSCI 4100 and Senior status.

HSCI 4700 - Quality Management (3)

This course focuses on the elements of healthcare quality and human resource management. Human resources in healthcare present the concepts and tools for understanding healthcare employment industry and the challenge of managing healthcare employees. Healthcare quality management presents the basic principles and techniques of quality management in healthcare to achieve safety, quality and efficiency goals. Offered in spring. Prerequisites: HSI 2100; HSCI 3700 or HIM 4200 and Senior status.

HSCI 4700 - Healthcare Quality and Human Resource Management (3)

This course focuses on the elements of healthcare quality and human resource management. Human resources in healthcare present the concepts and tools for understanding healthcare employment industry and the challenge of managing healthcare employees. Healthcare quality management presents the basic principles and techniques of quality management in healthcare to achieve safety, quality and efficiency goals. Offered in spring.

HSCI 4980 - Adv. Independent Study (3)

Students in this course will explore science and philosophy and the connection through language and technology to the activity of inquiry.

HSCI 5000 - Science & Philosophy (3)

Students in this course will explore science and philosophy and the connection between them through language and technology to the activity of inquiry. Offered in spring.

HSCI 5050 - Foundations of US Health Care System (3)

This course explores financial, regulatory, scientific, and political elements that have shaped the US Healthcare System along with current and future impact of reforms. Offered in spring.

HSCI 5250 - Qualitative Methods for Health Sciences Research-3 (3)

This course examines the traditions and methods, scientific issues, and techniques associated with qualitative research inquiry. Offered in fall.

HSCI 5280 - Research Methods (3)

This course provides an overview of research methodologies. Offered in fall.

HSCI 5290 - Research Techniques (3)

In this elective course, students are paired with their thesis research project faculty mentors to learn and develop the pertinent skills and techniques necessary to complete the data collection phases of their thesis research projects. Offered in spring.

HSCI 5500 - Advanced Consortium (3)

This course provides students with the opportunity to identify and communicate significant influences on the US Health Care System and potential future trends. Offered in fall.

HSCI 5550 - Applied Epidemiology (3)

This course covers basic epidemiology principles, concepts, and procedures useful in the surveillance and investigation of health-related states or events. Offered in spring.

HSCI 5560 - Applied Statistics (3)

This is a hands-on data analysis course in which students learn how to think capture, manipulate, and analyze data using common statistical and biostatistical techniques. Offered every fall.

HSCI 5970 - Research Application (3)

This contract course is designed for students whose thesis research project warrant additional work towards completion. Offered in spring.

HSCI 5980 - Independent Study (1-3)

This contract course allows students to pursue topics relevant to their area of interest. Offered fall, spring and summer.

HSCI 5991 - Thesis I (3)

In this course, students work under the direction of their thesis research project faculty mentors to implement their thesis research project. Offered fall and summer.

HSCI 5992 - Thesis II (3)

In this course, student work under the direction of their thesis research project faculty mentors to continue conducting their thesis research projects. Offered summer and fall.

HSCI 5993 - Thesis III (0-3)

In this course, students work under the direction of their thesis research project faculty mentors to complete the remaining phases of their thesis research projects. Offered fall and spring.

Health Science and Informatics (HSI)**HSI 2100 - Health Care Management (3)**

This course will discuss management and project management from the standpoint of a healthcare manager who must organize, plan, implement and control tasks. Students will learn to apply management theory and project management tools and techniques to achieve an organization's schedule, budget and performance objectives. Offered in spring. Restricted to Health Science and Health Information Management students only.

HSI 2200 - Medical Terminology (3)

The course teaches the basic language related to medical science and allied health professions; word analysis, construction, pronunciation, spelling, definition, and use of terms pertaining to anatomy, pathology, abbreviations, and medical procedures. Offered fall, spring and summer. For the first four weeks of registration, this course is only open to Doisy College of Health Sciences students. At the end of the 4th week of registration, the restriction will be lifted and anyone at SLU may register for this course on a first come, first serve basis until capacity is reached.

HSI 3300 - Anatomy & Physiology I (3)

This course provides a comprehensive study of the structure and function of the human body. Topics include anatomical terminology; body organization; homeostasis; cytology; histology; and the integumentary, skeletal, muscular, and nervous systems. Offered in fall. For the first four weeks of registration, this course is only open to Doisy College of Health Sciences students. At the end of the 4th week of registration, the restriction will be lifted and anyone at SLU may register for this course on a first come, first serve basis until capacity is reached. HSI 2200 prerequisite.

HSI 3310 - Anatomy & Physiology I Lab (1)

This lab will examine the structure and function of the human body. Topics include body organization; homeostasis; cytology; histology; and the integumentary, skeletal, muscular, and nervous systems. Offered in fall. For the first four weeks of registration, this course is only open to Doisy College of Health Sciences students. At the end of the 4th week of registration, the restriction will be lifted and anyone at SLU may register for this course on a first come, first serve basis until capacity is reached.

HSI 3400 - Anatomy & Physiology II (3)

This course provides a comprehensive study of the structure and function of the human body. Topics include general and special senses; hemocytology; fluid and electrolyte balance; and the cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Offered in spring. For the first four weeks of registration, this course is only open to Doisy College of Health Sciences students. At the end of the 4th week of registration, the restriction will be lifted and anyone at SLU may register for this course on a first come, first serve basis until capacity is reached. HSI 2200 prerequisite.

HSI 3410 - Anatomy & Physiology II Lab (1)

This lab will examine the structure and function of the human body. Topics include general and special senses; hemocytology; and the cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Offered in spring. For the first four weeks of registration, this course is only open to Doisy College of Health Sciences students. At the end of the 4th week of registration, the restriction will be lifted and anyone at SLU may register for this course on a first come, first serve basis until capacity is reached.

Athletic Training (MAT) (MAT)**MAT 1000 - 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 2000 - AT Student Development I (1)

This course is designed to move the student from thinking about the profession of athletic training to thinking about him/herself as a future professional and a athletic trainer. Students explore the Foundational Behaviors of Professional Practice in Athletic Training. The concept of the Jesuit Mission is expanded to include consideration of the integration of Foundational Behaviors of Professional Practice. Essentials of effective career development including communication skills, critical thinking, professional networking, cultural competence, and time and energy management are addressed.

MAT 3000 - Athletic Training Student Development (2)

This course introduces the student to the cognitive, psychomotor and affective skills integral to athletic training. These abilities lay the foundation for the development of competency in clinical practice. They are also necessary for taping, bracing, injury prevention and emergency care.

MAT 3230 - 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 4970 - Mastery Assurance (0)

The purpose of this course is to provide students with the opportunity to master course content not mastered in the prior semester. Content will be completed as described in the criteria listed on a mastery assurance learning contract set up between the instructor and the student.

MAT 5010 - Principles of Athletic Training (2)

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 demonstrate and practice taping and wrapping are included. Offered every summer.

MAT 5100 - Athletic Training Kinesiology (3)

This course applies the foundational sciences of physics, human anatomy and human physiology in developing and understanding of the kinetics and kinematics of human movement in sport. Emphasis is placed on the functional motions of running, jumping, and throwing (overhand and underhand).

MAT 5133 - Lab Studies and Imaging (2)

This course covers clinical testing, including clinical lab studies, EMG/NVC, radiological studies, MRI, vascular and general ultrasound.

MAT 5160 - Bioenergetics Athletic Perform (3)

This course establishes the role energy, metabolism, energy costs, associated metabolic changes, gender influences on metabolism, resting metabolic rate and the thermal effects of food. All of these factors will be addressed specifically as they are evident in athletic performance.

MAT 5240 - Musculoskeletal Assessment & Management I (0-4)

This course explores the pathokinematics of selected pathologies within the upper quadrant of the human body, relevant examination techniques to assist in differential diagnosis, and subsequent intervention measures.

MAT 5250 - Musculoskeletal Assessment and Management II (0-4)

This course covers the pathokinematics of selected pathologies within the lower quadrant and the examination, diagnosis and treatment of those conditions. Treatment procedures discussed and practiced include use of mobilization of bony and soft tissues, and other forms of active and passive exercise, both mechanical and non-mechanical, for a broad range of musculoskeletal conditions.

MAT 5500 - Rehabilitation in AT I (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 5550 - Rehabilitation in Athletic Training II (3)

This course provides an evidence-based approach to rehabilitation of injuries and conditions associated with athletic participation. The emphasis in the course is the development of rehabilitation protocols utilizing of therapeutic modalities and therapeutic exercise. Surgical and non-surgical approaches to conditions and injuries will be addressed.

MAT 5600 - 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 5650 - 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 5700 - 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 5750 - 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 5800 - Medical Conditions in Athletic Training (3)

This course is a review of responses of the body to exercise and sports with specific discussion of acute and chronic medical problems that can affect athletic performance. Medical conditions that are emphasized include asthma, diabetes, cardiac abnormalities, and viral diseases. In addition, this course covers dermatological conditions encountered in sport.

MAT 5900 - AT Field Experience (2)

This is an internship with the athletic training staff of an outside agency affiliated with the program. Documentation will be kept in a portfolio format.

MAT 6160 - Enhancing Athletic Performance (2-3)

This course is designed for students to use knowledge of anatomy, physiology, kinesiology, and coaching techniques in designing strength and conditioning programs for athletes. Consideration will be given to strategies for improving sports-specific agility, speed, power, strength, and cardiovascular/respiratory fitness.

MAT 6700 - 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 6750 - 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 6800 - 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.

MAT 6960 - 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.

Molecular Imaging/Therapeutics (MIT)**MIT 5110 - Physical Principles (3)**

This class will cover the history of magnetic resonance imaging, magnetism, signal production, and the physics related to imaging. This will include, but it not limited to: tissue characterization; T1 and T2 relaxation; signal decay; K-space; Fourier transformation; spatial encoding; and image characteristics.

MIT 5120 - Cross Sectional Anatomy and Pathology (3)

Students will become familiar with cross-sectional anatomy and will learn how to view and to image the human body in multiple planes. The pathology of the various body regions (including neurological, visceral, musculoskeletal, soft tissue, and vasculature) will be discussed as it relates to MR imaging.

MIT 5130 - Instrumentation and Quality Analysis (3)

This class covers all components of MR imaging equipment including the magnet, the acquisition console, and all ancillary equipment. The various types of magnets, gradients, shims, radiofrequency coils, and magnetic and RF shielding will be covered, as well as maintenance, quality analysis and operational workflows.

MIT 5140 - Clinical MRI and Image Production (5)

Students will learn the clinical aspects of MRI. This includes the imaging parameters for intrinsic image contrast characteristics; proper sequence selection; adjustments of imaging options; administration of contrast media; and use of post-processing applications.

MIT 5150 - Patient Care and MRI Safety (3)

This class will cover the handling and care of patients, visitors, and staff in the MRI environment. This includes the proper education and screening of anyone or any equipment entering the magnetic field. Emergency procedures and their effect on patients, staff, and the public will also be discussed.

MIT 5210 - Clinical MRI Practicum (9)

Students will perform a wide variety of magnetic resonance imaging procedures in multiple clinical settings under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics. Clinical experience will include venipuncture and the administration of contrast media.

MIT 5220 - Advanced/Emerging Technologies (2)

An exploration of the emerging technologies and advances in MRI, including their impact on imaging and healthcare, will be presented. In addition, a correlation between MRI and other imaging modalities (Computed Tomography, Nuclear Medicine/PET, Ultrasound, etc.) will be discussed.

MIT 5310 - Radiation Physics (2)

This course is intended for those who may be interested in the fundamental concepts of physics that apply to the field of Nuclear Medicine and Radiation Therapy. During this course the student is introduced to the fundamental structure of the atom and its associated binding energies. The course includes a comprehensive coverage of the types and mathematics of radioactive decay. Interactions of charged particles and photons with matter are discussed to provide a basis for the understanding of radiation detectors. X-ray production as well as internal radiation dosimetry will be covered. (Prerequisite(s): MATH-1400, PHYS-1220 & PHYS-1240)

MIT 5320 - XRT Radiation Therapy Practice I (3)

This course provides the student with an overview of the foundations in radiation therapy and the practitioner's role. Principles of radiation, health safety ethics and the professional responsibilities of the radiation therapist will be discussed and examined. Basic operational issues in radiation therapy will be examined. The role of the radiation therapist in the health care organization, the treatment prescription, the documentation of treatment parameters and delivery, emergency procedures and patient condition and education needs will be presented, discussed, and evaluated. The students are expected to observe and gain practical experience in the areas of patient care, patient safety, department operation, localization, treatment, dosimetry, and quality assurance as these are all components of the daily responsibilities of the radiation therapist.

MIT 5330 - Treatment Technique (3)

This course will introduce concepts and terminology of radiography and radiation therapy treatment set-ups. It will examine anatomy, positioning, immobilization, field boundaries, and standard beam arrangements for site-specific anatomical areas. Laboratory experiences include virtual simulation demonstrations and conventional/CT simulator practice with a phantom.

MIT 5340 - Treatment Planning (2)

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. Offered every fall.

MIT 5350 - XRT Clinical Practicum I (6)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting for simulation, treatment planning and administration of a prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated.

MIT 5360 - Emerging Technologies (2)

This course will introduce basic x-ray production and its uses plus advanced imaging technologies. A study of human anatomy as it relates to radiographic films and cross sectional human anatomy is also covered.

MIT 5400 - Radiation Oncology Patient Care and Quality Management (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, incorporating clinical process, equipment, and documentation that demonstrate patient care outcomes. Additionally, regulatory agencies and respective rules affecting the radiation oncology workplace, staff, and patients are emphasized. The role of the radiation therapist in patient care, safety and quality management is stressed.

MIT 5410 - Radiobiology and Radiation Protection (2)

The radiobiology course content is designed to present basic concepts and principals of radiation biology. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Discussion of the theories and principals of tolerance dose, time-dose relationships, fractionation schemes and relationship to the clinical practice of radiation therapy will be discussed, examined and evaluated. The radiation protection section of this course covers the basic concepts of radiation protection, types of radiation, personnel and facility radiation monitoring, environmental protection, the safe handling of radioactive materials, equipment use, quality control, and how these concepts relate to radiation protection. Radiation safety practices in radiation therapy departments, and regulations that govern the use of radioactive materials in the clinical setting will also be covered. The entirety of the course will provide the student with an understanding of the significance of protecting themselves and the patients that they serve.

MIT 5430 - XRT Capstone (1)

This course integrates previous knowledge and skills with significant, relevant issues and subjects in professional practice. Emphasizes professional role development of the new graduate and preparation for the national credentialing board exam. Only MIT MIRT students can register for this course. Course offered in spring and summer.

MIT 5440 - XRT Clinical Dosimetry (3)

Reviews basic concepts introduced in Treatment Planning, further examining factors that influence and govern dose determination and planning treatment for radiation therapy patients. Emphasizes clinical application of photon and electron beam characteristics, dose calculations, and related factors to safely and optimally treat the radiation therapy patient. Several laboratory sessions supplement the lectures. Some focus is directed on clinical dosimetry and treatment planning for radiation oncology special procedures.

MIT 5450 - Clinical Practicum II (0)

Content and clinical practice experiences shall be designed for sequential development, application, analysis, integration, synthesis and evaluation of concepts and theories in radiation therapy. Clinical practice experiences shall be designed to provide care to the patient in the therapeutic setting simulation treatment planning and administration of the prescribed course of treatment. Levels of competency and outcomes measurement shall assure the well-being of the patient preparatory to, during, and following delivery of radiation therapy treatment and services. Through structured assignments in clinical facilities, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Continuation of Clinical Practicum I.

MIT 5510 - NMT Radiation Physics and Radiation Protection (4)

This course is intended for those who may be interested in the fundamental concepts of physics that apply to the field of Nuclear Medicine and Radiation Therapy. During the physics portion of the course the student is introduced to the fundamental structure of the atom and its associated binding energies. The course includes a comprehensive coverage of the types of mathematics of radioactive decay. Interactions of charged particles and photons with matter are discussed to provide a basis for the understanding of radiation detectors. X-ray production as well as internal radiation dosimetry will be covered. The radiation biology section of this course covers the basic concepts of radiobiology, sources and types of radiation, and the effects of radiation exposure to humans. The radiation protection section covers the safe handling of radioactive materials, radiation safety practices in the nuclear medicine and radiation therapy departments, and regulations that govern the use of radioactive materials in the clinical setting. The entirety of the course will provide the student with an understanding of the significance of protecting themselves and the patients that they serve.

MIT 5520 - Radiochemistry (3)

This course will focus on the methods of production and compounding radiopharmaceuticals and their biodistribution in the human body. There will also be sections on general nomenclature of the radiopharmaceutical, aseptic technique and pertinent regulations.

MIT 5530 - Nuclear Medicine Instrumentation (2)

During the basis instrumentation part of the course the student is introduced to the principles and operation of various types of radiation detectors and imaging devices in nuclear medicine. The series of basic events by which the energy of a detected gamma or x-ray photon is transformed into electrical pulses will be discussed. The theory and operation of SPECT and PET/CT imaging instruments will be discussed. Quality control procedures will be emphasized through a series of instrumentation experiments, the students will have an opportunity to calibrate a single channel analyzer and identify the detection characteristics influencing the counting of radioactivity.

MIT 5540 - NMT Clinical Nuclear Medicine (5)

This course is divided into four sections, which are taught simultaneously in units. These sections are imaging, nonimaging, patient care and administrative procedures. The imaging portion of the course includes a review of concepts in anatomy, physiology and pathology as they relate to clinical applications in nuclear medicine. Through a team teaching approach (physicians and technologists), indications for nuclear medicine exams, procedural techniques and analysis of laboratory data are presented. Students learn how basic image appearance and/or numerical data are altered by specific pathologic states. The nonimaging portion of the course includes an introduction to basic laboratory equipment, its proper operation and necessary quality control procedures. Principals of immunology are presented prior to discussing individual procedures. Lecture presentations are reinforced with companion clinical application experiments performed in the student laboratory.

MIT 5550 - Nuclear Medicine Information Systems (3)

In this course the basic principles of computer design and operation will be presented. The student will gain an understanding of how these principles are applied to Nuclear Medicine computer applications.

MIT 5610 - Imaging Practicum (7)

During the imaging rotation the student is expected to have observed the following procedures and be capable of performing same under the supervision of the staff technologist. A record is kept as to the number of procedures a student has observed, participated in and performed.

MIT 5620 - Radiochemistry Practicum (3)

During the radiopharmacy rotation the student is expected to observe all procedures and be capable of performing same under the supervision of the radiopharmacist or the responsible individual. A record is kept as to the number of times each task has been observed, participated in and performed by the student.

MIT 5630 - Emerging Technologies (2)

The Advanced Imaging course is designed to provide students with a working knowledge of the contribution of Computed Tomography, Magnetic Resonance Imaging and PET/CT imaging.

MIT 5880 - NMT Clinical Practicum (0)

This course follows the same content and objectives as NMT 561. It is offered during the summer semester to complete the 12 month program.

MIT 5890 - Clinical MRI Practicum II (0)

Students will perform wide variety resonance imaging procedures in multiple clinical settings under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics. Clinical experience will include venipuncture and administration of contrast media. Continuation of Clinical Practicum I.

MIT 6000 - Masters Seminar I (1)

This course is the first of three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both of their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 6100 - Masters Seminar II (2)

This course is the second of the three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 6200 - Masters Seminar III (3)

This course is the final course of three masters level seminar courses that build upon each other, culminating in a scholarly project suitable for publication in a peer-reviewed journal, professional presentation or equivalent. It will emphasize clinical research design including extensive statistical methods and conclusions. The student must select a topic that combines both their undergraduate and graduate areas of study. Each student is assigned a scholarly mentor to provide guidance in planning, coordinating, conducting and presenting the project.

MIT 6980 - Independent Study (1-3)

This course is intended for MIT students who undertake a research project in which the complexity of the work extends the project beyond the traditional MIT schedule. The length of this course may not extend the entire semester and the course will end upon completion of the contracted work.

Medical Laboratory Science (MLS)**MLS 3150 - Urinalysis & Immunology Laboratory (1)**

A laboratory course designed to provide hands-on laboratory experiences in the analysis of urine and other body fluids to include spinal fluid using real patient samples. Students will learn and perform the three phases of urine analysis to include the physical, chemical and microscopic evaluation of a urine sample. The principles of urinalysis testing will be discussed along with the clinical significance of the various procedures used in testing urine and their role in disease diagnosis. Physical analysis and cell counting procedures will be performed and discussed on various body fluids. Prerequisite(s): BIOL-1240 and CHEM-1120; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): BLS-3110.

MLS 3200 - Principles of Clinical Education (1)

Basic concepts of education theory and applications as it applies to medical laboratory practice are presented. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a timeline, expected outcomes and a grading rubric. Pre-requisite(s): MLS or MLS Categorical students; Permission of the instructor

MLS 3300 - Clinical Laboratory Management (1)

Basic concepts of management theory and laboratory operations to include human resource management, financial management, quality assurance/improvement, and governmental regulations are presented. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Restricted to MLS, MLS Categorical, Cytotechnology Senior or Cytotechnology post-baccalaureate students; Permission of the instructor

MLS 4150 - Analytical Chemistry Laboratory (2)

A laboratory course which introduces analytical principles and instrumentation used in a clinical chemistry laboratory. Topics include: photometry, electrochemistry, immunoassays, chromatography, mass spectrometry, and osmometry. Experiments are designed to demonstrate basic principles and laboratory techniques. Prerequisite(s): CHEM 1120, CHEM 2410; MLS major or MLS Certificate students; Permission of the instructor. Co-requisite(s): BLS-4110.

MLS 4160 - Molecular Biology Laboratory (2)

A laboratory course which presents concepts of molecular biology and hands-on laboratory experiences in a variety of molecular techniques to include the use of restriction enzymes, isolation of genomic DNA, evaluation of DNA purity, hybridization techniques (Southern, Northern & Western), amplification techniques (e.g. PCR & Real time PCR), gel electrophoresis, recombinant DNA techniques, microarray assays, and use of bioinformatics websites for sequence searching. Prerequisite(s): BIOL-1040 and CHEM-1120; BIOL-3020 recommended; MLS, MLS Categorical, CYTO Junior, or CYTO post-baccalaureate students; Permission of the instructor. Co-requisite(s): BLS-4110.

MLS 4161 - Molecular Biology Laboratory (1)

A laboratory course which presents concepts of molecular biology and hands-on laboratory experiences in a variety of molecular techniques to include the use of restriction enzymes, isolation of genomic DNA, evaluation of DNA purity, hybridization techniques, amplification techniques, gel electrophoresis, recombinant DNA techniques, microarray assays, and use of bioinformatics websites for sequence searching. Prerequisite(s): BIOL-1240, CHEM-1120, BLS 4130; BIOL-3020 recommended; MLS majors, MLS Certificate students; Permission of the instructor. Co-requisite(s): BLS-4130.

MLS 4250 - Hematology Laboratory (1)

Performance, interpretation, and troubleshooting of a variety of basic hematology procedures will be accomplished using clinical specimens. Cell counts and differentials and other hematology procedures will be performed on blood. Principles and reactions involved in the testing procedure will be emphasized as well as the interpretation of results. Students will also receive an introduction to phlebotomy. Prerequisite(s): BIOL-1240 & CHEM-1120; BIOL-3020 recommended; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): BLS-4210.

MLS 4350 - Immunohematology Lab (1)

Practice in routine testing procedures utilized in the blood bank such as blood typing, antibody identification, and crossmatching using clinical samples. Theoretical principles, troubleshooting procedures and interpretation of results will be discussed. Prerequisite(s): BLS-4411; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite: BLS-4310.

MLS 4520 - Medical Bacteriology (2)

Content focuses on prokaryotic microbes of pathologic importance. Included are discussions on structure, molecular biology, molecular diagnostics, metabolism, growth, replication, current topics and emerging concerns. Pathogenicity, epidemiology, diagnosis and laboratory identification of important groups of human pathogenic bacteria are emphasized. Modes of action of selected antimicrobics and chemotherapeutic agents are also discussed. Prerequisite(s): BLS-4510; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite: BLS-4550.

MLS 4530 - Medical Mycology (1)

Course will focus on the clinically relevant fungi and the mycotic diseases of man. Terminology, taxonomy, pathogenesis, specimen processing and techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): BLS-4510; MLS or MLS Categorical students; Permission of the instructor

MLS 4540 - Medical Parasitology (1)

Course will focus on the clinically relevant parasites and the diseases they produce in man. Terminology, aspects of epidemiology, modes of transmission, pathogenesis, morphology, life cycles, specimen processing and techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric.

Prerequisite(s): BLS-4510; MLS or MLS Categorical students; Permission of the instructor

MLS 4550 - Medical Bacteriology Laboratory (2)

Laboratory course designed to give the student experience in the Gram staining, isolation, identification and susceptibility testing of microorganisms, as well as an introduction to non-culture based procedures used in the diagnosis of infectious disease. Prerequisite(s): BLS-4510; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite: MLS 4520.

MLS 4560 - Medical Mycology Laboratory (1)

A laboratory course involving the analysis of the clinically relevant fungi and the diseases they produce in man. Techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS-4540

MLS 4570 - Medical Parasitology Laboratory (1)

A laboratory course involving the analysis of the clinically relevant parasites and the diseases they produce in man. Techniques of laboratory identification are covered. Honors Section: In addition to the above course requirements, students in the honors section will consult with the instructor to select and complete a project on a course relevant topic along with determining a time-line, expected outcomes and a grading rubric. Prerequisite(s): MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS-4540

MLS 4610 - Advanced Topics and Case Correlations (2)

Key content areas of laboratory medicine will be reviewed and advanced topics, molecular diagnostics and specialty areas in the clinical laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Prerequisite(s): MLS 4700 through MLS-4820; Permission of instructor

MLS 4620 - Advanced Topics and Case Correlations-Clinical Chemistry (1)

Key content areas of clinical chemistry will be reviewed, advanced topics and specialty areas in the clinical chemistry laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): MLS 4701, MLS 4710; MLS Certificate students; Permission of instructor.

MLS 4630 - Advanced Topics and Case Correlations - Hematology (1)

Key content areas in clinical hematology will be reviewed, advanced topics and specialty areas in the clinical hematology laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): MLS 4740, MLS 4750; MLS Certificate students; Permission of the instructor.

MLS 4640 - Advanced Topics and Case Correlations - Microbiology (1)

Key content areas in clinical microbiology will be reviewed, advanced topics and specialty areas in the clinical microbiology laboratory will be discussed. Clinical case studies addressing laboratory test/disease correlation, the selection of laboratory tests, interpretation of laboratory results, and problem resolution will be emphasized. Advanced theory and clinical practice issues are presented and reinforced through lectures, discussions, and case presentations. Pre-requisite(s): MLS 4800, MLS 4811; MLS Certificate students; Permission of the instructor.

MLS 4700 - Clinical Chemistry Routine Testing Practicum (2)

Clinical rotation course focuses on clinical chemistry testing in a practicum setting. Concepts and techniques include: protein structure and function; enzyme kinetics; carbohydrate and lipid metabolism; hormonal regulation; pathophysiology of water, electrolyte, and acid-base balance. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4110, BLS-4120, & MLS-4150; MLS or MLS Categorical students; Permission of the instructor. Co-requisite(s): MLS-4710

MLS 4701 - Clinical Chemistry Practicum (3)

Clinical rotation course focuses on clinical chemistry testing in a practicum setting. Concepts and techniques include: protein structure and function; enzyme kinetics; carbohydrate and lipid metabolism; hormonal regulation; pathophysiology of water, electrolyte, acid-base balance, and special techniques. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4110, BLS-4120, & MLS-4150; MLS major or MLS Certificate students; Permission of the instructor. Co-requisite(s): ML 4710.

MLS 4710 - Clinical Chemistry Routine Testing (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical chemistry practicum. Prerequisite(s): BLS-4110, BLS-4120, & MLS-4150; MLS majors or MLS Certificate students; Permission of the instructor Co-requisite(s): MLS-4701.

MLS 4720 - Clinical Chemistry Special Testing Practicum (1)

Clinical rotation course focuses on clinical chemistry testing in a practicum setting. Concepts and techniques include: therapeutic drug monitoring, electrophoresis & toxicology investigative techniques. Laboratory techniques workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4110, BLS-4120, & MLS-4150; MLS or MLS Categorical students ; Permission of the instructor Co-requisite(s): MLS 473

MLS 4730 - Clinical Chemistry Special Testing (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical chemistry practicum. Prerequisite(s): BLS-4110, BLS-4120, and MLS-4150; MLS or MLS Categorical students; Permission of the instructor Co-requisite(s): MLS 4720

MLS 4740 - Clinical Hematology Practicum (2)

Clinical rotation course focuses on the counting, identification and analysis of the cellular components of blood in a clinical laboratory setting using advanced techniques and state of the art computer integrated instruments. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4210 and MLS-4250; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS 4750.

MLS 4750 - Clinical Hematology (1)

Discussions, assignments and exams covering the theory, concepts and procedures used in the clinical hematology practicum. Prerequisite(s): BLS-4210 & MLS-4250; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS-4740.

MLS 4760 - Clinical Hemostasis Practicum (1)

Clinical rotation course involving specialized hemostasis testing in a practicum setting. Concepts and techniques include the evaluation of bleeding and thrombotic disorders. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4220; MLS majors or MLS Certificate students; Permission of the instructor.

MLS 4770 - Clinical Phlebotomy Practicum (1)

Clinical rotation course where experience is gained in the principles and procedures of blood collection. Professional and interpersonal communication with patients along with accurate selection and handling of equipment/collection are emphasized. Following OSHA and standard clinical safety guidelines in the collection and handling of blood is required. Prerequisite(s): MLS or MLS Categorical students; Permission of the instructor

MLS 4780 - Clinical Immunohematology Prac (2)

Clinical rotation course providing laboratory experience in routine and specialized blood bank techniques such as antibody identification, crossmatching and component preparation. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4310 & MLS-4350; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS-4790.

MLS 4790 - Clinical Immunohematology (1)

Discussion, assignments and exams covering the theory, concepts and procedures used in the clinical immunohematology practicum. Prerequisite(s): BLS-4310 and MLS-4350; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS-4780.

MLS 4800 - Clinical Microbiology Prac (3)

Clinical rotation course applying principles and procedures used in the isolation, identification and susceptibility testing of microorganisms in a clinical setting. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-4510, MLS-4520 and MLS-4550; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS-4811.

MLS 4810 - Clinical Microbiology (2)

Assignments and exams covering the theory, concepts and procedures used in the clinical microbiology practicum. Prerequisite(s): BLS-4510, MLS-4520 and MLS-4550; MLS or MLS Categorical students; Permission of the instructor. Co-requisite(s): MLS-4800

MLS 4811 - Clinical Microbiology (1)

Assignments and exams covering the theory, concepts and procedures used in the clinical microbiology practicum. Prerequisite(s): BLS-4510, MLS-4520 and MLS-4550; MLS majors or MLS Certificate students; Permission of the instructor. Co-requisite(s): MLS-4800.

MLS 4820 - Clinical Urinalysis Practicum (1)

Clinical rotation course focuses on the physical, chemical and cellular components of urine in a clinical laboratory setting. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-3110 & MLS-3150; MLS or MLS Categorical students; Permission of the instructor

MLS 4821 - Clinical Urinalysis&Phlebotomy (1)

Clinical rotation course focuses on the physical, chemical and cellular components of urine and the principles and procedures of blood collection in a clinical laboratory setting. Professional and interpersonal communication with patients along with accurate selection and handling of equipment/collection are emphasized. Laboratory techniques, workflow management, quality control and evaluation of results in the interpretation of health/disease status are emphasized. Prerequisite(s): BLS-3110 & MLS-3150; MLS majors or MLS Certificate students; Permission of the instructor.

Occupational Therapy (MOT)**MOT 5000 - Fund of Occup Sci I (1)**

This course is an overview for post baccalaureate occupational therapy students only. It reviews basic concepts of occupation, looking closely at habits, routines, rituals, identity, motivation, and time use. Contexts of occupation are also included. The course is delivered as a Two day intensive prior to the start of the fall semester. Readings and reflective exercises will be required prior to the first class meeting.

MOT 5020 - 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 5030 - Professional Development II (1)

Professional Development Seminars (PDS) (MOT 5020, 5030, 5040) are a sequential progressive series of seminars throughout the professional level curriculum, the Master of Occupational Therapy (MOT) I and II years. These courses complement the didactic portion of the curriculum by focusing on socialization to the profession through fieldwork, interprofessional experiences, and professional development/service activities. This course will focus on the following topics: inter- and intra-professional collaboration, ethical considerations related to supervision and collaboration, fieldwork preparation giving and receiving professional feedback, and preparation for fieldwork education.

MOT 5040 - Professional Development III (1)

Professional Development Seminars (PDS) (MOT 5020, 5030, 5040) are a sequential progressive series of seminars throughout the professional level curriculum, the Master of Occupational Therapy (MOT) I and II years. These courses complement the didactic portion of the curriculum by focusing on socialization to the profession through fieldwork, interprofessional experiences, and professional development/service activities. This course will focus on the following topics: federal and state regulations impacting occupational therapy practice, liability issues, certification and licensure requirements for occupational therapists, professional organizations, preparation for fieldwork education, and preparation for navigating the job market.

MOT 5150 - 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 a person of middle age through older adulthood. Lab Required.

MOT 5170 - 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.

Prerequisite(s): BIOL-1100, ANAT-1000, CHEM-1083, PPY 2540.

MOT 5200 - Clinical Conditions & Phenomen (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 5250 - Policy & Administration (2)

This course explores policy and service delivery systems relevant to the practice of occupational therapy, the role of occupational therapy in these systems, and how these systems are influenced by legislation, regulation, and reimbursement practices. Principles of program planning and management, utilization of resources, and quality improvement within occupational therapy are discussed, as well as the influence of health care trends on the delivery of occupational therapy services with regard to an individual, group, organization or environmental context.

MOT 5260 - Professional Reasoning and Development (2)

Small groups work with a faculty facilitator in a problem-based learning approach to developing clinical reasoning, teamwork, and professional behavior skills. Case studies will allow participants to explore personal, environmental, occupational, and ethical issues across the lifespan, and to apply a variety of frames of reference to evaluation and intervention. Students will be encouraged to explore and evaluate their knowledge and attitudes relative to a variety of clinical, social, and policy issues. An emphasis on independent, lifelong learning and generating solutions to complex problems will be evident throughout the course.

MOT 5300 - Fundamentals of OT Practice (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. 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.

MOT 5350 - Theoretical Foundations of Occupational Therapy (3)

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 5400 - OT Adults Physical Dysfunction (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies, lab activities and community experiences.

MOT 5400 - OT in Rehabilitation I (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory and adaptive approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences

MOT 5410 - Occupational Therapy in Mental Health (0-3)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab included

MOT 5410 - OT In Mental Health I: Theory, Evaluations & Treatment Planning (0-3)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for clients. Premeditative, compensatory, adaptive and mental health approaches to psychosocial and physical dysfunction will be explored through case studies and community experiences. Lab included

MOT 5450 - Occupational Performance & Assessment of Infants & Children (0-3)

This course introduces students to the occupational performance of infants, children, and adolescents. It focuses on occupational conceptual models and how occupational therapists use theory to guide practice. The Occupational Therapy Practice Framework is used to guide the study of the domain of OT as it relates to the transaction of person-environment-occupation. The physical, psychological/emotional, cognitive/neurological and sociocultural determinants of occupation will be explored. Assessments are introduced that analyze infant, child, and adolescent occupational performance and behavior. Lab required.

MOT 5460 - OT with Aging Adults (3)

This course provides a foundation in evidence-based population trends in aging and their implications for occupational therapy services with aging adults. Intrinsic and extrinsic determinants of aging adult occupation are explored as they relate to the unique development of the individual as an occupational being across the lifespan. Using aging related conceptual models and related assessments, students learn to analyze and develop interventions that address personal and environmental factors that impact the quality of life of aging adults.

MOT 5480 - Occupational Therapy & Upper Extremity Rehabilitation (2)

This course focuses on the evaluation and treatment of upper extremity dysfunction from an occupational therapy perspective. This lecture/lab combination covers nerve and muscular/orthopedic issues throughout the upper extremity with an emphasis on the wrist and hand. Multiple orthotics are fabricated in the lab portion of this course.

MOT 5490 - Applied Research I (1)

Building upon learning from research courses in the undergraduate curriculum, Applied Research I is an introductory course focusing on the application of scholarly inquiry and appreciation of evidence based practice in the Occupational Therapy profession.

MOT 5500 - Applied Research II (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.

MOT 5500 - 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 5550 - OT in Rehabilitation II (0-4)

Assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches to neurological and physical dysfunction will be explored through case studies and community experiences. Lab required.

MOT 5550 - Occupational Therapy for Adults with Neurological Dysfunction (0-3)

This course is designed to provide students with the therapeutic reasoning to evaluate and treat adults with occupational performance deficits resulting from neurological illnesses and impairments. Building on theories and concepts from prior coursework, students will learn to assess, remediate, habilitate, and rehabilitate, deficits impacting occupational performance and participation. The final product will be the students' understanding of the OT process and best practice in OT, evidenced by the completion of an OT evaluation & development of individualized OT intervention plans that identifies the process for returning a client to their most independent level of function within their environment.

MOT 5560 - OT in Mental Health II: Intervention & Group Skills (0-3)

This course builds upon the foundation of occupational science and occupational therapy services to prepare students to engage in holistic occupational therapy practice in a wide array of intervention settings across the lifespan. Students will develop an understanding of conceptual models for community-based practice in a variety of areas. This course will focus on assessment, treatment planning and use of clinical reasoning to develop intervention strategies for adult client conditions. Compensatory and adaptive approaches will be explored through case studies and community experiences. Prerequisites: MOT 5410 Occupational Therapy in Mental Health and MOT 5400 Occupational Therapy for Adults with Physical Dysfunction.

MOT 5600 - Occupational Therapy w/Infants & Children (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 5650 - Applied Research III (1)

Building upon the foundation established in Applied Research I and II, this course focuses on knowledge, skills, and attitudes in qualitative scholarly inquiry processes in the Occupational Therapy profession.

MOT 5650 - Applied Research III (1-2)

Building upon the foundation established in the OT Applied Research I course, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner's appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master's project, which is related to their faculty mentor's scholarship.

MOT 5660 - Applied Research IV (1-6)

Building upon the foundation established in the previous Applied Research courses, this seminar course lays additional groundwork for an entry-level occupational therapy practitioner's appreciation of the role of scientific inquiry in the field. Students complete a significant portion of their master's project, which is related to their faculty mentor's scholarship.

MOT 5700 - Advanced Field Work I (6)

This practicum course engages students in a supervised, 12-week Level II Fieldwork experience. Level II Fieldwork is an integral part of occupational therapy education that facilitates the transition from the didactic curriculum to the clinical setting. During this course, students will have the opportunity to apply OT knowledge in a clinical setting, develop clinical reasoning through reflective practice, refine professional behaviors, apply ethical standards to clinical cases, and ultimately, develop entry-level OT skill.

MOT 5750 - Advanced Fieldwork II (6)

This practicum course engages students in a supervised, 12-week Level II Fieldwork experience. Level II Fieldwork is an integral part of occupational therapy education that facilitates the transition from the didactic curriculum to the clinical setting. During this course, students will have the opportunity to apply OT knowledge in a clinical setting, develop clinical reasoning through reflective practice, refine professional behaviors, apply ethical standards to clinical cases, and ultimately, develop entry-level OT skill.

MOT 5980 - Independent Study (1-6)

Independent project within the Occupational Science and Occupational Therapy Department. Course objectives will be identified through student and faculty consultation. Offered every semester. Restricted to MOT students.

Magnetic Resonance Imaging (MRI)**MRI 4310 - Physical Principles (3)**

This class will cover the history of magnetic resonance imaging, magnetism, signal production, and the physics related to imaging. This will include, but is not limited to: tissue characterization; T1 and T2 relaxation; signal decay; K-space; Fourier transformation; spatial encoding; and image characteristics. There are no prerequisite courses. (Offered every Fall)

MRI 4320 - Cross Sectional Anatomy and Pathology (3)

Students will become familiar with MRI cross-sectional anatomy and will learn how to view and to image the human body in multiple planes. The pathology of the various body regions (including neurological, visceral, musculoskeletal, soft tissue, and vasculature) will be discussed as it relates to MR imaging. There are no prerequisite courses. (Offered every Fall)

MRI 4330 - Instrumentation and Quality Analysis (3)

This class covers all components of MR imaging equipment including the magnet, the acquisition console, and all ancillary equipment. The various types of magnets, gradients, shims, radiofrequency coils, and magnetic and RF shielding will be covered, as well as maintenance, quality analysis and operational workflows. There are no prerequisite courses. (Offered every Fall)

MRI 4340 - Clinical MRI and Image Production (5)

Students will learn the clinical aspects of MRI. This includes the basics of image production and corresponding pulse sequences (which is expounded upon in the Physical Principles course). Imaging parameters for intrinsic image contrast characteristics; proper sequence selection; adjustment of imaging options; administration of contrast media; and use of post-processing applications are included. There are no prerequisite courses. (Offered every Fall)

MRI 4350 - Patient Care and MRI Safety (3)

This class will cover the handling, care, and safety of patients, visitors, and staff in the MRI environment. This includes the proper education and screening of anyone or any equipment entering the magnetic field. Emergency procedures and their effect on patients, staff, and the public will also be discussed. There are no prerequisite courses. (Offered every Fall)

MRI 4410 - Clinical MRI Practicum (9)

Students will perform a variety of MRI procedures in multiple clinical settings under the direct supervision of qualified medical professionals. Students will interact with patients ranging from infants to geriatrics and apply the skills necessary for patient and personnel safety. The practicum allows students to practice skills necessary to obtain high quality MR images, to alter protocols objectively based on patient anatomy and pathology or physical condition, and to identify image quality and equipment problems to make appropriate corrections. Clinical experience will include venipuncture and the administration of contrast media. Prerequisites: MRI-4310; MRI-4320; MRI-4330; MRI-4340; MRI-4350. (Offered every Spring)

MRI 4420 - Advanced / Emerging Technologies (2)

An exploration of the emerging technologies and advances in MRI, including their impact on imaging and healthcare, will be presented. In addition, a correlation between MRI and other imaging modalities (Computed Tomography, Nuclear Medicine/PET, Ultrasound, etc.) will be discussed. There are no prerequisite courses. (Offered every Spring)

MRI 4910 - Clinical Practicum (0)

This course is a continuation of MRI 4410 Clinical MRI Practicum. Prerequisites: MRI-4310; MRI-4320; MRI-4330; MRI-4340; MRI-4350; MRI-4410. (Offered every Summer)

MRI 4960 - Capstone in MRI (1-3)

Students enrolled in this course develop an individual research project for presentation. The project is worked on independently with program faculty mentorship and is required for graduation. Prerequisite courses: All MRI program courses. (Offered every Spring)

Nuclear Medicine Technology (NMT)**NMT 4310 - Radiation Physics and Radiation Protection (4)**

This course provides a study of atomic structure, radioactive decay modes, 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 are included in the content. Concepts in radiobiology and dosimetry are covered. Offered Fall semester only.

NMT 4320 - Radiochemistry/Radiopharmacy (3)

This course provides 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. Offered Fall semester only.

NMT 4330 - Nuclear Med Instrumentation (3)

This course provides a study of Nuclear Medicine Instrumentation that is based on 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. Offered Fall semester only.

NMT 4340 - Clinical Nuclear Medicine (5)

This course provides a study of the 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. Offered Fall semester only.

NMT 4350 - Nuclear Medicine Information Systems (3)

This course provides 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. Offered Fall semester only.

NMT 4410 - 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. Offered Spring semester only. NMT majors only.

NMT 4420 - 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. Offered Spring semester only. NMT majors only.

NMT 4430 - 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. Offered Spring semester only.

NMT 4910 - Clinical Practicum (0)

This course is a continuation of NMT 4410. 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 4960 - Capstone in Nuclear Medicine (1)

Students enrolled in this course develop an individual research project that is a culmination of the knowledge obtained in the didactic and clinical coursework within the Nuclear Medicine Technology Program. This project is worked on independently with a faculty mentor and is required for graduation.

Occupational Science (OCS)**OCS 1000 - Seminar in OT Practice (2)**

This course is uniquely designed for the traditional freshman student, incorporating concepts learned in UNIV 1010 Enhancing First Year Success, as well as, introduces those interested in the profession as a career to the realm of occupational therapy practice.

OCS 1010 - 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 2430 - Human Growth & Development Across the Lifespan (3)

This online course is a preparatory or foundation course for the occupational science courses to follow. It is intended to be an introduction to the physical, emotional, psychological, intellectual, and social development throughout the lifespan, including later adulthood. Students will examine developmental norms and sequences. The theories that explain development at different stages of life and the transitions we make between childhood, adolescence, adulthood, and old age will be reviewed, including exploring the wider social factors which influence human growth and development. Finally student test theoretical concepts against their own experience and intuitions. A vertical-horizontal approach will be taken so that at each stage of lifespan, all aspects of the vertical domains will be explored.

OCS 3120 - The Study of Occupation (3)

This course is an introduction to occupational science. It focuses on the individual meaning of occupation. Patterns of occupation are examined as well as subjective dimensions of occupational experience. Students will learn to describe occupation using more specific terminology, including habits, routines, rituals, identity, motivation and individual time use. Students will also study an occupational science leader and reflect on the evolution of their research and interests related to the study of occupation. OCS 3120, 3220, and 3320 are taken together. There is a 24 hour shared ACSE (Applied community service experience) across these courses.

OCS 3220 - 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. Each dimension will have a focus on ethnic groups in the St. Louis area.

OCS 3320 - Development of Humans as Occupational Beings (3)

This course explores the development of human occupation across the lifespan from an occupational science perspective. The course begins by outlining the domains of occupational science and occupational therapy to provide a foundation for the semester's work. We will analyze theoretical approaches to development, learning, and behavior across the lifespan. We will examine occupations across categories of play, leisure, and work, and we will understand the ways in which life transitions influence occupation. We will critically examine the link between occupation and wellbeing, including whether occupations are always good, and will end the course by synthesizing our occupational science knowledge.

OCS 3520 - Personal and Community Wellness (3)

This course presents a holistic overview of health and wellness through use of the wellness wheel, personal experiences, reflection, and observation. Students explore their own occupational patterns of motivation, change, goal setting, and asking for/receiving help and reflect on the broader impacts of what they have learned for use in future practice. A comprehensive community wellness project applies personal insights from this experience combined with concepts learned in all other OCS courses, showing an understanding of the application of learned terminology, research, and comprehensive view of the person and context in a local non-healthcare setting.

OCS 3520 - 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 3620 - 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 neurologic conditions.

OCS 3720 - Critical Perspectives of Culture, Occupation, & Justice (3)

This course extends the knowledge of humans as occupational beings by introducing concepts of culture, globalization and marginalization. Themes of occupational justice and political occupational therapy run throughout the course as we critically analyze dominant American practices and perspectives on local and global conditions for occupation, and our moral responsibility to understand others in a service role.

OCS 4620 - Clinical Conditions & Phenomena (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 4980 - Independent Study (1-3)

Independent project within the Occupational Science and Occupational Therapy Department. Course objectives will be identified through student and faculty consultation. Offered every semester. Restricted to OS students.

Occupational Therapy (OCTH)**OCTH 5010 - Foundations of OT: Theories, Domains & Processes (3)**

This course will provide OTD students with an overview and synthesis of historical and contemporary perspectives that guide current OT practice. Students in this course will understand and apply fundamental concepts and language used in current OT theories and practice models. Restricted to students applying for the Post-Professional OTD. Offered every summer.

OCTH 5011 - Fundamentals of Occupational Science (3)

This course introduces future OTD students to basic concepts and themes in occupational science. The course will begin with an exploration of the relationship between occupational science and occupational therapy before moving to the review and application of concepts. Students will learn about the occupational perspective as it applies to topics including development across the lifespan, context, and occupational justice.

OCTH 6100 - Occupational Science in Practice and Society (3)

This course will examine current trends in occupational science knowledge and their interactions with contemporary healthcare practice and societal developments. By the end of the course, students will be able to articulate and defend the relevance of occupational science knowledge for modern issues of real-world concern. Offered every fall.

OCTH 6200 - Professional Leadership and Public Policy (3)

This course provides foundational knowledge regarding professional leadership and public policy with specific focus on how each impacts clients and the profession of occupational therapy. At the completion of the course, students will have an increased understanding of the nature of health policy-making, health politics, and current healthcare issues as they advocate for clients and the profession. Offered every spring.

OCTH 6300 - Conceptualizations and Applications of Occupational In/Justice (3)

This course will explore the relationship of occupational justice, human health and wellbeing, and the Jesuit principle of men and women for and with others. Students will begin by learning about the conceptual development of occupational justice and its relation to the idea of social justice and Jesuit philosophy. Students will then select one real-world example of an occupational injustice and examine its impact on health and wellbeing in local and global contexts. Students will draft a proposal that enfolds all course concepts into an intervention that addresses the occupational injustice they have examined.

OCTH 6400 - OTD Practicum 1 (3)

This practicum course engages students in a supervised, 12-16 week practicum experience at a practice-related site chosen in collaboration with the student's faculty mentor. The practicum is an integral part of doctoral education that facilitates translation of knowledge from the didactic curriculum to practice settings. During this course, students will have the opportunity to apply, analyze, and critique learned ideas in a practice setting, make improvements to existing service delivery processes, and/or contribute to information dissemination. As a practicum experience, this course provides an opportunity for development of post-professional occupational therapy skills through involvement in a practice or advocacy setting.

OCTH 6500 - OTD Practicum 2 (3)

This practicum course engages students in a supervised, 12-16 week practicum experience at a practice-related site chosen in collaboration with the student's faculty mentor. The practicum is an integral part of doctoral education that facilitates translation of knowledge from the didactic curriculum to practice settings. During this course, students will have the opportunity to apply, analyze, and critique learned ideas in a practice setting, make improvements to existing service delivery processes, and/or contribute to information dissemination. As a practicum experience, this course provides an opportunity for development of post-professional occupational therapy skills through involvement in a practice or advocacy setting. Prerequisite: OCTH 6400 OTD Practicum 1

OCTH 6980 - Independent Study in Occupational Therapy (3)

Independent project within the Occupational Science and Occupational Therapy Department. Course objectives will be identified through student and faculty consultation. Offered every semester. Restricted to Doctorate of Occupational Therapy students.

Physician Assistant Educ (PAED)**PAED 4980 - Independent Study (1-3)**

This course is designed for Program graduates working on degree requirements.

PAED 5000 - 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 5010 - Professional & Psychosocial Issues of Physician Assistant Practice (3)

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 5040 - Physiology (4)

This is a comprehensive course that covers all major systems of the human body. Special emphasis is placed on the clinical application of this knowledge. The course is designed specifically for PA students as they prepare for courses in pathophysiology and clinical medicine. Previous physiology or combined anatomy/physiology is a prerequisite.

PAED 5050 - P.A. Seminar (1)

Instruction in the history and role of the PA; accessing, reading and interpreting the medical literature; health promotion and disease prevention; patient education; and clinical correlation case studies.

PAED 5070 - 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 5080 - 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 the findings in the complete write up.

PAED 5090 - 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 5100 - 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 5110 - Principles and Practice of Dermatology (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 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. Offered in spring.

PAED 5120 - 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 5130 - Prin & Pract. Otorh & Opthmlgy (3)

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 5150 - Clinical Pharmacology I (2)

Principles of pharmacology and physiology essential to appropriate medical therapy are presented, with emphasis on the action, absorption, metabolism, excretion, and toxicity of the major groups of drugs used in medicine. Pharmacotherapy for common medical problems is emphasized and reviewed in clinical case discussions.

PAED 5170 - 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 5201 - Clinical Pharmacology II A (1)

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. This course is only for students in the Department of PA Education. Offered in summer.

PAED 5202 - Clinical Pharmacology II B (1)

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. This course is only for students in the Department of PA Education. Offered in fall.

PAED 5211 - Principles and Practice of Pulmonology I (2)

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. This course is only for students in the Department of PA Education. Offered in summer.

PAED 5212 - Principles and Practice of Pulmonology II (1)

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. This course is only for students in the Department of PA Education. Offered in fall.

PAED 5221 - Principles and Practice of Cardiovascular Medicine I (2)

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. This course is only for students in the Department of PA Education. Offered in summer.

PAED 5222 - Principles and Practice of Cardiovascular Medicine II (2)

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. This course is only for students in the Department of PA Education. Offered in fall.

PAED 5231 - Principles and Practice of Gastroenterology & Nutrition I (1)

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 5232 - Principles and Practice of Gastroenterology & Nutrition II (2)

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 5240 - 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 5250 - Principles and Practice of Endocrinology (3)

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 5300 - 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 5310 - Princ/Prctc: Orthopcs & 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 5320 - Prin/Prctcs of Neurology (3)

The neurology course provides an integrated approach to understanding the pathophysiologic basis of disorders of the central and peripheral nervous system as well as the pharmacological rationale for their therapy. At the same time, students are introduced to the clinical approach to these disorders, including physical examination, clinical, laboratory, and radiographic findings and various management methods.

PAED 5330 - 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 clinic presentation and pre- and post-operative management. Laboratory sessions are used to familiarize the student with aseptic technique and basic surgical procedures such as airway control, various catheter placements, surgical bleeding control and wound management.

PAED 5340 - Essentials of Emerg. Medicine (2)

This course introduces the principles of life support technique as well as the initial identification and management of acute medical and traumatic conditions.

PAED 5350 - Specialty Lecture Series (3)

This lecture-based course is designed to prepare students for upcoming clinical rotations in Orthopedic Surgery, Emergency Medicine, Pediatrics, Family Medicine, Women's Health and Psychiatry/Behavioral Medicine. Instructors emphasize the assessment, treatment, management and referral of various medical conditions commonly seen in these specialty practices.

PAED 5360 - Essentials of Pediatrics (2)

This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.

PAED 5370 - Essentials of Behavioral Medicine (2)

Basic psychiatric manifestations and how to work with both patients and families exhibiting psychological problems are examined. Topics include psychiatric diagnosis, the effect of society on behavior, the basis of drug and alcohol abuse, and basic intervention and treatment modalities.

PAED 5380 - Essentials of OB & Gynecology (2)

This course examines the physical and psychological fundamentals of normal growth and development. Focus is on the major pediatric illnesses and conditions, their signs, symptoms and treatment; immunization schedules and various medications used in the pediatric population, their doses and indication; the management of pediatric emergencies such as acute cardiac and respiratory arrest, anaphylaxis, seizures and trauma.

PAED 5400 - Clinical: Internal Medicine (4)

Six weeks. Students actively participate in all aspects of direct patient care in inpatient and/or outpatient adult medicine. This fundamental clinical experience places emphasis on patient evaluation and assessment, oral and written case presentations, understanding the complexities and interrelationships of disease processes and diagnostic and therapeutic collaboration.

PAED 5420 - Clinical: Family Medicine (4)

Six weeks. Practicum provides the second-year student with an opportunity to gain experience in a primary care setting. This experience exposes the student to a wide range of common ambulatory care problems.

PAED 5450 - Internal Medicine II (3)

Four weeks. As an adjunct to PAE-H440, the direct patient care fundamentals of outpatient and/or inpatient adult medicine are continued in this clinical experience.

PAED 5510 - Clinical: General Surgery (4)

Six weeks. This clinical experience provides exposure to concepts and principles that characterize the practice of general surgery. Students participate in the pre-operative, operative and post-operative care of patients admitted to a variety of surgical services in both inpatient and outpatient settings.

PAED 5600 - Clinical: Pediatrics (3)

Six weeks. Practical experience in the recognition and management of common pediatric problems is provided, including assessment of the newborn, well baby care, preventive pediatrics and parent counseling.

PAED 5700 - Clinical: Behavioral Medicine (3)

This clinical rotation provides experience working with patients in a psychiatric/behavioral medicine setting. Emphasis is placed on the clinical presentation, diagnostic work-up, treatment and management of these patients in both inpatient and outpatient settings.

PAED 5750 - Clinical: Ob/Gyn, Women's Health (3)

Six weeks. This clinical experience encompasses the fundamentals of women's health. Emphasis is on the medical history, physical examination, diagnosis and treatment involved with pre-natal, post-natal and general gynecologic care.

PAED 5800 - Clinical: Emergency Medicine (4)

Six weeks. This clinical experience includes the management of acute medical and surgical problems with an emphasis on the importance of precise diagnosis as well as the principles of emergency therapy.

PAED 5850 - Orthopedic Surgery (4)

Four weeks. Clinically based experience provides opportunities in orthopedic surgery and outpatient sites at the VA Medical Center or in private settings.

PAED 5860 - Clinical: EBM Clerkship (4)

Six weeks. As an adjunct to PAED-5300, students critically review one area of the medical literature based on a clinical question of interest and develop a comprehensive project that includes concepts of evidence-based medicine and Healthy People 2010 components.

PAED 5900 - Preceptorship (6)

This clinical experience integrates previous studies. Preceptorship sites are chosen by the student in most cases.

PAED 5930 - Clinical: Elective (4)

Six weeks. Many options are available for this elective experience. Specific clinical disciplines may be chosen based upon special interests of the student or upon what he or she determines would best augment existing clinical knowledge and skills.

PAED 6000 - Senior Seminar (1)

This is the capstone experience for the physician assistant program. The purpose is two-fold: to ascertain if the student has both the broad and specific knowledge expected of someone holding a master's degree. Second, to determine whether the student has been able to integrate knowledge obtained from individual courses into unified concepts which link the students' own specialization to other fields of study. The student is given an oral exam, a written examination and a clinical skills examination in the form of an Objective Score of Clinical Evaluation (OSCE).

Radiation Therapy (XRT)**XRT 4310 - Radiation Physics (2)**

This course provides a study of atomic structure, radioactive decay modes, 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 are covered along with concepts in dosimetry. Offered Fall semester only. Pre-requisites: MATH 1400 Pre-calculus, PHYS 1220 & 1240 General Physics I&II

XRT 4320 - Radiation Therapy Practice I (3)

This course is an introduction to radiation therapy practice and the practitioner's role. Principles of radiation therapy treatment, health safety, ethics, the radiation therapy professional's scope of practice and responsibilities will be discussed and examined. Basic operational issues will be discussed, including treatment parameters and delivery, equipment and emergency procedures. Offered Fall semester only. Pre-requisites: HSCI 3300/3310 and HSCI 3400/3410 Anatomy & Physiology I&II with lab, ORES 2310 Intro to Clinical Medicine, IPE 4200 Applied Decision Making Co-requisites: XRT 4330 Treatment Techniques, XRT 4360 Emerging Technologies

XRT 4330 - Treatment Techniques (3)

This course will introduce concepts and terminology of radiography and radiation therapy treatment set-ups. It will examine anatomy, positioning, immobilization, field boundaries, and standard beam arrangements for site-specific anatomical areas. Laboratory experiences include virtual simulation demonstrations and conventional/CT simulator practice with a phantom. Offered Fall semester only. Pre-requisites: HSCI 3300/3310 and HSCI 3400/3410 Anatomy & Physiology I&II with lab, HSCI 3010 Medical Terminology. Co-requisites: XRT 4320 Radiation Therapy Practice I, XRT 4360 Emerging Technologies

XRT 4340 - Treatment Planning (3)

This course will introduce concepts and terminology of radiation therapy treatment planning with an introduction to dosimetry. Students will examine and practice anatomical site-specific treatment planning which incorporates imaging, target volume delineation and dose prescription, delineation of organs at risk, and dose limitations. Included is a discussion on beam arrangements, energies, modalities, modifiers, calculations and dose evaluation. Demonstrations and practice with computer treatment planning systems enhances the course. Offered Fall semester only. Pre-requisites: HSCI 3300/3310 and HSCI 3400/3410 Anatomy & Physiology I&II with lab. Co-requisites: XRT 4320 Radiation Therapy Practice I, XRT 4330 Treatment Techniques

XRT 4350 - Clinical Practicum I (2-6)

This practicum course includes content and clinical practice experiences that are 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. Evaluation of competency and outcomes measurement of the student's clinical practice shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Offered in the Spring semester only. Pre-requisites: XRT 4320 Radiation Therapy Practice I, XRT 4330 Treatment Techniques, XRT 4360 Emerging Technologies, XRT 4340 Treatment Planning

XRT 4360 - Emerging Technologies (2)

This course will introduce basic x-ray production and its uses plus advanced imaging technologies. A study of human anatomy as it relates to radiographic films and cross sectional human anatomy is also covered. Offered Fall Semester only. Pre-requisites: HSCI 3300/3310 and HSCI 3400/3410 Anatomy & Physiology I&II with lab Co-requisites: XRT 4320 Radiation Therapy Practice I, XRT 4330 Treatment Techniques

XRT 4420 - 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. Offered Spring semester only. Pre-requisites: XRT 4320 Radiation Therapy Practice I, XRT 4330 Treatment Techniques, XRT 4360 Emerging Technologies.

XRT 4440 - 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 4440 - Clinical Dosimetry (3)

Reviews basic concepts introduced in Treatment Planning, further examining factors that influence and govern dose determination and planning treatment for radiation therapy patients. Emphasizes the clinical application of photon and electron beam characteristics, dose calculations, and factors relating to safely and optimally treating the radiation therapy patient. Some focus is directed on clinical dosimetry and treatment planning for radiation oncology special procedures. Demonstrations and practice with computer treatment planning systems enhances the course. Offered Spring semester only. Prerequisites: XRT 4310 Radiation Physics, XRT 4340 Treatment Planning

XRT 4450 - Clinical Practicum II (0-2)

This course is a continuation of XRT 4350 Clinical Practicum I which includes the 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. Evaluation of competency and outcomes measurement of the student's clinical practice shall assure the well-being of the patient preparatory to, during and following delivery of radiation therapy treatment and services. Offered in the Summer semester only. Pre-requisite: XRT 4350 Clinical Practicum I

XRT 4500 - Rad Onc Pat. Care & Qual Manag (3)

This course provides foundational concepts in assessment and evaluation of the patient undergoing radiation therapy along with the responsibilities of the radiation therapist in caring for the patient. Psychological and physical needs affecting treatment outcomes will be presented. Incorporated into the course are the principles and guidelines of a quality management program in radiation oncology, including clinical process, equipment, and documentation that demonstrate patient care outcomes. Additionally, regulatory agencies and 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. Offered Fall semester only. Co-requisite: XRT 4320 Radiation Therapy Practice I

XRT 4510 - Radiobiology/Rad Protection (2)

This course presents basic concepts and principles of radiation biology integrated with radiation protection. The interactions of radiation with cells, tissues and the body as a whole and resultant biophysical events will be presented. Also covered are the basic concepts of radiation protection, radiation monitoring, environmental protection, the safe handling of radioactive materials, equipment use, and quality control. Radiation safety in radiation therapy departments and regulations that govern the use of radioactive is presented. The course provides a thorough examination of radiation safety from both the patient and therapist perspective. Offered Fall semester only. Pre-requisites: MATH 1400 Pre-calculus, PHYS 1220 & 1240 General Physics I&II Co-requisite: XRT 4310 Radiation Physics

XRT 4960 - Capstone in Radiation Therapy (1)

Students enrolled in this course develop an individual research project for presentation that is a culmination of the knowledge obtained in the didactic and clinical coursework within the Radiation Therapy Program. This project is worked on independently with program faculty mentorship and is required for graduation. Some didactic review and professional development content is included. Pre-requisite: All radiation therapy program courses

XRT 5980 - Radiation Therapy Independent Study (1-3)

This is an independent study, contracted course for the radiation therapy program. Approval of the program director is required prior to enrolling in the course and requires a learning contract.

Nursing (NURS)

NURS 1400 - Introduction to Nursing (1)

This course introduces the student to nursing as a profession. Various roles and functions of the nurse are explored. Emphasis is placed on the organization and education of nursing, nursing systems in various settings, and recipients of nursing care. Exploration of the conceptual and philosophical basis of nursing and the role of critical thinking in the nursing process will be examined. The structure. Open to non-nursing majors.

NURS 1430 - Human Growth and Development through the Lifespan (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 2500 - Clinical Concepts in Nursing Practice (3)

This course introduces the student to foundational clinical concepts in nursing. The social, legal, ethical, cultural and interprofessional context of nursing practice is presented. The use of the therapeutic relationship as a basis for nursing care is emphasized. Consideration is given to developing students' self-awareness, the importance of reflective practice, and the ability to use one's self as a therapeutic tool. The nursing process is introduced and its use in promoting patient safety in an interprofessional health care environment is discussed.

NURS 2510 - Health Promotion Across the Lifespan (3)

The role of the nurse in promoting health and reducing risk behaviors of individuals and families across the lifespan is the focus of this course. Exemplars of nutrition, physical activity and stress management will be examined with an emphasis on the impact of genetics, values, lifestyle, and cultural influences. Patient teaching as an essential function of the nurse is emphasized. In the clinical practicum, the student will facilitate his/her understanding of factors that enhance health promotion and risk reduction through the development of a long term relationship with a patient and family.

NURS 2515 - Health Promotion Across the Lifespan (2)

The role of the nurse in promoting health and reducing risk behaviors of individuals and families across the lifespan is the focus of this course. Exemplars of nutrition, physical activity and stress management will be examined with an emphasis on the impact of genetics, values, lifestyle, and cultural influences. Patient teaching as an essential function of the nurse is emphasized. In the clinical practicum, the student will facilitate his/her understanding of factors that enhance health promotion and risk reduction through the development of a long term relationship with a patient and family. Offered in summer.

NURS 2520 - Foundations for Nursing Care (0-3)

This course focuses on the use of clinical judgment in the application of evidence based therapeutic interventions and technologies in providing direct care to patients across the lifespan. Building therapeutic relationships, patient safety and the provision of quality care in an inter-professional setting are emphasized. Students gain experience in developing communication skills and implementing the nursing process in simulated and actual patient settings.

NURS 2700 - 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 2705 - Interprofessional Issues in Evidence Based Care (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. Prerequisites: NURS 2500 and NURS 2520 with C or better grade.

NURS 3100 - Healthcare Policy, Finance and Regulatory Environments

This course provides students with an overview of the major functional areas of health care management and shows their relevance to the safe delivery of health care services in a turbulent and very complex interprofessional environment. The focus on how patient care services are organized and financed, how reimbursement is structured and the role of regulatory agencies.

NURS 3105 - Healthcare Policy, Finance and Regulatory Environments

This course provides students with an overview of the major functional areas of health care management and shows their relevance to the safe delivery of health care services in a turbulent and very complex interprofessional environment. The focus on how patient care services are organized and financed, how reimbursement is structured and the role of regulatory agencies.

NURS 3107 - Healthcare Policy, Finance and Regulatory Environments for RNs (3)

This course provides students with an overview of the major functional areas of health care management and shows their relevance to the safe delivery of health care services in a turbulent and very complex interprofessional environment. The focus on how patient care services are organized and financed, how reimbursement is structured and the role of regulatory agencies.

NURS 3200 - 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 3207 - Health Assessment for RNs (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 3217 - Health Assessment for RNs Credit by Exam (1-3)

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 3330 - Pharmacotherapeutics for Nursing Care (3)

This course develops the students knowledge of the nurses role and responsibilities in drug therapy based on application of concepts from nursing and pharmacology sciences. Legal, ethical, and life span considerations will be presented as they apply to the nurse role in drug therapy. The student will have the opportunity to study groups of drugs using a structured, systematic approach that includes general principles of drug activity, major actions, therapeutic effects, and adverse reactions. The student will learn to apply the nursing process to the care of the patient receiving drugs in a variety of clinical situations. Prerequisite(s): ANAT-1000, CHEM-1083 to CHEM-1120 (one course), PPY-2540 and NURS 1430, as well as the following NURS courses which may be taken concurrently: NURS-2500, NURS-2520, NURS-3360 and NURS-3200.

NURS 3360 - Pathophysiology (4)

Lecture 4 hours per week. The focus of the course is on the physiology of altered health states as a dynamic science that has application for both well and ill populations of all age groups. The focus is on the physiological responses to altered health states. This course content is based on the health illness continuum, including pathophysiological alteration, and system or organ failure. Considerations are given to selected pathological alterations and the effects on physiological and psychological functions. A life span approach is utilized.

NURS 3370 - Essentials of Therapeutic Nutrition: A Nursing Approach (2-3)

This course builds on concepts from previous courses to focus on therapeutic nursing interventions to promote patient nutrition during illness with considerations for age and culture. Regulatory process for fluid and electrolyte balance, conditions that alter fluid balance and interventions to prevent body fluid and electrolyte disturbances are emphasized.

NURS 3375 - Essentials Of Therapeutic Nutrition: A Nursing Approach (2)

This course builds on concepts from previous courses to focus on therapeutic nursing interventions to promote patient nutrition during illness with considerations for age and culture. Regulatory process for fluid and electrolyte balance, conditions that alter fluid balance and interventions to prevent body fluid and electrolyte disturbances are emphasized. Prerequisite(s): NURS 2500; NURS 2515; NURS 2520; NURS 3360 all with a grade of C or better.

NURS 3377 - Essentials of Therapeutic Nutrition for RNs Credit by Exam (2-3)

This course builds on concepts from previous courses to focus on therapeutic nursing interventions to promote patient nutrition during illness with considerations for age and culture. Regulatory process for fluid and electrolyte balance, conditions that alter fluid balance and interventions to prevent body fluid and electrolyte disturbances are emphasized.

NURS 3430 - Psychiatric/Mental Health Nursing (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 3435 - Psychiatric/Mental Health Nursing (4)

The concepts of adaptation serves as the basis for the promotion, maintenance, and restoration of health in clients across the life span. Emphasis is placed on individuals, families, and groups experiencing alterations in mental health status. The focus of this course is on the application of the nursing process to implement professional relationships, based on principles of therapeutic communication and knowledge of psychopathology. As a member of the interdisciplinary health care team, the student will care for psychiatric mental health clients in a variety of settings.

Prerequisite(s): NURS 2500; NURS 2515; NURS-2520; NURS 3200; NURS 3330; and NURS 3360 all with a grade of C or better.

NURS 3440 - Public Health Nursing (0-4)

The focus of this course is the introduction of the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups within the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, and referral by home visiting and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health care are examined. Prerequisite(s): NURS-3330, NURS-3360, & NURS-3200.

NURS 3445 - Public Health Nursing (4)

This course introduces the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups in the community. The nursing process is applied to the care of individuals, families, and groups in the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined. Limited to Accelerated Option. Prerequisite(s): NURS-3360, NURS-3200

NURS 3447 - Public Health Nursing for RNs (4)

This course introduces the student to the concepts and principles of public health and the practice of public health nursing. The nursing process is applied to the care of individuals, families, and groups in the community. The nursing process is applied to the care of individuals, families, and groups in the community. The theoretical content and clinical practice emphasize community health measures which promote and maintain the health of the community. Research-based knowledge of public health science is incorporated, health team relationships are broadened, and management of client care is practiced through health teaching, counseling, home visiting, and other experiences. Evaluation of care and fostering of accountability are integrated throughout the course. Legal and ethical issues in public health are examined. Limited to Accelerated Option. Prerequisite(s): NURS-3360, NURS-3200

NURS 3457 - Community Project for RNs (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 3460 - Nursing Care of the Adult (4)

This course uses a patient-centered, culturally sensitive approach to the health care needs of acutely ill adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the safe delivery of care.

NURS 3460 - Nursing Care of the Adult (0-4)

This course uses a patient-centered, culturally sensitive approach to the health care needs of acutely ill adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the safe delivery of care.

NURS 3470 - Nursing Care of the Older Adult (4)

The theory portion of the course uses a patient-centered, culturally sensitive approach to the health care needs of the older adult. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to the discussion of chronic health conditions, geriatric syndromes, and frailty.

NURS 3470 - Nursing Care of the Older Adult (0-4)

The theory portion of the course uses a patient-centered, culturally sensitive approach to the health care needs of the older adult. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to the discussion of chronic health conditions, geriatric syndromes, and frailty.

NURS 3480 - Maternal/Neonatal Nursing (4)

This course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of women in the childbearing cycle and their newborns. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Consideration is also given to common complications occurring in the childbearing cycle.

NURS 3480 - Maternal/Neonatal Nursing (0-4)

This course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of women in the childbearing cycle and their newborns. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Consideration is also given to common complications occurring in the childbearing cycle.

NURS 3485 - Maternal/Neonatal Nursing (3)

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care.

NURS 3485 - Maternal/Neonatal Nursing (0-3)

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care.

NURS 3490 - Child Health Nursing (0-4)

The theory portion of this course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of infants, children, and adolescents. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to discussion of significant health care issues within these populations.

NURS 3490 - Child Health Nursing (4)

The theory portion of this course uses a person-centered, family-centered, and culturally sensitive approach to the health care needs of infants, children, and adolescents. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. Priority is given to discussion of significant health care issues within these populations.

NURS 3495 - Child Health Nursing (3)

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care.

NURS 3495 - Child Health Nursing (0-3)

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care.

NURS 3565 - Adult/Older Adult Health I (4)

This course uses a person-centered, family-centered and culturally sensitive approach to the health care needs of adults, and older adults. Emphasis is placed on theoretical knowledge and evidence-based practice findings as the basis for nursing strategies to promote, maintain, and restore health. An interprofessional team approach is emphasized in the delivery of safe, effective, and quality care. The course emphasizes acute health problems of adults and older adults. Prerequisite(s): NURS 2500; NURS 2515; NURS 2520; NURS 3200; NURS 3330; NURS 3360 all with a grade of C or better.

NURS 3807 - Conceptual Framework for Practice (3)

Lecture 3 hours per week. This course introduces the Registered Nurse Option student to the Conceptual Framework, nursing theories and the research process as a scientific basis for practice. Health promotion concepts will be incorporated. Students will be assisted in reconstructing and expanding their own theory base for the practice of nursing.

NURS 4100 - Leadership and Management (2)

This course focuses on the development of the nurse as a leader at the microsystem level. The concepts of delegation, motivation, negotiation, and problem-solving are addressed within an organizational context. The use of evidence in process improvement for quality care is emphasized. Interprofessional teamwork and health information technology are further explored as mechanisms to promote cost-effective, quality outcomes.

NURS 4105 - Leadership and Management (2)

This course focuses on the development of the nurse as a leader at the microsystem level. The concepts of delegation, motivation, negotiation, and problem-solving are addressed within an organizational context. The use of evidence in process improvement for quality care is emphasized. Interprofessional teamwork and health information technology are further explored as mechanisms to promote cost-effective, quality outcomes.

NURS 4107 - Leadership and Management for RNs (3)

This course focuses on the development of the nurse as a leader at the microsystem level. The concepts of delegation, motivation, negotiation, and problem-solving are addressed within an organizational context. The use of evidence in process improvement for quality care is emphasized. Interprofessional teamwork and health information technology are further explored as mechanisms to promote cost-effective, quality outcomes.

NURS 4147 - Research and Evidence Based Practice (3)

In this course, research is introduced as a method of inquiry and as a foundation for evidence based clinical decisions. Fundamentals of research methodology will be presented. Developing, evaluating, and applying an evidence-base to address nursing care issues will be explored. Barriers to implementation of evidence based practice and strategies to address those barriers will be considered from an individual and an organizational perspective. The role of the nurse in affecting evidence based change in practice will be discussed. Offered every fall.

NURS 4200 - Nursing Immersion Practicum (4)

This course builds on prior nursing courses and provides the student with a practicum experience in managing patients and environments in selected specialty settings. This precepted clinical experience focuses on assessments, interventions, and outcomes unique to these populations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 4300 - Complex Care Theory (2)

The course builds on nursing courses and focuses on complex acute and chronic conditions, some of which may result in death. An evidence based focus is used to support assessments, clinical judgment and effective, efficient nursing interventions. Life span and developmental factors, cultural variables and legal aspects of care frame the ethical decision-making employed in patient choices for treatment or palliative care within the acute care setting.

NURS 4305 - Complex Care Theory (2)

The course builds on nursing courses and focuses on complex acute and chronic conditions, some of which may result in death. An evidence based focus is used to support assessments, clinical judgment and effective, efficient nursing interventions. Life span and developmental factors, cultural variables and legal aspects of care frame the ethical decision-making employed in patient choices for treatment or palliative care within the acute care setting.

NURS 4350 - Complex Care Practicum (0-4)

This course builds on previous nursing courses to provide the student with a practicum experience in managing complex patients and environments. This precepted adult clinical experience focuses on clinical judgment in complex patient situations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 4350 - Complex Care Practicum (4)

This course builds on previous nursing courses to provide the student with a practicum experience in managing complex patients and environments. This precepted adult clinical experience focuses on clinical judgment in complex patient situations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 4355 - Complex Care Practicum (4)

This course builds on previous nursing courses to provide the student with a practicum experience in managing complex patients and environments. This precepted adult clinical experience focuses on clinical judgment in complex patient situations. The student becomes an integral part of the interprofessional team with responsibility for the efficient management of care that produces cost effective, patient-centered outcomes. Skills related to enhancing communication and information management are refined.

NURS 4400 - Synthesis of Nursing Concepts (1)

This course provides the student with the opportunity to integrate and synthesize nursing concepts in preparation for taking the NCLEX-RN exam. The NCLEX blueprint is described, key content is reviewed and test taking strategies are presented. Students have the opportunity to apply learning by taking standardized exit exams.

NURS 4405 - Synthesis of Nursing Concepts (1)

This course provides the student with the opportunity to integrate and synthesize nursing concepts in preparation for taking the NCLEX-RN exam. The NCLEX blueprint is described, key content is reviewed and test taking strategies are presented. Students have the opportunity to apply learning by taking standardized exit exams. Prerequisite: NURS 4305

NURS 4507 - Comprehensive Nursing Practice (4)

This clinical course focuses on the analysis of health care needs of clients and the application of organizational and management theories. Students are expected to demonstrate increased competence in a variety of nursing roles, including care giver, teacher, advocate, and collaborator. Students will manage the nursing care of individuals, families, and groups at various points on the health-illness continuum. Prerequisite(s): NURS-3430, NURS-3440.

NURS 4600 - Pharmacology in Nursing (3)

This course develops the student's knowledge of the nurse's role and responsibilities in drug therapy based on application of concepts from nursing and pharmacology sciences. Legal, ethical, and life span considerations will be presented as they apply to the nurse's role in drug therapy. The student will have the opportunity to study groups of drugs using a structured, systematic approach that includes general principles of drug activity, major actions, therapeutic effects, and adverse reactions. The student will learn to apply the nursing process to the care of the patient receiving drugs in a variety of clinical situations.

NURS 4810 - Topics in Pediatric Nursing (2-3)

Offered periodically in spring.

NURS 4819 - Roles of the Nurse Case Manager/Care Manager (2-3)

This course facilitates critical examination of the practice of integrated case management and care management. Using a case study approach, critical thinking skills will be fostered to plan for and address the care needs of the patient with complex health needs. Students will utilize tools and resources commonly used by case managers and care managers to assess individual patient care needs, population health, develop a plan of care, and to coordinate patient care throughout the care continuum. Offered periodically in spring.

NURS 4823 - Intro to Forensic Nursing (2-3)

The course is an introductory survey course that includes the evolution of the role, education, subspecialties, and credentialing within forensic nursing. Theoretical, ethical, legal and sociocultural issues in forensic nursing including interpersonal violence, sexual assault, death investigation, and disaster management are explored. Concepts of forensic nursing as well as theories and applications are presented. Offered periodically in spring.

NURS 5005 - Nursing Strategies for Health Promotion (6)

This course introduces the advanced generalist student to nursing and the role of nurses in promoting the health of individuals, families and communities. The social, legal, ethical, cultural and interprofessional context of clinical decision making in nursing is discussed. The nursing process is presented; clinical decision-making to promote health is emphasized. Nursing interventions to promote health will be introduced and practiced in the laboratory setting. The determinants of health in individuals, families and communities will be explored. Health promotion in special populations will be investigated in classroom and field experiences.

NURS 5010 - Nursing Strategies in Physiological Health Alterations (6)

Building on concepts learned in previous courses, this course uses a lifespan approach in the study of clients experiencing alterations in health. Emphasis is placed on theoretical and evidence based knowledge as the basis for nursing strategies to promote adaptation of the individual and family. The student applies theoretical knowledge in the care of clients in simulated client settings. Field experiences provide the student with the opportunity to interact with clients in actual patient care settings.

NURS 5020 - Health Care Systems & Policy (3)

This course examines the environment in which nursing and health care is provided. Health care delivery systems and the organizational theories and behaviors involved in those systems will be introduced. The effect of health care policy in determining accessibility, accountability and affordability will be investigated. Financing of health care will be discussed and basic business principles will be introduced. The role of the advanced generalist nurse in the provision of quality cost-effective care in a variety of health care systems will be emphasized.

NURS 5025 - Informatics and Quality Improvement (3)

This course examines the process for reviewing, monitoring, improving and evaluating health care services. Health services accreditation standards will be explored. The role of information technology in providing data for the documentation and evaluation of client outcomes will be emphasized. Basic principles of epidemiology will be introduced. Quality improvement models will be described. The role of the advanced generalist nurse in developing and implementing performance improvement plans will be examined.

NURS 5040 - Advanced Practice Nursing: Role Acquisition (1)

This course examines the history and development of the advanced practice nursing (APN) role, responsibilities and specialty areas in advanced practice. Capabilities and competencies relevant to advanced practice are explored. Professionalism and commitment to life-long learning are reaffirmed. Offered every year in the fall.

NURS 5050 - 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 5060 - 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 5070 - 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 5080 - 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 5110 - Advanced Assessment and Clinical Decision Making (0-3)

This course focuses on the assessment and diagnostic reasoning component of the nursing process in the health care of individuals and families across the life span. The course integrates advanced assessment within the dimension of the adaptation framework including advanced assessments of physical health, growth and development and psychological, socio-cultural and spiritual health of individuals within their families of performing comprehensive health assessments and development of advanced assessment skills.

NURS 5115 - Advanced Health Assessment for the Generalist Nurse (3)

This course focuses on the assessment & diagnostic reasoning component of the nursing process in the health care of individuals and families across the life span. The course integrates advanced assessment within the dimension of the adaptation framework including advanced assessments of physical health, growth and development and psychological, socio-cultural and spiritual health of individuals within their families. Emphasis is placed on the performance of comprehensive health assessments and the development of advanced assessment skills. Students have the opportunity to practice assessment skills in a simulated client setting.

NURS 5120 - 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, neurons, neurosensory influences, specialized areas of the brain, and biochemical hormonal stability.

NURS 5130 - Clinical & Diagnostic Reasoning (0-2)

Concepts of diagnostic reasoning and clinical decision-making are presented as integral components of the advanced health assessment of individuals and families across the life span. During supervised clinical practicum experiences, students apply theoretical knowledge and advanced practice nursing skills to perform health assessments on clients/patients. The synthesis and application of anatomical-physiological, psychosocial, cultural, spiritual health concepts, growth and development, aging process, and ethical practice are emphasized to achieve competence in comprehensive health assessment as an advanced practice nurse. There are no prerequisites.

NURS 5140 - Health Promotion (3)

Selected models, mid-range theories, and tools are used to understand behavior and to identify risks to health. Evidence-based clinical prevention activities are analyzed for their use to improve the health of individuals, families, and populations. Methods for providing leadership in the conceptualization and implementation of clinical prevention and population health for individuals and populations are explored. The impact of lifestyle, cultural and environmental factors on health and/or health disparity are discussed. Students will implement and evaluate health promotion/disease prevention interventions with individuals and/or groups.

NURS 5160 - Principles of Practice Management (3)

This course explores the professional and business aspects of advanced practice nursing. Concepts explored include: legal aspects of practice, cost containment, reimbursement, coding, case management, and outcomes management. Principles of advanced practice nursing management and balancing productivity with quality of care are examined. Mentoring others in practice and the importance of being active in professional organizations are discussed. Prerequisite(s): NURS-5240, NURS-5260, NURS-5280, NURS-5320, or NURS-5340 Corequisites: NURS-5250, NURS-5270, NURS-5290, NURS-5330, NURS-5350. (Offered every Fall and Spring)

NURS 5160 - Principles of Practice Management (2-3)

This course explores the professional and business aspects of advanced practice nursing. Concepts explored include: legal aspects of practice, cost containment, reimbursement, coding, case management, and outcomes management. Principles of advanced practice nursing management and balancing productivity with quality of care are examined. Mentoring others in practice and the importance of being active in professional organizations are discussed. Prerequisite(s): NURS-5240, NURS-5260, NURS-5280, NURS-5320, or NURS-5340 Corequisites: NURS-5250, NURS-5270, NURS-5290, NURS-5330, NURS-5350. (Offered every Fall and Spring)

NURS 5170 - 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 5180 - Hlth Promo/Prot Disease Preven (1-4)

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 5190 - Adv Hlth Assmt 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 5205 - Evidence-Based Practice for the Advanced Generalist Nurse (3)

In this course research is introduced as a method of inquiry and as a foundation for evidence based clinical decisions. Fundamentals of research methodology will be presented. Developing, evaluating, and applying an evidence-base to address nursing care issues will be considered. The theoretical basis for research utilization, the contributions of the evidence-based practice movement, and practical instances of their application in nursing will be examined. Barriers to implementation of evidence based practice and strategies to address those barriers will be considered from an individual and an organizational perspective. Opportunities will be provided for students to gain experience in finding and applying evidence based knowledge

NURS 5220 - 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. Prerequisite(s): NURS-5170, NURS-5180, NURS-5190 (pre) and NURS-5080 (pre/co).

NURS 5240 - Advanced Clinical Studies I: Adolescents and Adults (4)

Relevant Theories are applied in the nursing management of clients with primary health care needs and/or acute or chronic illnesses. By using research and evidence based practice guidelines students implement strategies in the physiological, psychosocial, cultural, and spiritual dimensions in caring for clients and their families. The practicum component provides for integration of the nurse practitioner role in the primary care setting.

NURS 5250 - Advanced Clinical Studies II: Adult & Older Adult (0-5)

This course focuses on the theoretical and scientific basis for advanced nursing management of adult and older adult clients with primary health care needs and/or acute or chronic illnesses. Geriatric Syndromes and complex comorbidity management will be addressed. By using nursing research, practice guidelines and standards students implement strategies in the psychosocial, cultural, and spiritual dimensions in caring for elderly patients and their families. The practicum component provides for the application and integration of the advanced practice nursing in the primary care setting.

NURS 5260 - Advanced Clinical Studies I: The Acute Care Setting (4)

This course addresses short-term goal including minimizing or preventing complications, attending to co-morbidities, and promoting physical and psychological well-being. Discussion will relate to palliative care, end-of-life care and evaluation of risk factors to address maximizing health outcomes. Specific skill sets for the Acute Care Nurse Practitioner are developed dependent on the patient population and specialty-based area of practice. The practicum component of this course provides the nurse practitioner student the opportunity to master and apply the theory, knowledge and skills in a variety of acute care settings.

NURS 5270 - Advanced Clinical Studies II: The Acute Care Setting (0-5)

Specific concepts in this course that will be addressed are the management of adult clients with complex acute and unstable conditions in the hospital setting. Discussion will relate to the utilization of invasive interventions and procedures that promote physiologic stability in acute and life threatening conditions. In caring for patients and their families strategies in the physiological, psychological, sociocultural and spiritual dimensions will be implemented. The practicum component of this course provides the nurse practitioner student the opportunity to master and apply the knowledge and skills in a variety of hospital subspecialties. Prerequisite(s): NURS-5260

NURS 5280 - Adv Clin I: Adlt & older Adlt (5)

Relevant Theories are applied in the nursing management of clients with primary health care needs and/or acute or chronic illnesses. By using research and evidence based practice guidelines students implement strategies in the physiological, psychosocial, cultural, and spiritual dimensions in caring for clients and their families. The practicum component provides for integration of the nurse practitioner role in the primary care setting.

NURS 5290 - Advanced Clinical Studies II: Women and Children (0-5)

This course focuses on the theoretical and scientific bases for health promotion, maintenance, and management in the primary care of women, expectant families, and children (ages 0-21 years). Well woman care, family planning, and reproductive tract disorders commonly seen in primary care will be studied. Care of children with minor acute and selected stable chronic health problems also will be addressed. Trends in health care, ethical issues and the socioeconomic and political environment of women, expectant families, and children are analyzed to optimize the management of care. A practicum component is required. This course is designed for the family nurse practitioner role in the primary care setting.

NURS 5310 - Critical Appraisal of Technology: Acute Care (3)

This course evaluates technologies utilized in the acute care setting in providing comprehensive assessment data or stabilizing physiologic conditions. Contents include critical appraisal of available technology and selection of appropriate patient populations. Strengths and limitations and implications for further research and development will be explored.

NURS 5320 - Advanced Clinical Studies I: Nursing of Children (4)

This course provides the student with the opportunity to apply knowledge and skills in the clinical management of children who are healthy or who are experiencing selected health problems. Emphasis is placed on using models and theories that guide advanced nursing practice. The focus is on the assessment and diagnosis of health risks and health problems. Therapeutic interventions will be designed to promote health for well child care and to restore health for children who have common childhood illnesses.

NURS 5330 - Advanced Clinical Studies II: Nursing of Children (0-4)

This course provides the student with the opportunity to apply knowledge and skills in the clinical management of children who are experiencing selected acute and chronic health problems. Emphasis is placed on using models and theories that guide advanced nursing practice. The focus is on the assessment, diagnosis and therapeutic interventions for children with acute and chronic illness and their families.

NURS 5340 - Advanced Clinical Studies I: Psychiatric Mental Health Nursing (4)

This course focuses on behaviors pertinent to the role of the advanced practice nurse as a psychotherapeutic agent in holistically treating clients with acute and chronic mental health needs/problems. Selected counseling and psychotherapy theories, biopsychosocial theories, and psychiatric mental health-related concepts, issues, problems, and disorders are examined. Clinically, students use research findings, evidence-based clinical practice guidelines, practical knowledge and skills, and theories. Self-initiated academic and personal discoveries are expected. Emphasis is given to active and ongoing collaboration with clients, their families and/or significant others, and the interprofessional team.

NURS 5350 - Advanced Clinical Studies II: Psychiatric Mental Health Nursing (0-5)

This course focuses on the use of pertinent theories, research, evidence-based findings, practice guidelines and standards, and interdisciplinary collaboration to holistically assess and manage complex health and mental health care needs/problems of groups and individuals across the continuum of care. Group theories and processes to effectively design, conduct, and evaluate strategies for a structured group therapy product is stressed. The performance of comprehensive psychiatric assessments/evaluations and analysis of client data to formulate differential diagnoses based on appropriate classification systems are emphasized. Students tailor their use of holistic psychotherapy modalities and intervention strategies for clients of selected populations. Prerequisite: NURS 5340

NURS 5400 - Ecol Approach to Hum Behavior (3)

This course focuses on content that facilitates the development of the psychotherapist role of a psychiatric mental health advanced practice nurse of the counseling role of advanced practice nurses in other specialties when taken as elective. Psychological theories, models, therapies, and treatment strategies that address the requisite knowledge and skills needed to foster therapeutic advanced practice nurse-client relationships are examined with emphasis on target populations. Analyses of treatment/intervention strategies within various theories and models that may be used with particular clients are explored. Personal and professional orientations, values, and behavioral insights are examined throughout the course to promote increasing depth and breadth of understanding of using oneself as a therapeutic tool.

NURS 5430 - Psychopharmacology (2)

This course focuses on concepts, principles, and application of psychopharmacotherapeutics used in the management of individuals across the lifespan at risk for developing and/or having mental health needs/problems or diagnoses of psychiatric disorders. Emphasis is placed on the proposed mechanism of action, metabolism, excretion, and adverse reactions of the major classes of psychopharmacological agents used in a wide range of clinical settings.

NURS 5470 - Advanced Clinical Studies: Primary Health Care Nursing of Childbearing and Childrearing Families (4)

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 5520 - 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 5550 - 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 5560 - Evidence-Based Approaches for the Nurse Educator (2)

Prerequisite: NURS 5200 or 5205. May be taken concurrently.

NURS 5570 - Curriculum Dev Nrs Education (2-3)

Course focuses on program development and curriculum design in nursing. Theories of education and cognitive development, as a foundation for program preparation, will be presented. Use of mission and philosophy statements as bases of curriculum development will be explored. Students will participate in the curriculum-design process. Issues affecting curriculum design and development of curriculum outcomes will be analyzed. The evaluation process and its impact on curriculum development and implementation will be considered.

NURS 5580 - 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 evaluative methods will be discussed.

NURS 5590 - 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 5601 - Clinical Studies I (4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to develop a beginning understanding of how patient-centered care and interprofessional collaboration can result in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be discussed.

NURS 5601 - Clinical Studies I (0-4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to develop a beginning understanding of how patient-centered care and interprofessional collaboration can result in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be discussed.

NURS 5602 - Clinical Studies II (4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to further their understanding of how patient-centered care and interprofessional collaboration results in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be examined.

NURS 5602 - Clinical Studies II (0-4)

Using theoretical and evidence based knowledge gained in previous course work, the student will apply the nursing process to the care of patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to further their understanding of how patient-centered care and interprofessional collaboration results in positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be examined.

NURS 5603 - Clinical Studies III (4)

Integrating theoretical and evidence based knowledge gained in previous course work, the student will use the nursing process to design care for patients and families experiencing acute health alterations. Students will work with preceptors in an acute care setting to promote patient-centered care, interprofessional collaboration and positive adaptation for patients and families. The role of the nurse in providing safe, quality care will be emphasized.

NURS 5604 - Advanced Clinical Studies (3-4)

This course focuses on the application of evidence-based nursing care to promote safety and quality care outcomes in a specific clinical population. Particular emphasis will be placed on the assessment of risk and the development of risk reduction strategies in the selected patient population. Key issues in the management of acute and chronic illness and the promotion of health will be explored.

NURS 5605 - Practicum in Clinical Leadership (3-5)

The student will design, implement and evaluate care during an immersion experience in a designated health care setting. The experience will foster leadership and role acquisition with emphasis on quality improvement, interprofessional team care, patient-centered care, evidence-based practice and utilization of informatics and technology. The culmination of the experience will be a professional paper and presentation in which students communicate their project design and results.

NURS 5606 - Clinical Nursing Leadership for Advanced Generalists (3)

This course examines the theory and application of leadership strategies in the health care setting. Change theory and the process of making changes at the individual, unit and organizational level are examined. Leadership roles for the advanced generalist will be explored.

NURS 5607 - Advanced Synthesis of Nursing Concepts (1)

This course provides the student with the opportunity to integrate and synthesize nursing concepts in preparation for taking the NCLEX-RN exam. The NCLEX blueprint is described, key content is reviewed and test taking strategies are presented. Students have the opportunity to apply learning by taking standardized exit exams. Offered every spring. Students must take this course the semester of graduation in conjunction with NURS5605.

NURS 5610 - The Role of the CNL in promoting health and reducing risk (3)

This course examines the theory and application of leadership strategies in the health care setting. Change theory and the process of making changes at the individual, unit and organizational level are examined. Leadership roles for the advanced generalist will be explored.

NURS 5614 - CNL Capstone and clinical immersion I (3)

This course examines the theory and application of leadership strategies in the health care setting. Change theory and the process of making changes at the individual, unit and organizational level are examined. Leadership roles for the advanced generalist will be explored.

NURS 5615 - CNL Capstone and clinical immersion II (3)

This course examines the theory and application of leadership strategies in the health care setting. Change theory and the process of making changes at the individual, unit and organizational level are examined. Leadership roles for the advanced generalist will be explored.

NURS 5630 - Dynamics of Family Nursing Practice (3)

This course provides the theoretical foundations for the nursing care of families within a community context. The course will emphasize analysis of theories and research concerning families. Family functioning and roles in family health care, using family assessment tools and other nursing strategies with respect to advanced nursing practice are appraised. Family dynamics that impact family well-being and contemporary governmental, corporate and agency policies and resources that affect family functioning are examined.

NURS 5650 - Adol Sex/Chldbearing/Chldrear (2-3)

Examines current trends in adolescent sexuality, fertility, and childrearing and their social context. Explores related factors within the framework of adolescent development. Describes public health and social consequences of adolescent childbearing; analyzes creative models for prevention of pregnancy and for providing comprehensive services. Examines ethical issues surrounding such programs.

NURS 5660 - Evidence-Based Approaches for the Nurse Educator (2)

This course is designed to help students develop an evidence-based approach for the roles of the nurse educator in a variety of practice settings. The evidence on selected educational topics is examined and students create instructional materials based on existing evidence. Students utilize skills in locating, analyzing, integrating and presenting evidence to demonstrate teaching approaches in a selected nurse educator role. Reflective practice is highlighted and students plan for continuing professional development in the areas of discovery, integration, application, and teaching.

NURS 5680 - Rsch Util/Evdnce 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 5690 - Adv Nrs Prac for Gynol Issues (2)

Course will focus on gynecologic health-care issues for advanced nursing practice. Health promotion, disease prevention, and management of common disorders seen in gynecologic and primary-care settings will be examined. By using nursing research and practice standards, students will analyze strategies in the physiological, psychological, sociological, and spiritual dimensions in caring for women. Trends in health-care ethical issues and the sociopolitical environment of women will be analyzed to optimize care management.

NURS 5720 - Adv Cln 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 5750 - 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 5760 - Multisystem Disorders (3)

The focus of this course is the management of chronic complex health issue in the adult and older adult. This course will cover the management of multi-system disorders including the selection and interpretation of cardiovascular and pulmonary diagnostics: diabetic therapies, sleep disorders, movement disorders; HIV and the newest approaches to complex cancer care.

NURS 5780 - Adv Cln 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 5810 - Advanced Practice Nursing Clinical Practicum (1-5)

This course is the first of two courses that provides the student with a practicum experience as an advanced practice nurse. The student spends concentrated time practicing in the role of an advanced practice nurse under the supervision of an approved and qualified preceptor. The student assumes increasing independence in assessing, planning, implementing and evaluating health care. This course includes seminar discussions exploring the implementation of the role and functions of the advanced practice nurse.

NURS 5810 - Advanced Practice Nursing Clinical Practicum (0-5)

This course is the first of two courses that provides the student with a practicum experience as an advanced practice nurse. The student spends concentrated time practicing in the role of an advanced practice nurse under the supervision of an approved and qualified preceptor. The student assumes increasing independence in assessing, planning, implementing and evaluating health care. This course includes seminar discussions exploring the implementation of the role and functions of the advanced practice nurse.

NURS 5820 - 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 5830 - 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 5870 - 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 5880 - Administration Care Systems II (3)

This course focuses on mastering applied quantitative and qualitative methods to analyze and evaluate quality and costs in the administration of nursing care systems. Advanced methodologies are studied for the strategic management of fiscal resources and costs of human resources. Students apply advanced quality and cost technologies in the practicum.

NURS 5890 - Adv Prac Nrs: Sem/Practicum (1-5)

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 6000 - 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 6100 - 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 6110 - 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 6130 - 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 6130 - Interprofessional Collaboration (0-3)

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 6140 - Leadership in Health Care (0-3)

This course analyzes leadership theories and spheres of influence of the advanced practice nurse in health care delivery. Change theory and the process of making change at an organizational/system level are examined. The focus is on the assessment and enhancement of leadership skills.

NURS 6140 - Leadership in Health Care (3)

This course analyzes leadership theories and spheres of influence of the advanced practice nurse in health care delivery. Change theory and the process of making change at an organizational/system level are examined. The focus is on the assessment and enhancement of leadership skills.

NURS 6150 - Clinical Informatics (2)

Explores information literacy and the use of computers in health care. Students learn processes for selection and evaluation of information system. Patient care technology is studied and used to analyze outcomes and examine patterns. Information systems/decision supports and clinical tools are discussed to support and improve patient care.

NURS 6160 - Evidence Based Practice (3)

Developing, evaluating, and applying an evidence-base to address nursing-care issues will be considered. The theoretical basis for research utilization, the contributions of the evidence-based practice movement, and practical instances of their application in nursing will be examined. Barriers to research implementation and strategies to address those barriers will be considered from an individual and an organizational perspective, using both model-based and practical considerations. Opportunities will be provided to develop and evaluate a research utilization plan to address a clinical area of practice.

NURS 6160 - Evidence Based Practice (0-3)

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 6170 - Evidence Based Practice II (3)

This course builds on student's understanding of scholarly inquiry, research designs, methods, and research translation as best practices in health care. Topics include theoretical underpinnings for translational research design, needs assessment, program planning and evaluation, and application of quantitative and qualitative methods in the study of practice related phenomena. Cultural, political, and ethical issues related to translational research are addressed are consistent with Jesuit values.

NURS 6180 - Mechanism of Health Inequities (3)

This course will explore the ways diversity and health inequities occur within the urban and rural environments and affect the health of populations. The course will address the complexity inherent in trying to reduce health inequities that have historical, economic, cultural, ethical, and environmental roots; and the factors that continue to perpetuate health disparities. Explanatory and practice models aimed at reducing health inequities will be explored. Federal and local initiatives aimed at addressing health care inequity will be analyzed. Offered every fall.

NURS 6800 - Theory Development in Nursing (3)

Study of theory development in nursing from historical and philosophical perspectives. Distinguish between various approaches to nursing theory development. Analysis of the process of theory construction, including current approaches to organizing and building nursing knowledge. In-depth study of one selected theory and its related practice and research literature. Discussion of various research topics that support theory development and/or testing.

NURS 6801 - Research Issues in Health Promotion, Disease Prevention and Reduction of Health Disparities (3)

Examine existing 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 reduction of health disparities, protection of vulnerable populations from health problems and limitation of disability. Areas of research to which nurse researchers have made a significant contribution are highlighted. Analysis of research addresses conceptual, theoretical, methodological, ethical, and nursing practice issues. Prerequisite: NURS 6800

NURS 6802 - Measurement of Nursing Var (3)

Psychometric analysis of selected health-related research instruments and their application to the measurement of nursing variables. Includes the study of measurement theory, quantitative research methods and designs, and instrument construction, modification, and evaluation. Analysis of instruments will include discussion of the impact of cultural, ethnicity, gender, and age variables on the development, evaluation, and modification of new and existing instruments. Prerequisites: NURS 6809 and NURS 6806
Multivariate/Multivariable Statistics in Nursing Research or an equivalent.

NURS 6803 - Nursing Issues and Leadership (2)

This course focuses on the diffusion of innovations by nursing leaders and how historical events have influenced their innovations to shape contemporary nursing. Policy issues related to nursing and health will be analyzed within the context of social norms and leadership theories/strategies. Managed care, as policy/practice, will be analyzed. Prerequisites: NURS 6800, 6809, and 6810

NURS 6804 - Care Acute/Chronically Ill Pop (3)

Advanced study of evidence based practice related to physiological and behavioral responses to acute and chronic illness. This course focuses on analysis of research to promote effective nursing care of acutely and chronically ill populations. Emphasis on knowledge development to advance nursing as a discipline. Prerequisite: NURS 6800.

NURS 6805 - Applied Univariate Statistics in Nurse Research (3)

This course strengthens students' knowledge of the application and analysis of univariate statistics for generating nursing knowledge. Topics include a review of probability theory, sampling theory and distributions, hypothesis testing, tests of association and independence with emphasis on univariate parametric and nonparametric statistics. Practical application is given to the use of statistical software, graphing data, coding, data management, and conducting nursing research. Pre-requisite: a minimum of an undergraduate statistics course completed within the last five years.

NURS 6806 - Multivariate/Multivariable Statistics in Nursing Research (3)

This course uses a general linear models approach to data analysis with multivariate/ multivariable techniques, including ANOVA/MANOVA methods for repeated measures, multiple regression, logistic regression, factor analysis, and introduction to model fitting techniques. Emphasis is given to interpretative principles of research design, statistical modeling, and analysis methods applied to nursing and clinical research rather than on specific mathematical details. Pre-requisites: NURS 6805 or equivalent.

NURS 6809 - Quantitative Mthds Nrs Rsch (3)

Examines the selection and use of quantitative methods and approaches in nursing research. This course will focus on nursing research design, analysis, and knowledge generation from a quantitative perspective. Emphasis will be given to writing nursing research proposals, grant applications, and the role of peer review in the research process. Prerequisites: NURS 6800, NURS 5200 General Research Methods or equivalent.

NURS 6810 - Qualitative Mthds Nrsng Rsch (3)

Examines the philosophical foundations and epistemological perspective of qualitative research; includes study of traditions and methods, scientific and ethical issues, and techniques of data collection, analysis, and interpretation. Emphasis is given to the use of qualitative approaches in theory development and to the nature of the contribution of qualitative studies in expanding nursing knowledge. Prerequisite: NURS 6800 and NURS 6813 preferred.

NURS 6812 - Iss Sci Integrity in Nrs/Hlth (1)

Discusses the historical development of principles of research ethics with particular focus on their evolution in nursing and health research. Considers issues associated with intellectual responsibility for and avoidance of misconduct in individual work. Explores issues of mentoring, intellectual property, and conflict of interest associated with joint work. Augments the consideration of issues associated with research on human subjects with illustrative case studies in nursing.

NURS 6813 - 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 6814 - Interpretive Phenomenology: Research Method for Conducting Human Science (3)

Elective Course. This course builds upon prior study in qualitative research methods. 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 along with issues and skills in conducting interpretive research. Post-modern conceptions of validity for evaluating interpretive research will also be examined. Prerequisite: NURS 6810 or equivalent introductory qualitative methods course or by special permission of the instructor, NURS 6813 preferred.

NURS 6815 - Applied Inter Phen (3)

Elective Course. The course is for students who intend to use interpretive methods for their dissertation research. Students will examine primary philosophical sources for describing the methodological implications of interpretive phenomenology for studying human meanings and practices, including professional and lay caregiving. Prerequisite: NURS 6814.

NURS 6816 - Research Issues in Nursing Education (3)

This course presents specific approaches to conducting nursing education research in academic/classroom, clinical, and simulation/skills laboratory settings. Methods of examining learning processes and outcomes from traditional and innovative pedagogies and use of emerging technologies by nurse educators are explored. Emphasis is given to the ethical issues and analytical strategies related to conducting nursing research. Pre-requisites: NURS 5570, NURS 5580, NURS 6809, NURS 6810, and NURS 6802 preferred.

NURS 6817 - Resrch Synth & Meta-Analysis (3)

This course focuses on the conceptual understanding and practical application of quantitative research synthesis. Topics will include writing purpose statements and research questions, developing advanced search strategies, coding primary studies, and analyzing and interpreting data. Students will conduct pilot meta-analyses through the semester. Pre-requisites: NURS 6805, NURS 6809.

NURS 6960 - Capstone Project Management (1-2)

This course is designed to assist the student in refining the Capstone project in regard to the clinical research question, statistical analysis, writing the interpretation and discussion of results. The course is offered as variable credit.

NURS 6961 - Doctor of Nursing Practice Project (0-4)

This course includes 1 credit hour of seminar and 3 credit hours of clinical. The clinical requirement includes 210 hours of experience culminating in a publishable paper. This clinical experience will provide the student with the opportunity to integrate and synthesize knowledge gained throughout the program. The student's project will focus on a practice change initiative in risk reduction. Examples include: a program evaluation, a quality improvement project, evaluation of a new practice model, a consulting project, or a pilot study.

Health Data Science (HDS)

HDS 5130 - Healthcare Organization, Management, and Policy (3)

The course is designed to give students frameworks, analytic tools, informational resources, and specialized expertise in health administration and health policy. This background will prepare students for professional work in the health sector in medical and health settings, as researchers, managers or program developers, or as professionals responsible for analysis, evaluation, or advocacy. The course emphasizes knowledge of the organization and financing of health care, politics, the influence of Medicare and Medicaid policies, and the implications of health policy for diverse populations. The course will particularly focus on the implications of the recently enacted health reform, the Patient Protection and Affordable Care Act (ACA) of 2010. Offered in spring.

HDS 5210 - Programming for Health Data Scientists (3)

Students will be introduced to concepts in computer programming using the Python programming language. Students will learn to conceptualize steps required to perform a task, manipulate files, createloops, and functions. By the end of this course, students will have a basic understanding of computer programming, a working knowledge of the Python programming language, and they will be able to share their scripts to collaborate with other team members.

HDS 5310 - Analytics and Statistical Programming (3)

This course will serve as a foundation for subsequent coursework in the Health Data Science degree program. Students will learn statistical concepts of probability theory, sampling theory, null hypothesis significance testing, and Bayesian estimation. They will develop expertise in the R statistical programming language and Markdown syntax, and learn to collaborate with one another using the Git and GitHub version-tracking/sharing tools. By the end of this course, students will have a basic knowledge of statistical concepts, be able to execute analyses in R, share work with collaborators, and document their results. Offered in spring.

HDS 5320 - Inferential Modeling (3)

Students will learn to conceptualize research questions as statistical models, and parameterize those models from real-world data. The course will start by introducing the linear model, then expand into generalized linear models, nonlinear models, mixed and multilevel models, and Cox survival models. Students will have a working knowledge of how to use statistical models to gain an understanding of the influence of individual predictor variables on health outcomes. Offered in summer. Prerequisite: HDS 5310 Analytics and Statistical Programming

HDS 5330 - Predictive Modeling and Machine Learning (3)

In contrast to the statistical modeling course which focuses on understanding the influence of variables on outcomes, this course will focus on predicting individual health outcomes using modern automated model development algorithms. By the end of this course, students will be able to create predictive analytics using popular machine learning packages in R and Python. - Software competencies: R and Python Offered in spring.

HDS 5960 - Capstone Experience (3)

This course is designed to offer data science students an opportunity to practice their skills in an industry setting, to learn the roles that various members of a data science team play in an organization, and to begin building a network of professional contacts and references. Prerequisites: ORES 5300, HDS 5210, HDS 5310

Outcomes Research (ORES)

ORES 2300 - Survey of Epidemiology in Health Services Research (3)

This course introduces methods and interpretations of measures of frequency, association, error, bias and health impact. Epidemiological methods are presented within the context of assessing cost, quality, and access of the health care system. Employing mix of lecture, discussion, and computer-based laboratory assignments, students will explore the relationships between policy, medical care practices, and scientific understanding via epidemiology.

ORES 2310 - Introduction to Clinical Medicine (3)

This course addresses the fundamentals of diagnosis and treatment related to the practice of medicine for leading diseases. Students will be introduced to the basic science concepts of medicine, including anatomy, physiology, microbiology, and genetics in the context of evidence-based screening and treatment guidelines used by medical subspecialties. Class sessions, taught by medical school faculty, employ a mix of lecture, discussion, hands-on demonstrations, and care simulation. Student assignments include analysis of diagnostic criteria and treatment options available to clinicians and development of patient-directed communications about medication use.

ORES 2320 - Interprofessional Health Outcomes (2)

In this course, students will use skills in effective and efficient searching for evidence-based health-care focusing on outcomes of collaborative practice to improve health status. Students will identify outcome variables to be measured and methods used in conducting outcomes research. Students will learn how to search and critically evaluate the literature and develop a plan for evaluating an interprofessional collaboration on health outcome.

ORES 4570 - U.S. Health System Reform (2-3)

This course explores the evolution of the modern U.S. health care system. Students will study and critique strategies employed by communities, states and federal agencies to address cost, quality and access. The major provisions of reform initiatives, such as the Affordable Care Act (ACA), will be examined to assess actual and potential impact on patients, physicians, hospitals and biotech/pharmaceutical companies. Students may choose a 2 or 3-credit version of this course with the latter including the development of a system reform proposal for state government. Offered every summer.

ORES 4980 - Undergraduate Readings in Outcome Research (1-3)

This class is for undergraduates wanting to do independent projects such as special problems or special topics with SLUCOR faculty members.

ORES 5010 - Introduction to Biostatistics for Health Outcomes (3)

This course is designed to introduce basic principles of descriptive and inferential statistics. The course will cover fundamental concepts and techniques of descriptive and inferential statistics with application to health outcomes research. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 5100 - Research Methods in Health & Medicine (3)

This online course is designed to provide an introduction to the techniques, methods, and tools used for research in the health sciences. Students will obtain an understanding of the research process and scientific method, specific study designs, methods for data collection and analysis. This is a very applied and hands-on course and is focused entirely on the unique aspects of research in the health sciences. This course will utilize Blackboard for all lectures, online discussions, assignment submission, and examinations.

ORES 5150 - Multivariate Analysis for Health Outcomes Research (3)

This course will cover multivariate statistical methods commonly utilized in health outcomes research. The course is designed for health outcomes research masters students and doctoral level students in public health. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 5160 - Data Management (3)

This course will cover the basic skills necessary for maintaining databases as well as ensuring data quality and manipulating data. The course will also introduce an experiential component in data base design and management. The course is designed for health outcomes research masters students and doctoral level students in public health. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 5210 - Foundations of Medical Diagnosis and Treatment (3)

Taught by medical school faculty, this course is an introduction to clinical medicine for graduate students. Basic science concepts include anatomy, physiology, microbiology/hematology, infectious diseases, genetics, immunology, endocrinology and metabolic pathways. Primary organ systems and their associated diseases will also be covered, with special emphasis on their diagnosis and treatment.

ORES 5260 - Pharmacoepidemiology (3)

This course is an introduction to pharmacoepidemiology - the use and effects of drugs in human populations. It provides an overview of the principles of pharmacoepidemiology, sources of pharmacoepidemiology data, and special issues in pharmacoepidemiology methodology. It reviews commonly used study designs, special topics and advanced methodologies for pharmacoepidemiologic studies.

ORES 5300 - Foundations of Outcomes Research I (3)

This course will assist students in understanding outcomes research and provide a background in the basic tools used in outcomes studies. The course will enable students to 1) conceptually define the meaning and purpose of outcomes research, 2) understand the role of epidemiology, biostatistics, health economics, and database and information technology in conducting outcomes research, 3) evaluate the usefulness and utility of outcomes measures, 4) recognize the different types of measures used in outcomes research, including clinical, health status, quality-of-life, health care utilization, and patient satisfaction, 5) obtain a basic appreciation of statistical analyses appropriate for outcomes research, and 6) interpret the results of health outcomes research.

ORES 5310 - Foundations of Outcomes Research II (3)

This course is a continuation of Foundations of Outcomes Research. This course provides an more in-depth look at study designs pertinent to the field of outcomes research including: comparative effectiveness research, cost-effectiveness research, and the skill-set surrounding risk-adjustment in outcomes research. The course also includes an experiential component in database design and management. This course contributes to the First Dimension by preparing students for advanced study in areas related to Outcomes Research and contributes to the Second Dimension by teaching students tools and methods of research.

ORES 5320 - Scientific Writing&Communicatn (2)

This course is designed to provide students with the tools necessary to effectively communicate to scientific and lay audiences. The primary emphases of the course are the scientific manuscript and the oral presentation; however, grant and proposal writing, preparing poster presentations, and writing for lay audiences will also be discussed. The course will emphasize both the structure of a scientific paper as well as grammar and sentence structure, cohesion and coherence, and developing concise and simple messages.

ORES 5400 - Pharmacoeconomics (3)

Pharmacoeconomics is one of the cornerstones of Health Outcomes Research. This course is designed to teach clinicians and new researchers how to incorporate pharmacoeconomics into study design and data analysis. Participants will learn how to collect and calculate the costs of different alternatives, determine the economic impact of clinical outcomes, and how to identify, track and assign costs to different types of health care resources used. This is a required course for the MS in Outcomes Research and Evaluation Sciences but may also be of interest to students in Public Health and Health Administration. This course contributes to the First Dimension by providing students with advanced skills in highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communication complex information.

ORES 5410 - Evaluation Sciences (3)

This course will examine methods for evaluation of health programs in both organizational and community contexts. Topics include formative research, process evaluation, impact assessment, cost analysis, monitoring outcomes, and evaluation implementation. Strengths and weaknesses of evaluation designs will be discussed. This is a required course for the MS in Outcomes Research and Evaluation Sciences Program but may also be of interest to students in Public Health, Health Administration, and Allied Health. This course contributes to the First Dimension by providing students with advanced skills in the evaluation sciences and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 5420 - Clinical Trials Design and Analysis (3)

This course is designed to provide students with an understanding of the major concepts and issues in clinical trial design and interpretation. The course will concentrate on the design, conduct, analysis, interpretation, and dissemination of results in clinical trials research. Topics include power analysis, randomization (individual and group), study design, outcomes selection, generalizability, data monitoring, and federal regulations. This course is an elective in the MS in Outcomes Research & Evaluation Science program, but may also be of interest to masters and doctoral level Public Health students as well as student in Medicine and Allied Health. This course contributes to the First Dimension by providing students with advanced skills in highly valued research area and contributes to the Second Dimension by developing students ability to effectively communicate complex statistical information.

ORES 5430 - Health Outcomes Measurement (3)

This course is designed to introduce students to the principles of health outcomes measurement. Specifically, students will be introduced to the most common measures seen in health outcomes and health services research as well as measure development and assessment of psychometric properties. Topics will include generic vs. disease specific measures, instrument design, scaling, reliability and validity, addressing measurement error, Classical Test Theory, and Item Response Theory. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 5440 - Comparative Effectiveness Research (3)

This course is designed to introduce students to the principles of comparative effectiveness research. Specifically, students will be introduced to the concepts of comparative effectiveness research, common research methods and statistical analyses, and translation and dissemination. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 5450 - Biomedical Informatics (3)

This course provides students with an understanding of the fundamental concepts and activities in biomedical informatics. Topics include clinical classification systems, electronic health records, genomics, decision theory, Health, and clinical decision-making. The relationship between health information technology and clinical and outcomes research is emphasized.

ORES 5460 - Drug and Device Development (3)

This course provides an overview of the drug and device development process from the laboratory through post-marketing studies. Practical aspects of the drug and device development process as well as regulatory policies and procedures will be discussed. Topics include the steps for gaining approval for a new drug in humans, clinical phases in the development process, use of biotechnology in drug development, preparing investigational new drug applications, and pharmacoeconomic principles for evaluating new treatments.

ORES 5550 - SAS Programming I (3)

In the era of big data and outcomes research, skilled scientists can organize, manipulate, and analyze using many different tools. Programming in SAS is an essential skill. This course introduces the SAS environment and programming language. Students will learn data management, descriptive analysis, and statistical inference testing using a hands-on approach. By the end of the course, students will be able to import, organize, and analyze data as well as interpret the results.

ORES 5560 - R Programming (3)

This course will introduce students to the R statistical programming language, as well as some of the added features of the R Studio integrated development environment for R. We will start with a general introduction to R and R Studio to gain familiarity with the environment. We will import data, run a regression, and create a simple graphic. Then we will move into an overview of some of the usual suspects, t-tests, chi-square, ANOVA, logistic regression, etc. on fairly clean data. Along the way we will learn about objects, the workspace, scalars, vectors, matrices, data frames, other object classes, etc. The middle weeks will delve into more nuts and bolts of programming. We will structure and manipulate data frames, merge relational tables, create loops, write customized functions, etc. The last weeks will cover graphics and reporting. R has several graphics engines, the base graphics package, Lattice, ggplot2, and ggvis. I will walk through creating customized graphics in the base package, then introduce the "grammar of graphics" philosophy behind ggplot2. We will then turn to reproducible research, using R Studio's capabilities to create Markdown and LaTeX documents that contain embedded R code. We will open the door to as many of R's capabilities as possible, and then give students the resources to explore those capabilities. Offered every summer.

ORES 5570 - U.S. Health System Reform (2-3)

This course explores the evolution of the modern U.S. health care system. Students will study and critique strategies employed by communities, states and federal agencies to address cost, quality and access. The major provisions of reform initiatives, such as the Affordable Care Act (ACA), will be examined to assess actual and potential impact on patients, physicians, hospitals and biotech/pharmaceutical companies. Students may choose a 2 or 3-credit version of this course with the latter including the development of a system reform proposal for state government. Offered every summer.

ORES 5580 - Qualitative Research Methods (3)

Investigators conducting outcomes research seek to inform the development of clinical practice guidelines, to evaluate the quality of medical care, and to foster effective interventions to improve the quality of care. Outcomes research has traditionally used quantitative sciences and experimental designs to examine the utilization, cost, and clinical effectiveness of medical care. However, despite the utility of quantitative methods for measuring these important outcomes, these methods are not well suited to measure other complex aspects of the healthcare delivery system, such as organizational change, clinical leadership in implementing evidence-based guidelines, and patient perceptions of quality of care, which are also critical issues in outcomes research. These more nuanced aspects of healthcare delivery may be most appropriately examined with qualitative research methods. Qualitative research is a form of scientific inquiry that spans different disciplines and subject matter and utilizes many approaches including interview, observation, and focus group discussion, just to name a few. Qualitative studies are often exploratory in nature and seek to generate novel insights using inductive (starting with observations and developing hypotheses) rather than deductive (starting with extant hypotheses and testing them with observations) approaches. Such research is important in clinical outcomes research because it can illuminate aspects of organizational context and healthcare delivery that influence organizational performance and quality of care. Offered every summer.

ORES 5590 - Advanced R Programming (3)

The advanced R course will provide students who are familiar with R the opportunity to delve deeper into the language. Students will learn about S3 and S4 classes, creating packages, managing memory, parallel processing, and vectorizing computations. We will also delve into some of the Hadleyverse packages, including dplyr and ggplot2, and create interactive web-based dashboards using shiny. Offered in summer.

ORES 5960 - Health Outcomes Research Capstone (3)

This course is designed to allow students to integrate the knowledge and skills developed over the course of the MS in Health Outcomes Research and Evaluation Sciences Program. Students will design and complete an outcomes study or program evaluation over the course of the semester culminating in a formal presentation of the study and results. The overarching goal is to incorporate and utilize research skills in a real-world setting. This course contributes to the First Dimension by providing students with advanced skills in a highly valued research area and contributes to the Second Dimension by developing students' ability to effectively communicate complex statistical information.

ORES 6950 - Special Study for Exams (0)

This Special Study for Exams course indicates that a student will be taking the exams the semester they are registered for.

Philosophy & Letters (PLJ)**PLJ 4900 - Integration Seminar (1-3)**

Integration, application, and deepening of paired courses in philosophy and theology. Restricted to Jesuits and students in the College of Philosophy and Letters.

PLJ 4960 - Systematic Synthesis (3)

This course, principally for students in the College of Philosophy and Letters, serves as a 'capstone course.' Students write small papers on philosophy of human nature, epistemology, ethics, and philosophy of God and mutually criticize each other's papers. Finally, they produce their own full synthesis. Prerequisites: Phil 105, 205, and permission of the instructor.

Applied Analytics (AA)

AA 5000 - Foundations of Analytics (3)

This course is an introduction to the field of Analytics, with an emphasis on its applications in different domains of business and organizational operations. Concepts covered include Data; Information; Knowledge; Big Data and Analytics; Data Governance; Information Visualization and Representation; Evidence-Based Decision-Making; Information Retrieval; and Legal, Ethical and Privacy-related issues associated with Analytics.

AA 5050 - Programming & Problem Solving (3)

A survey of the computer programming concepts used to solve problems within the study of informatics. The course will emphasize logical problem analysis, program development techniques, data organization and user interface concepts used to develop informatics applications.

AA 5100 - Information Retrieval (3)

This course provides a foundation in retrieval of information from different types of data sources, such as Relational Database Management Systems (RDBMSS); Key-Value Data Stores; and Semi-Structured and Unstructured Text. Students develop the key competencies necessary for designing data structures associated with each of the above-mentioned data sources and in accessing data stored in those sources. The primary areas of emphasis will be RDBMSS and Structured Query Language. Key-value data stores and data stores for storing unstructured data will be introduced and the problem areas where they are applicable will be explained and contrasted with those involving RDBMSS.

AA 5150 - Evidence-Based Decision Making (3)

This course provides the essential foundation of how one uses data to change the organization through and evidence-based decision making process. Students will have the opportunity to learn about and practice critical evaluation of data across a variety of disciplines. Topics will include logic models, decision making models, cybernetic systems, project/program evaluation, and ways to promote learning and innovation. Prerequisite: IF 510.

AA 5200 - Visualization, Feedback and Dissemination (3)

This course will expose students to visualization and presentation techniques designed for the interpretation of data, improved comprehension, communication, and decision making. Students will use current software tools to analyze data, design interfaces and create interactive visualization and presentation applications. Topics will include data and image models, design and evaluation of reporting structures, maps and mapping, document collections, object interaction, feedback processes, and scientific and business simulations. Prerequisite: IF 515.

AA 5250 - Project Management (3)

This course introduces students to the processes involved with managing a corporate level project from its beginning through implementation and ongoing maintenance. The course will cover current project management methodologies and processes, which include plan assessment, strategy formulation, implementation, quality control, and administration. In addition, the student will develop and review project plans from a corporate level project. The goal of the class is for the student to be able to understand and communicate the basics of managing projects, as well as the competitive advantage these projects bring within the business and industry. Prerequisite: IF 500.

AA 5300 - Advanced Analytics (3)

This course covers several commonly-used advanced analytical methods involving statistical learning. Applications of these methods on datasets drawn from several fields will be emphasized, alongside a coverage of visualizations of data and results. Students will also learn how to automate tasks in various phases statistical analyses, and in creating useful visualizations of data and results. Prerequisite: ORLD 503 or equivalent. Offered annually as needed.

AA 5750 - Contemp Issues in Analytics (3)

This course is a survey of recent technological advances in the area of Analytics. Theoretical foundations of the concepts and their applications in specific business and organizational domains are emphasized. Students will be introduced to specific Analytics techniques that are used currently by practitioners: Predictive Modeling; Data Mining; Marketing Analytics; Web Analytics; Risk Analytics; Text Analytics; and Academic and Learning Analytics. Prerequisites: AA 5050, AA 5100, AA 5200, & ORLD 503

AA 5900 - Applied Analytics Project I (3)

The goal of the Applied Analytics Project I is to prepare students in the design of an applied research project within an organizational setting. Students will revisit competencies emphasized in the Applied Analytics program and reflect on the ways in which they have developed themselves within those competency areas. Specific attention will be paid to strengths and weaknesses of the student and to opportunities for programmatic improvement.

AA 5950 - Applied Analytics Project II (3)

The goal of the Applied Analytics Project II is for students to use the skills they acquired during the Applied Analytics program to analyze and implement the plan for an applied research project that they have proposed in IF 590. The outcome of this course will be a pilot project, a proof-of-concept, or prototype that has the potential to affect and/or promote knowledge discovery and dissemination in an organizational context. Prerequisite: Completion of all other required courses.

Anatomy (ANAT)

ANAT 1005 - Basic Human Anatomy (3)

Gross and microscopic structure of human body; emphasis on anatomical concepts, terminology, and correlation of structure and function.

Art History (ARTH)

ARTH 1005 - 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 3805 - 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.

Aviation Management (AVM)

AVM 1000 - Helicopter Ground I (2)

This course includes all topics required by the FAA Approved Part 141 Aviation Regulations for the Private Pilot Certificate. Students will also be introduced to the training aircraft with practical application problems. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director. Offered annually as needed.

AVM 1500 - Helicopter Flight Operations I (2)

This is the first in the sequence of flight training courses. This course will include all operations and procedures required for the Private Pilot Certificate with a Helicopter rating. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director.

AVM 1505 - Helicopter Flight Operations IA (1)

This is the first in the sequence of flight training courses. This course will include operations and procedures required for the Private Pilot Certificate with a Helicopter rating up to the first student pilot solo activity. Permission of Program Director. This course may be done in conjunction with AVM 1510. Prerequisite: An FAA approved and current private pilot certificate will be accepted in lieu of AVM 1500 or both AVM 1505 and AVM 1510. Offered annually.

AVM 1510 - Helicopter Flight Operations IB (1)

This is the second in the sequence of flight training courses that can be completed in conjunction with AVM 1505 or after completing AVM 1505. This course will include all operations and procedures required for the Private Pilot Certificate with a Helicopter rating. Permission of Program Director. Offered annually.

AVM 2000 - Helicopter Ground II (2)

Federal Aviation Regulations and flight procedures as outlined in the Aeronautical Information Manual; aircraft engine operation, aircraft/engine performance; flight instrumentation and systems; aircraft operations. The student is prepared to take the FAA commercial pilot knowledge test upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 1000 and Permission of Program Director. Offered annually as needed.

AVM 2010 - Instrument Flight (2)

This course is part one of an instrument flight training sequence. Instruction is provided to introduce Pilots to instrument operations and standards. Offered occasionally. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite: AVM 1500

AVM 2020 - Commercial Flight I (2)

This course is part one of a commercial flight training sequence. Instruction is provided to introduce Commercial Pilots to operations and standards. Offered occasionally. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite: AVM 1500

AVM 2500 - Helicopter Flight Operations II (2)

This course is the second in the flight training sequence. Instruction is provided to introduce Commercial Pilot operations and standards. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 150 and Permission of Program Director. Offered annually as needed.

AVM 3000 - Helicopter Ground III (2)

Attitude instrument flying, parts 61 and 91 of the Federal Aviation Regulations along with the Instrument Flight Procedure set forth in the Aeronautical Information Manual; introduction to IFR charts and approach plates; theory and operation of flight instruments; radio navigation; theory and analysis of weather reports, forecasts and weather charts. The student is prepared to take the FAA instrument knowledge test upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 2000 and Permission of Program Director. Offered annually as needed.

AVM 3010 - Commercial Flight II (2)

This course is part two of a commercial flight training sequence. Instruction is provided to conclude pilot orientation to commercial flight operations and standards. Offered occasionally. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite: AVM 2010

AVM 3500 - Helicopter Flight Operations III (2)

This course is the third in the flight training sequence. Instruction is provided to complete helicopter Commercial Pilot certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 2500 and Permission of Program Director. Offered annually as needed.

AVM 3750 - Helicopter Flight Operations IV (2)

This course is the fourth course in the flight sequence. Instruction is provided to complete the Instrument Rating. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 3500 and Permission of Program Director. Offered annually as needed.

AVM 4000 - Principles of Flight Instruction I (2)

Fundamentals of teaching and learning; teaching methods; aerodynamics; flight training syllabus; maneuvers and procedures. The student is prepared to take the two flight instructor knowledge tests upon successful completion of this course. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 300 and Permission of Program Director. Offered annually as needed.

AVM 4250 - Helicopter Flight Operations V (2)

Instruction leading to flight instructor certificate with Helicopter rating. Prerequisite: commercial pilot certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 3750 and Commercial Pilot Certificate with Instrument Rating and Permission of Program Director. Offered annually as needed.

AVM 4500 - Principles of Flight Instruction II (2)

This course will provide the appropriate knowledge to understand the elements of teaching instrument and multiengine flight. The student will prepare lesson plans and practice various methodologies appropriate for advanced flight instruction. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): Possession of the Certified Flight Instructor Airplane Certificate and Permission of Program Director. Offered annually as needed.

AVM 4750 - Helicopter Flight Operations VI (1)

Instruction leading to the addition of an instrument rating to a flight instructor certificate. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Prerequisite(s): AVM 4250 and Commercial Flight Instructor Certificate and Permission of Program Director. Offered annually as needed.

AVM 4800 - Peer-Mediated Instruction (1-6)

This course provides upper level students with supervised opportunities to integrate theory and practice by working with teachers in classrooms or other field settings to mentor beginning level students within the discipline of helicopter ground and flight operations. Peer-mediated Instruction and Support will emphasize the development and application of teaching skills that can influence critical thinking and applied hands-on learning. Restricted to students who are coded as Helicopter Preparation students in Banner. Permission to register is required by the department. Permission of Program Director required. Offered annually as needed.

Biology (BIOL)**BIOL 1375 - Introduction to Cellular Biology (3)**

This course explores the basic concepts of cellular biology and genetics, stressing molecular structure, cellular interactions, energy metabolism, and heredity. These principles will be introduced through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method can be applied to future academic course work and in professional settings.

BIOL 1385 - Introduction to Ecology and Evolution (3)

This course explores the basic concepts of ecology and evolution, through phylogenetic relationships, organismal form and function, biological interactions and conversation biology. These principles will be introduced through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method of research and applied to the relevance of biology to global issues. Interpretive and analytical skills explored through the scientific method can be applied to future academic course work and in professional settings.

BIOL 1405 - Biology of Health and Disease (3)

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

BIOL 3205 - Microbiology (3)

This course is a general introduction to the diversity, ecology, growth and genetics of microorganisms, including topics of medical microbiology. This foundational course is for students in the School of Nursing and Allied Health. Prerequisite(s): Any BIOL-1000/2000 level course. (Offered periodically)

BIOL 3305 - The Biology of Plants and Animals (3)

This course explores the concepts of plant and animal biological interactions in the context of conservation and biodiversity. In addition to learning about plant and animal biology, students will learn how to read, analyze and interpret scientific research and data. They will also design ecological experiments and make predictions about how scientific research affects conservation efforts. The knowledge and analytic skills gained in this course can be applied to future academic course work as well as in professional settings. Prerequisite(s): Any BIOL-1000/2000 Level Course (Offered periodically)

BIOL 3415 - Concepts in Ecology (3)

This course will explore the fundamental concepts in ecology including organisms, populations, and ecosystems, adaptation and natural selection, changing environmental conditions, and the interactions among the myriad inhabitants of Earth. This course will strive to provide scientific insight into a variety of current issues and everyday decisions about ecological problems. The course will include discussions of the destruction of habitats by fire, pest outbreaks and control, habitat fragmentation, conservation, and global warming. Prerequisite(s): Any BIOL-1000/2000 Level Course. (Offered periodically)

Chemistry (CHEM)**CHEM 1005 - Chemistry and the Environment (3)**

This course presents an introduction to the basic principles of chemistry and the role they play in environmental issues. Topics include energy use, elemental cycles, atmospheric chemistry and pollution, the hydrosphere and water pollution, and the biosphere and persistent organic compounds. Lecture: 3 hours/week. Offered annually for SPS students.

Computer Information Systems (CIS)**CIS 1150 - Concepts & Applications of Technology (3)**

This course prepares students to function successfully in today's knowledge society. It engages students through hands-on experiences with many emerging technologies used in online, interactive, and media-rich environments. It covers software applications, social and business networking platforms, content and learning management tools, web conferencing, immersive environments, and other technologies. Critical thinking is emphasized in solving organizational problems through the choice and application of appropriate technological solutions.

CIS 1300 - Information Systems and 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.

CIS 1600 - Introduction to Programming (3)

This course introduces students to the foundational concepts of computer programming. Students learn the steps involved in creating computer programs using the Java programming language and its associated tools. Through exercises, assignments and exams, students are guided in learning the key programming concepts that are drawn primarily from the object-oriented programming paradigm.

CIS 2700 - Discrete Methods and Models (3)

After successfully completing this course the student will be able to: Examine the practical aspects of using discrete methods for understanding, modeling, and interpreting data within industry. Topics presented in this course are directed toward employing statistical and discrete methods for problem solving.

CIS 2750 - Healthcare Information Systems Terminology (3)

Information technology professionals working in a healthcare setting utilize specialized terminology for effective communication. The goal of this course is to teach basic language related to medical science and allied health professions; word analysis, construction, pronunciation, spelling, definition, and use of terms pertaining to anatomy, pathology, abbreviations, and medical procedures.

CIS 2850 - Principles of Data Analysis (3)

This course examines the concepts, techniques and methods used in the description and analysis of data and in statistical inference. Topics presented in this course are directed towards the analysis of experimental and survey data. Microsoft Excel software will be used as a tool to collect, organize, and process data.

CIS 3000 - Software Engineering (3)

This course provides a business-oriented approach to the analysis and design of computer information systems. Exercises in the analysis, design, implementation, testing and maintenance of a modular application will provide the student with the foundation knowledge needed in today's computer technology field. Topics include software engineering goals, object-oriented methodologies, human interface design, and organizational issues.

CIS 3100 - Principles of Object Oriented Programming (3)

This course builds on foundational principals of object-oriented programming students learn in CIS 160. The course emphasizes good software engineering principals and programming skills in the context of a language that supports the object-oriented paradigm. Topics include abstraction, objects, classes, methods, parameter passing, encapsulation, inheritance, polymorphism, and object-oriented considerations for software design and reuse.

CIS 3150 - Computing in Society (3)

A survey of the impact that computers and information technology has on society. It examines the roles and responsibilities that computer and information technology professionals have in directing current and emerging technologies.

CIS 3300 - Database Analysis and Design (3)

A detailed overview of the fundamental concepts of database analysis, design and implementation with emphasis on the relational model. The course will cover databases used in today's networked client-server applications. Topics include ANNSI SQL, data normalization, tables, queries, reports, forms, security, replication, data layout, and backup/recovery.

CIS 3600 - Networking and Telecommunications I (3)

A survey of computer networks and telecommunications for today's computer information technology professional. This course will cover basic network terminology, the different types of networks, and the components that comprise a network. Specific topics include the OSI model, network protocol network operating system, network hardware, and network topologies. Additionally, this course will examine telecommunications and the role it plays in information exchange.

CIS 3700 - Web Application Development (3)

This course presents the structure, implementation, and theoretical underpinnings of web development and the applications that have been enabled by that technology. This course will include topics in principles of web technologies and web engineering, support tools for web-site creation and web, management, database-driven web sites, web security issues, and enterprise-wide web-based applications.

CIS 3800 - Technology Integration Field Experience in Elementary, Middle, & Secondary Schools (1-3)

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.

CIS 3850 - Analytics and Modeling (3)

CIS 3910 is a project based course designed to develop a student's analytic knowledge applying statistics to decision making. Students will learn modeling techniques to organize, manage and present data in formats appropriate for multiple audiences. Upon completing the course, students will be able to apply analytics and modeling in a deliberate and valid evidence-based decision-making process. Prerequisite: CIS2850 & Principles of Data Analysis

CIS 3900 - Information Organization and Representation (3)

A project based course that provides the opportunity for students to apply information technologies used to collect, organize, analyze, present, and manage data used in decision making processes. Students will learn to join together the technical aspects of application development with human dimensions to aid an organization in answering complex questions.

CIS 4050 - 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 re-engineering the computer/information technology project with the goal of building, sustaining, and expanding a competitive advantage within the business industry.

CIS 4100 - Enterprise Architecture (3)

The alignment of business and IT technology models is key in supporting the strategic of an organization. This course explores the analysis, design, implementation, evaluation, and management of enterprise IT solutions.

Topics include functional modeling, physical architecture design, security planning and recovery issues, project management, emerging technologies, and financial and global considerations.

CIS 4150 - Data Governance (3)

Data governance considers data as enterprise asset. This course issues related to data storage and governance in an organizational context. Topics will include the policies, standards, processes, and regulations that are associated with management of data.

CIS 4300 - The Fundamentals of Computer Forensics (3)

The course offers computer forensics theory and methodology. The course explores how to find traces of illegal or illicit activities left on a disk with computer forensic tools and manual techniques. The student will learn about the elements of an effective computer crime policy. It is a study of the investigations of computer crime from both a legal and technical perspective.

CIS 4400 - Information Systems in Healthcare Organizations (3)

Modern day healthcare organizations rely heavily on information systems for their day-to-day operations. This course will first provide an overview of the organizational structures, types of governance, administration, and facilities used in the delivery of health care. Secondly, it will examine the applications of information systems specifically used to support and drive the health care industry.

CIS 4550 - Social and Organizational Computing (3)

Social and organizational computing is the use of online communication for collaboration. This course will examine how organizations can leverage social computing through the use of blogs, wikis, social networking, crowd-sourcing, and other related technology-enabled processes for achieving organizational goals. This course has CIS370 as a prerequisite.

CIS 4600 - Information Assurance and Security (3)

Information assurance and security is the protection and securing of organizational data and information infrastructure and assets. This course covers topics such as access control, disaster recovery and business continuity, security models and evaluations, networks and system security, physical security, and best practices with them.

CIS 4610 - Development of Mobile Applications (3)

Students learn how to design and implement applications (apps) that run on mobile devices. Principles related to design of user-interfaces and handling events from multiple sensors will be covered, along with the use of mobile APIs in creating apps that are robust, user-friendly, and secure. Prerequisite: CIS 310 Offered annually as needed.

CIS 4650 - Current Topics in Web Technologies (3)

Web technologies continue to evolve multidimensionally. This course presents a survey of current web technologies with an emphasis on societal implications. Technologies covered: social networking, virtual communities, video sharing, social bookmarking, and recommendation systems.

CIS 4700 - Advanced Database Systems (3)

This course provides advanced study in how to develop and implement a business oriented, data-driven information system. Students will design, construct, test, and install a database system using fourth generation event-driven languages and/or other data access tools.

CIS 4720 - Enterprise Application Development (3)

Enterprise Application Development focuses on applying object-oriented techniques in the design and development of software systems for enterprise applications. The emphasis of the course will be on developing real-world business and scientific applications that are effective, reliable, scalable, and secure.

CIS 4750 - Data Mining (3)

Data mining is the process of turning a large amount of data into useful information. This course presents the concepts, techniques, and application of data mining in an organizational context. Topics covered will include data selection and cleansing, predictive analytics, classification, associative rule mining, clustering, and visualization.

CIS 4900 - CIS Capstone Experience (1-3)

The capstone experience course provides students with a service-learning opportunity where they work with an organization of their choice to identify and define a problem that is of importance to the organization, design and implement a solution that is deemed satisfactory by the organization, within the various constraints of associated with the implementation. Students are required to have one faculty member and one member of the sponsoring organization as supervisors and guides who help them in completing their project successfully. During this course, students are expected to demonstrate a synthesis and application of the knowledge and Jesuit ideals learned during their coursework. The course can only be taken in the last two terms of their senior year of coursework. Final Term or Permission from Chair.

Criminal Justice (PS) (CJST)**CJST 3000 - 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 3550 - 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 3650 - 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 3700 - 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 3750 - Introduction to Corrections (3)

Overview of the corrections field; courts, detention, sentencing, adult institutions, probation, parole, and staffing and personnel issues.

CJST 3800 - 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 3900 - 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. 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 4140 - Drugs and Behavior (3)

This course gives the student a basic understanding of the common drugs used and abused in American society today by focusing on the history of drug use in the United States, the identification of legal and illegal drugs, the manner in which drugs affect the human body, and governmental policy in regard to drug use in the United States and its social implications.

CJST 4750 - Criminal Justice and Security Management Capstone (1-3)

This course will constitute a synthesis of the Criminal Justice and Security Management (CJSM) major courses. The course will address what you have learned from all your undergraduate coursework including courses in the core, electives, and the CJSM program.

CJST 4850 - CJO Portfolio Pro-Seminar (1)

Taken the last term of senior year in the CJST major. A seminar course in which each student assembles and presents a degree program portfolio. The portfolio will consist of designated course projects that were completed throughout the CJST degree program. The seminar will allow students to reflect on their personal and professional development and create a formal display of their knowledge and skills. The content and presentation of the portfolio will be evaluated by faculty according to established performance criteria. A pass/no pass grade will be given upon completion of the portfolio seminar.

CJST 4910 - Criminal Justice Internship (1-6)

Requires permission from the Program Director, and junior status. This course elective allows students to acquire relevant work experience with local corporate or not-for-profit organizations, courts, or governmental agencies. Students will have the opportunity to put knowledge and skills into practice under the direction of both a faculty sponsor and a practitioner from the organization. The arrangements for the working relationship and elective credit must be established prior to the start of the internship.

Communication (PS) (CMMK)**CMMK 1000 - 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 1210 - 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 2010 - 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 2930 - Special Topics in Communication (3)

Special topics in the communication profession or discipline. Offered as needed.

CMMK 3010 - Integrated Corporate Communication (3)

In this course, students will plan and implement online communication strategies designed to meet an organization's goals. This course will take a strategic approach, in which students define the organization's objectives, analyze audiences, select appropriate digital communication channels, create and launch digital content, and evaluate the effectiveness of their efforts. Students will learn basic principles of audience-focused web writing and website content organization, discuss the importance of engaging organizational stakeholders, and gain practical experience with digital media and tools. Pre-requisites: CMMK 121, ENGL 190, CST 115

CMMK 3230 - 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 3250 - Strategic Communication Across Professional Settings (3)

This course addressed the role of integrated corporate communication in achieving an organization's strategic goals. Students will explore internal and external corporate communication functions, formulate communication strategy, choose appropriate communication channels and tactics, and assess the effectiveness of corporate communication. Students will refine communication skills by delivering business and professional presentations appropriate to specific corporate communication functions and settings.

CMMK 3500 - Ethics in Professional Communication (3)

This course is an overview of classical and contemporary approaches to communication ethics. The course will closely examine and apply ethical practice in specific professional and organizational situations. Upon completion of the course, students will have a clear comprehension of theoretical and practical methods with which to develop and apply personal guidelines for making ethical decisions in business, corporate and organizational world. Pre-requisites : CMMK 121 and ENGL 190.

CMMK 3600 - Public Relations Princ & Pract (3)

This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will attain knowledge and understanding of the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Learning will be reinforced through case study analysis and development, written papers, interactive discussions, and oral presentations.

CMMK 3650 - Professional Communication Between Cultures (3)

This course explores the role of communication in understanding, accepting and appreciating cultural differences in professional settings. Students will learn that culture can include not only issues of nationality, ethnicity and race, but also gender, socioeconomic status, age, disability, and many other factors. Students will discuss the many facets of culture, explore the relationship between culture and communication, and apply intercultural communication principles in order to communicate with confidence, empathy, and integrity in professional contexts within a global society. Pre-requisites: CMMK 121 and ENGL 190.

CMMK 3700 - Advertising Princ & Practices (3)

This course explores the numerous dimensions of advertising - as a business, a creative communication process, a social phenomenon, and a fundamental ingredient of the free enterprise system. Students will have the opportunity to analyze advertising perspectives; develop marketing and advertising strategies; integrate advertising with other elements of the communications mix; and create advertisements and commercials. Ethics and social responsibility will be emphasized throughout the course. Learning will be facilitated through interactive discussions, case analysis, written assignments, oral presentations, and the critical analysis of an advertising campaign. Prerequisites: CMMK 1000, 1210, ENGL 400, PSYK 101, 205.

CMMK 4090 - Theories of Persuasion (3)

This course provides an overview of the study of persuasion. In addition to the traditional study of public persuasion, students will gain a solid grounding in the principles of social influence and compliance gaining as they apply to daily interpersonal interaction. Students will become familiar with theory and research in the field and apply strategies and techniques of persuasion across communication contexts. Learning will be demonstrated through interactive discussions, research papers, group projects and professional presentations. Prerequisites: CMMK 1000, 1210, ENGL 4005, PSYK1010, 2050.

CMMK 4150 - Public Relations Principles and Practices (3)

This course surveys the basic concepts and principles in the multifaceted field of public relations. Students will learn about the role and functions of public relations in a global society, including the role of the public relations professional as a liaison between all stakeholders, internal and external. The historical evolution of public relations; career opportunities in the field; and professional, ethical, and legal responsibilities will be discussed. Prerequisites: CMMK 121 and ENGL 400.

CMMK 4200 - Communicating in Small Groups (3)

Groups are an important and present aspect of our personal and professional lives. Each day we interact with small groups of people – family members, work teams, student groups; the ways in which we interact in groups has an impact on our professional, personal and community experiences. Group communication is complex and it is increasingly become more so in a globalized world. As our workplaces, families, and cultural institutions become more diverse, we are being asked to work in groups with members of communities different than our own. Whether individuals are of a different race/ethnicity, religion, gender, sexual orientation, age group, or level of ability, it is imperative that we learn to effectively communicate in the group setting. Learning the principles and processes of small group communication will enable you to function as a team member and/or leader in group setting. This course focuses on the theories, concepts, and practices of small group communication, with an emphasis on group development and roles, problem solving, and decision-making processes, leadership and conflict management in multicultural settings.

CMMK 4270 - Advertising Principles and Practices (3)

This course explores the numerous dimensions of advertising – as a business, a creative communication process, a social phenomenon, and a fundamental ingredient of the free enterprise system. Students will have the opportunity to analyze advertising perspectives, develop marketing and advertising strategies, integrate advertising with other elements of the communications mix, and create advertisements and commercials. Ethics and social responsibility will emphasize throughout the course. Prerequisites: CMMK 121 and ENGL 400.

CMMK 4500 - Persuasion in Professional Communication (3)

This course explores the theory and practice of persuasion. In addition to the traditional study of public persuasion, students will gain a solid grounding in the principles of social influence and compliance gaining as they apply to interpersonal interaction in professional settings. Students will survey theory and research in the field and apply strategies and techniques of persuasion across professional communication contexts. Prerequisites: CMMK 121 and ENGL 400.

Contract Management (PS) (CTM)**CTM 3350 - Contract Administration and Monitoring (3)**

Managing a contract is much like managing your own business. Like a business owner, as a contract professional you are ultimately responsible for a contract's profit or loss or the successful on-time, at or under budget completion. This means you have to understand the financial nuances of a contract from how estimating and pricing were done to timely accurate billing to close out. Applicable sections of the Federal Acquisition Regulation (FAR) will be reviewed. Students will be introduced to the basic techniques and applications of Earned Value Management (EVM). The roles of the government oversight organizations (DCAA and DCMA) will also be explored.

CTM 4000 - Intellectual Property Protection (3)

In the 20th century our nation's economy evolved from being manufacturing based to service based. The 21st century is seeing it adapt again to one based on information and knowledge. For many companies intellectual property has become their most critical asset, one which must be protected from domestic and foreign competitors. This course will examine ways to protect company property and gain a competitive advantage, with emphasis on obtaining, maintaining and enforcing intellectual property rights under United States and foreign law. Patents, trademarks, copyrights, trade secret protection of computer software and biotechnology, and international protection will be discussed.

CTM 4150 - Contract Acquisition: Process and Negotiation (3)

In this course, students will study the contract award process through the following steps: identification of need, preparation of the solicitation, development of the proposal, source selection, negotiations and contract award. Students will also learn how to use the best practices in regard to negotiation strategies and tactics.

CTM 4250 - 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.

English (ENGL)**ENGL 1000 - Writing in the Disciplines: Philosophy (6)**

This combined English and Philosophy course focuses primarily on the nature of argumentation and critical thinking through the writing process while engaging significant philosophical issues. Methodological topics covered in this course will include the identification and application of basic elements of critical thinking including deductive and inductive logic, informal fallacies, identifying reputable sources, and the nature of argumentation. Additionally, the course will introduce the student to some of the perennial questions in philosophy including the nature of a good life and happiness, personal identity, the existence of God, and the problem of evil. By learning and then employing basic strategies of effective thinking, communication, composition, and process, students will become more comfortable and adept at composing interdisciplinary writing across various genres. Students will explore the intricacies of the composition process by engaging philosophical concepts, from prewriting to final editing, along with sentence and paragraph organization, grammar, and mechanics as needed. At the end of the course, students will be able to produce an effective philosophical essay, and will be prepared to continue with their other college courses. Prerequisite: special permission from advisor

ENGL 1505 - The Process of Composition (3)

Develops effective personal and expository prose writing skills, including methods of invention, organization, audience analysis, and style. Focuses on the compositional process. Prerequisite: Writing Assessment

ENGL 2005 - Writing & Research Methods (3)

Required for all incoming SPS students, this course focuses on the elements of rhetoric that govern communication (audience, purpose, discourse community, and context). This course is designed to introduce students to a help them develop the rhetorical strategies necessary for writing and speaking persuasively in academic, work, and public settings. Students will develop their skills of critical reading, writing, and thinking – tools that students will require as they journey through the academic setting of the university and beyond. This course will explore what writing is and why we do it; students will also examine how to compose persuasive arguments and incorporate research methods into writing. Offered every semester.

ENGL 2025 - Intro to Literary Study (3)

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

ENGL 2605 - Introduction to Short Fiction (3)

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

ENGL 3065 - Creative Writing: Fiction (3)

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

ENGL 3275 - American Literary Traditions to 1865 (3)

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

ENGL 3285 - American Literary Traditions after 1865 (3)

Examines representative works in American literature from 1865 to the present in light of major historical and cultural developments. Strongly recommended for majors.

ENGL 3295 - American Literary Traditions: Special Topics (3)

Special topics in American literary traditions: content varies.

ENGL 3335 - World Literary Traditions III (3)

Studies selected fiction, drama or other topics from a diverse range of authors. Offered occasionally.

ENGL 3355 - Selected Major British Authors (3)

A study of several major British writers. Offered occasionally.

ENGL 3515 - Special Topics: (3)

Cultural and Interdisciplinary Studies: This course will focus on literature as seen from special viewpoints and perspectives.

ENGL 3535 - African American Literary Tradition: Special Topics (3)

Special topics in African American literary traditions: content varies.

ENGL 3545 - Literature of the African Diaspora (3)

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

ENGL 3565 - 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 3885 - Writing Personal Narratives (3)

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

ENGL 4005 - Business and Professional Writing (3)

Teaches business and professional writing from a rhetorical perspective. Involves case studies based on research in actual professional settings, with special attention to strategic planning and rigorous revision and editing. Offered every semester

History (HIST)**HIST 1115 - Origins of the Modern World to 1500 (3)**

An historical approach to understanding the development of the modern world to 1500. The course will examine ancient civilizations, the Hebrews, Greece, Rome, Christianity, Islam, Byzantium, the Middle Ages, The Renaissance, and encounters between cultures and regions of the globe.

HIST 1125 - Origins of the Modern World, 1500 to Present (3)

An historical approach to understanding the development of the modern world from 1500 to the present. The course will examine the cross-cultural impact of European expansion, the Protestant and Catholic Reformations, the Scientific Revolution, absolutism, the Enlightenment, the French and Industrial Revolutions, nineteenth and twentieth century thought the World Wars, totalitarian and liberation movements, and the challenges of the new global age.

HIST 2615 - History of the United States Since 1865 (3)

This survey course examines the U.S. from Reconstruction through the present. Required for majors.

HIST 3485 - U.S. CIVIL WAR and RECONSTRUCTION, 1850-1877 (3)

Causes of the war; personalities; factors in the Northern victory; the war on the home front; reconstruction; experience of the freedmen.

HIST 3525 - Contemporary America, 1945 - Present (3)

The Cold War, civil rights, Vietnam, Watergate, the technological revolution and modern society.

HIST 3635 - The Saint Louis Region (3)

Examines the rich and varied heritage of St. Louis, its social, cultural, and intellectual dominance of the American Heartland, its contributions in business, religion, politics and the arts.

HIST 3825 - Islamic Middle East (3)

This is survey course of the history of the Middle East from the rise of Islam 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.

Hospitality Management (HMG T)**HMG T 3000 - Introduction to Hospitality Operations (3)**

This course provides an introduction to the diverse scope and history of the hospitality industry. Various segments will be explored including lodging, food and beverage, theme parks and attractions, events, gaming, and tourism. Critical thinking will be applied to explore potential career interests and identify operational constructs within each segment.

HMG T 3110 - Hospitality Sales & Marketing (3)

This course will cover hospitality industry specific sales and marketing strategies and tools that can be used to effectively plan and implement them. The unique distribution channel options available to the industry and the impact of these options on the industry will be reviewed. The uniqueness of the hospitality product mix (with its significant component of non-tangible service) will be evaluated. The concept of target markets and target marketing will also be included in the class. Prerequisites: ENGL 190 & CST 295.

HMG T 3200 - Event Management (3)

This course provides the fundamental framework necessary for planning meetings and events regardless of size or function. Students will attain and demonstrate knowledge related to event planning, development and assessment of financial and contractual documents and logistics including selection, risk management, and food and beverage. Through examination of the industry resources and academic research, students will examine and apply the essential components of an event process blueprint in developing plan for a specific function.

HMG T 3400 - Branding the Customer Experience (3)

This course explores the relevance and interconnectivity of customer service as it relates to the organization's brand and service climate. Course objectives include analyzing strategic and competitive intelligence to provide a method measuring and assessing customer satisfaction. Students will utilize critical thinking to analyze the presence and significance of branding in organizations through case studies and industry publications.

HMG T 3600 - Hospitality Technology (3)

This course provides an introduction to technology systems and components utilized within the hospitality industry. Students will examine the functionality point of sale, back office, and property management systems; time, attendance, and payroll systems, and human resources and labor management systems within the industry. Students will evaluate the effectiveness of technology through conducting a site visit and informational interview with hospitality organization.

HMG T 4200 - Hospitality Administration (3)

This course examines various operational strategies and promotes administrative development. Students will analyze the operational departments/areas of sales & marketing, customer service, risk & crisis management, and technology within a hospitality organization. Students will apply strategic theory and concepts in analyzing and writing case studies in which examples of specific strategy implementation are demonstrated by a hospitality organization. Prerequisites: HMG T 3000, HMG T 3100, HMG T 3200, HMG T 3400, HMG T 3600, & HMG T 4200

HMG 4960 - Hospitality Capstone (3)

This course offers a theoretical and practical approach to effectively managing a hospitality organization. Reflective writing allows application of critical thinking skills in regards to defining and refining career goals. Experiential learning will provide immediate application of skills as students complete a minimum of 24 practicum hours at a hospitality organization. Practical application of fundamental competencies utilized throughout the practicum experience will serve as the final reflection assignment. Theoretical skills will be assessed through a final research project examining industry best practices including a presentation of the findings. Fundamental competencies will be evaluated by the practicum site supervisor. The course is designed to serve as the capstone of the hospitality management minor.

Mathematics (MATH)**MATH 0225 - 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.

MATH 0235 - Intro Elementary Algebra (3)

Prerequisite: Math Assessment

MATH 0265 - Intermediate Algebra (3)

Review of the real number system; linear equations, and inequalities in one and two variables; functions; systems of linear equations; exponents, polynomials and polynomial functions; factoring; rational expressions and functions; roots, radicals and root functions; quadratic equations, inequalities and functions. Fall and spring. Credit not given for both MATH 0260 and any of the following: MATH 0240, MATH 0250. Prerequisite: MATH 0230 or Math Assessment

MATH 1205 - 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-1320 or MATH-1400. Fall, spring and summer. Prerequisite(s): MATH-0260 or Math Assessment

MATH 1305 - 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(s): MATH-1200 or equivalent.

MATH 1325 - Survey of Calculus (3)

Linear equations and graphs; functions and graphs; limits; the derivative; rules of differentiation; curve sketching and optimization; antiderivatives; the definite integral; multivariable calculus and partial derivatives. Prerequisite(s): 3.5 years of high school mathematics or a grade of C- or better in MATH-1200.(Offered every Fall, Spring and Summer)

Music (MUSC)**MUSC 1005 - 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.

Organizational Leadership (ORLD)**ORLD 5000 - Organizational Dynamics (3)**

This course provides a foundation in organizational theory and practice; and introduces student to the field of organization development. It provides students with a framework for understanding and changing organizations from a micro and macro level. Students will learn how to create an organization that is responsive to environmental forces; and align the organization's structure and culture with strategy. The course is applicable to different types of large and small, private and public entities in the contemporary business environment. As part of the course, students will engage in in-depth case study development and analysis of real world businesses.

ORLD 5010 - Contemporary Organizational Leadership (3)

This course provides an introduction to leadership, highlighting historical and contemporary perspectives and research findings. Students will review fundamental leadership approaches and theories and examine the role of leaders in the 21st century. Students will also study leadership development approaches and the impact of effective and ineffective leadership within organizations. Strategic leadership practices will be identified and direct application will be emphasized at the individual, interpersonal/group, and organizational level. Throughout the course, students will create an integrated model of leadership based on credible perspectives, theory, and research findings. Integrated models can be directly applied to an organization that the student studies throughout the course.

ORLD 5020 - Applied Research Methods (3)

In this course, students will learn about research methods that commonly applied in conducting research in an organizational setting that fall under the paradigm of action research. Areas of focus include data collection, analysis and synthesis and dissemination of results. Students will learn the strengths and weaknesses of different types of data (e.g., subjective selfreport, bottom line performance data, market data), forms (or formats) (qualitative vs. quantitative), and methods. Additionally, students will learn how to evaluate the credibility of data and how to use data from multiple sources to make informed decisions.

ORLD 5030 - Applied Analytics (3)

This course introduces students to the analytical skills needed to produce evidence-based research results within their organizations. Students will review the foundations of analytics, and they will use these foundations to develop a working knowledge of more advanced analytics (e.g., analysis of variance, regression, and factor analysis). Students will also learn the appropriate ways to report the results of their analyses through the use of tables, figures, and tables. In addition, attention will be paid to ways to communicate results to senior leaders and layperson audiences.

ORLD 5100 - Prof Leadership Development (3)

This course focuses on professional development. The course is designed to improve personal awareness in the arenas of self-management, professionalism, work attitudes and motivation, personality, innovation and creativity, communication, diversity, and ethical decision making. In addition students will gain an appreciation and understanding of the diverse individual differences that leaders encounter in global workforce. Students can apply concepts from this class to their own professional development and also use concepts to promote and sustain a diverse working environment. Upon completion of this course, students will recognize their strengths and weaknesses and create and professional development plan that emphasizes self-management practices.

ORLD 5150 - Talent Mgmt & Development (3)

This course looks at talent management and development in organizations from a holistic, systems perspective. Talent management begins with the recruiting and staffing process and moves through the entire life-cycle of the employee as an active contributor in the organization. Students will study the major theories and approaches to selecting and developing employees. Topics that will be covered include strategic selection, employee and leadership development, assessment options for selection and development workforce planning, and employee motivation and retention. We will also discuss contemporary topics such as use of technology to implement talent management and development, multi-media methods for coaching and mentoring, and applied models for talent planning and succession planning.

ORLD 5250 - Leading a Healthy Organization (3)

This course focuses on the issue of organizational health. Students will develop a working definition of organizational health, focusing on elements of employees and the organization. Students will also learn how the organizational environment can promote positive or negative health, with a specific emphasis on the critical roles of stress. Specific types of interventions will be discussed as a way to provide a comprehensive framework for discussing organizational health. Students will learn how to design, implement, and evaluate key interventions related to organizational health, such as work-life balance, wellness, and employee involvement initiatives. Students will then develop a plan for designing, implementing, and evaluating an intervention in their organization.

ORLD 5350 - Team Leadership (3)

The ability of a group to function as a team to run things, to make things, or to provide recommendations about things is a powerful organizational dynamic. This course addresses teaming as a leadership tool to be used in appropriate situations to maximize individual talent through collective interactions. Students will learn what makes a group a team, how to build and lead a team, and how to facilitate team performance. Structured exercises and assessments carried out both in and outside the classroom will provide students with teaming experiences that develop their team consultation and facilitation skills. The most recent body of research literature will be used to develop a realistic understanding of what teaming can and cannot do as a leadership tool.

ORLD 5450 - Leading Organizational Change (3)

This course is designed to prepare students to lead organizational change efforts directed at improving organizational functioning and quality of work life. A general framework of planned change combined with the organizational development perspective of leading change will be used to introduce students to change facilitation tools and techniques. Using case studies, students will design change interventions and change management strategies using group simulations, demonstrating change agent competencies in the areas of systems thinking, action research consultation skills, project management, and strategic visioning. Awareness of the empirical evidence underlying the strategic, technostuctural, human resource, and human process change strategies will be identified.

ORLD 5650 - Future-Focused Leadership (3)

This course focuses on the competencies necessary to be a future-focused leader. Students will learn how to think about the future, in terms of visioning, scenario planning, and systems thinking. As a key component of the course, strategic elements will be introduced. In addition, students will learn the value of creativity and innovation in developing a future-focused approach of leadership. As a component of the course, students will be asked to develop a future-focused vision for their work unit or organization.

ORLD 5750 - Contem Issues in Leadership (3)

This course will be focused on contemporary issues in leadership. Students will use cases and recent scholarly and popular press media to explore some of the issues at the forefront of leadership, such as ethics, followership, and leadership assessment. This course will be designed as a way to spark advanced discussion on the topic of leadership, allowing students to go more in depth into contemporary leadership topics and paradigms. Students will produce a reflection paper focuses more in depth on one of the topics covered in the course.

ORLD 5900 - Action Research I (3)

This course serves as the first capstone experience for SPS graduate students. Students will revisit program competencies emphasized by the program and critically reflect on the ways in which they have developed themselves within those competency areas and within the 5 dimensions of the SLU experience. Specific attention will be paid to strengths and weaknesses of the student, as well as opportunities for programmatic improvement. This will culminate in a formal development plan for the student. Lastly, during this course, students will be assigned a faculty mentor, who will work with the student to develop a proposal for an action research project. The project will be implemented and summarized in ORLD 595: Action Research II.

ORLD 5950 - Action Research II (3)

This course serves to complete the capstone requirement for SPS Graduate students. Students will conduct their action research project and produce a summary of synthesis of their results. The capstone project will include evidence that the student has successfully applied the competencies taught within the program.

ORLD 5980 - Graduate Reading Course (1-4)

The graduate reading course provides opportunities through selected reading and/or a practicum component to apply substantive, research-based instruction that effectively enhances a candidate in the overall learning experience.

Organizational Studies (PS) (OSTD)**OSTD 2935 - Special Topics (1-4)**

Prior approval of sponsoring professor and Program Director required

OSTD 2985 - Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required

OSTD 3005 - 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 3205 - 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 3305 - 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 3935 - Advanced Special Topics (3)

Prior approval of sponsoring professor and Program Director required.

OSTD 3985 - Advanced Independent Study (1-4)

Prior approval of sponsoring professor and Program Director required.

OSTD 4105 - Concepts & Theories of Leadership (3)

Promotes leadership development through the study of leadership theory and concepts and encourages the practical application of leadership at all levels. 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 4805 - 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 4855 - 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 4915 - Org Studies Internship (1-4)

Requires permission from the program director, and Junior Status. This course elective allows students to acquire relevant work experience with local corporate or not-for-profit organizations. Students will have the opportunity to put knowledge and skills into practice under the direction of both a faculty sponsor and a practitioner from the organization. The arrangements for the working relationship and elective credit must be established prior to the start of the internship.

Philosophy (PHIL)**PHIL 1055 - Intro to Phil: Self & Reality (3)**

This course will focus primarily on the writings of Plato and Aristotle as central figures in that historical period when Western humanity began to use and to develop reason systematically as an instrument for understanding the world and its place in that world. Students will be introduced to the Greek contributions to logic, metaphysics, and ethics.

PHIL 1105 - Introduction to Philosophy: Critical Thinking (3)

This course will focus primarily on the nature of argumentation and critical thinking. The course will also address the role of definitions, distinctions between inductive and deductive logic, and how to employ these tools in the construction of arguments and essays. The writings of Plato and Aristotle will be used throughout the course to provide examples and an introduction to classical philosophical texts.

PHIL 2055 - Ethics (3)

This course undertakes a systematic analysis of fundamental problems and issues involved in questioning whether and how moral discourse can be rationally grounded; the utilitarian-deontological debate; questions concerning different levels of moral discourse; competing notions of justice and the relationship between morality and religion.

PHIL 3255 - Philosophy of Religion (3)

What is God's nature? What reasons are there for believing God exists? In this course, we approach these sorts of questions using tools and methods of philosophical investigation in order to engage students in reasoning about God. The course draws on classic texts of Western thought and on contemporary philosophical discussions. Prerequisite(s): THEO-1005; PHIL-1055 or PHIL-1105; PHIL-2055

PHIL 3305 - Philosophy of the Human Person (3)

Systematic or historico-systematic treatment of main philosophical problems, such as the mind-body problem; the unity of man; survival and immortality; sensation and intelligence; the emotions, their interplay with intelligence and volition; freedom vs. determinism; the person in and with or against society. Every semester.

PHIL 3365 - Medical Ethics (3)

Ethical problems of medicine, nursing and the life-sciences. Every semester.

PHIL 3605 - 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.

Prerequisite(s): THEO-1005; PHIL-1055 or PHIL-1105; PHIL-2055

Physics (PHYS)**PHYS 1015 - 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.

Project Management (PMGT)**PMGT 1010 - Fundamentals of Project Management (3)**

An introduction to the program of study, providing the student with an overview of Project Management philosophies, principles, processes and terminology. Topics include the Project Management framework, stakeholder groups, and knowledge areas. Offered annually.

PMGT 1020 - Fundamentals of Contract Management (3)

An introduction to the program of study, providing the student with an overview of Contract Management philosophies, principles, processes and terminology. Particular attention will be paid to the phases of Contract Management: acquisition strategy, pre-award, contract award, post-award and contract closeout. Offered annually.

PMGT 1030 - Project Selection and Scope (3)

This course provides an introduction to the project selection process, which includes developing the project or procurement business case, defining the scope of the project, tying it to the organizational strategy and operations, and articulating the purpose for the project. Offered annually. Prerequisite: PMGT 1010.

PMGT 2010 - Communication-Stakeholder & Quality Management (3)

This course acquaints students with the challenges of organizational communication, its impact on project quality and deliverables, and the role communication plays in effectively managing stakeholders and their expectations. Offered annually. Prerequisites: ENGL 1900, PMGT 1010

PMGT 2020 - Project Data Analysis (3)

Project Data Analysis examines the Project Manager's method(s) for collecting, modeling and interpreting data. Of necessity, students in this course will employ problem-solving and critical-thinking strategies. In addition, this course makes use of some analysis commonly used in Contract Management (e.g. Make-or-Buy decision or contract pricing). Offered annually. Prerequisites: ENGL 1900, PMGT 1010, CIS 2850

PMGT 2030 - Industry Certification (3)

This course enables students to attain certifications that benefit their career goals. Students choose certifications that match the industry qualifications. Offered annually. Permission of the Program Director.

PMGT 3010 - Proposal Management (3)

This course guides students through the process of successful proposal writing, fundamental to garnering contracts. Students will hone their source selection and acquisition strategies, paying special attention to the distinctions in the roles of business development manager, capture manager and proposal manager. Offered annually. Prerequisite: PMGT 2020

PMGT 3020 - Time, Cost and Risk Management (3)

This course focuses on the balance between the constraints of time, cost and risks. This course will expose students to industry software that will help manage these tradeoffs. Offered annually. Prerequisite: PMGT 2020

PMGT 3030 - Contract Supplier Administration (3)

The study of contract financial integration, including estimating and pricing, timely and accurate billing, and contract close-out. This course builds on the basic techniques and applications of Earned Value Management, of the contract audit process, and of managing supplier relations. Offered annually. Prerequisites: PMGT 1020, PMGT 2020

PMGT 3040 - Project Management Leadership Ethics (3)

This course develops the student's ability to enhance team building and team effectiveness. Further, it examines the roles and responsibilities that project managers have in applying interpersonal skills to project integration through team building and reflection. Offered annually. Prerequisites: THEO 1005 or PHIL 2055 and permission of department.

PMGT 3050 - Government Contracting; FAR & UCC (3)

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. Offered occasionally. Prerequisite: PMGT 1030

PMGT 4010 - Requirements Analysis (3)

This course examines techniques for ensuring a project meets stakeholder needs through effective requirements elicitation. Further, it studies the interaction between people, processes and tools to accomplish the project requirements. Offered annually. Prerequisites: PMGT 1030 and PMGT 2010 and permission of department.

PMGT 4030 - Project Management Laboratory (3)

This course provides a comprehensive approach to project integration that applies the Project Management Body of Knowledge (PMBOK® Guide). Specifically, students utilize discipline knowledge and managerial skills to effectively balance trade-offs and to accomplish stakeholder objectives. Offered annually. Prerequisites: PMGT 2010, PMGT 3020

Pharm & Physiological (PPY)**PPY 2545 - Human Physiology (4)**

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.

Professional Studies (PS) (PST)**PST 1000 - Learning Strateg., Processes, (3)**

This course explores the various functions that comprise the complex task of learning. Theories of development, motivation, intelligence, information processing, learning styles, behaviorism, and problem solving will be presented. Personal and environmental factors associated with academic and workplace success will be examined. Application of course content will enable students to use a variety of resources to become more self-directed, effective, efficient learners.

PST 1900 - 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 2050 - 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 3010 - Contemporary Spain Study Abroad: Culture-Commerce-Community (3)

An innovative course dealing with the societal practices, economic trends, and the diverse spiritual climate of Spain. The multidisciplinary course will cover issues related to Spain's cultural transformation, comparative business and leadership experiences, and religious diversity. While in Spain, students will participate in site visits to support the development of an understanding of the complexities of this nation from a global perspective. Students will also be exposed to the historical framework of Spain as well as its modern context to enhance their intercultural competence as professionals and leaders.

PST 3100 - 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 3200 - 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 research to a not-for-profit organization.

PST 3300 - 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 3400 - Marketing Strategies in Orgs (3)

An analysis of the fundamental principles and strategies of marketing. Students will gain an understanding of the functional role of marketing within an organization and within the expanding global economy. Students will gain deeper understanding of the external and internal variables that affect Marketing; eCommerce marketing; the roles of advertising, public relations, and sales; Integrated Marketing's role in the 21st century; and Strategic Marketing Planning. Students will integrate knowledge and skills acquired throughout the course with outside sources and information in order to develop an integrated marketing plan for an organization.

PST 4840 - CIPP Capstone Course (1)

The SLU-CIPP capstone course is aimed at providing students with the students with the opportunity to integrate the knowledge and skills they have acquired through the degree program, provide experiences for students to engage in meaningful interactions with their community, and offer the time for students to produce a portfolio demonstrating their academic accomplishments throughout the course of the degree program. By working a capstone project that draws on prior course work and that culminates in a community service project students utilize their critical thinking skills in synthesizing previous course work and extend and develop their own original ideas.

PST 4900 - Social Science Research Method (3)

Social Science Research Methods is designed to initiate the student to current social and policy research technologies and practices. In this course the student will engage in the study of both quantitative and qualitative approaches to social science research using a systematic process. Issues in criminal justice, public policy and administration, and urban planning will be the primary focus of research and cases. Major theories and concepts in social science and policy research applicable to these topics, as well as selected student projects, will be addressed through lectures, readings from the text, audio/visual presentations, class discussions, cases, and practice exercises. This course will provide the student with opportunities to think critically about social science and policy research and possible solutions to current problems confronting the criminal justice system, public policy decision makers and social science research professionals.

Psychology (PS) (PSYK)**PSYK 1010 - General Psychology (3)**

Provides a basic and general knowledge of the theoretical, scientific, and conceptual foundations of psychology, including biological, cognitive, emotional development, cultural and social aspects. Includes key concepts and principles, methods for collecting and evaluating evidence, and application of psychological knowledge.

PSYK 3330 - Applied Personality (3)

This course presents contemporary personality psychology organized around six domains of knowledge: Dispositional, Biological, Intrapsychic, Cognitive/Emotional, Self-Representational, and Social. The integration of these domains addresses the fundamental personality questions of what makes each of us human, often like some but different from others, and yet still individually unique. Workplace topics, such as job performance, leadership personnel selection and work motivation, will be studied from a personality perspective. The class will be interactive with each student developing an integrated personality model and applying the model to topics of personal and professional interest.

PSYK 3340 - Applied Social Psychology (3)

Introduction to social behavior focusing on how people relate to, think about, and influence each other. This course addresses topics such as attitude formation and change, social cognition, conformity, aggression, altruism, prejudice, and interpersonal attraction and relationships. Activities throughout the course focus on both the research and the application of these principles in the organizational and legal environments.

PSYK 4140 - Drugs and Behavior (3)

Behavioral, physiological and sociological effects of drugs which alter a person's ability to normally function in society. These drugs include alcohol, nicotine, caffeine, tranquilizers, stimulants, depressants, narcotics, hallucinogens, and marijuana.

PSYK 4250 - Motivation & Self-Management (3)

This course provides an overview of motivation and self-management as it specifically relates to employees in the workplace. Some of the topics to be addressed include: basic theories of employee motivation, rewards and punishments, motivational triggers, emotional intelligence, time management. The course will also emphasize specific strategies, tools, and techniques to assist students in evaluating and improving the way in which they interface with their work environments.

PSYK 4300 - Social Psychology (3)

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

PSYK 4310 - Personality Theory (3)

The dominant personality theories of Freud, Jung, Adler, Skinner, Rogers, Maslow, Kelly and others are presented within a historical and contemporary context. Emphasis is placed on the application of theory to personal situations through small group discussions and student logs.

PSYK 4450 - 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 4720 - 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 4730 - 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 4760 - Training & Development (3)

This course focuses on the application of psychological principles to the effective design, delivery, and evaluation of training in professional settings. It introduces a comprehensive approach to training and development including topics like: training needs assessment; learning theory, styles, and environment; training techniques and media; and evaluation design and training effectiveness. The course is interactive consisting of case analysis, experiential exercises and work place applications. Upon completion of the course, students will be able to apply the training model to the research, design and critique of strategic training programs.

PSYK 4770 - 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 (OSH) 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 1001 - Foundations of Information in Society (3)**

This course will introduce students to the foundations of information technology, preparing them to function successfully in today's knowledge society. Students will be engaged through hands-on experiences with emerging technologies used in online, interactive, and media-rich environments. Topics will include software applications, social and business networking platforms, content and learning management tools, web conferencing, immersive environments, and other technologies. Critical thinking is emphasized in solving organizational problems through the choice and application of appropriate technological solutions. Offered occasionally.

PWY 1002 - Foundations of Writing (3)

This course will review basic composition and develop a student's writing skills necessary for college success. The emphasis is on practical writing skills, including the logical organization of ideas. Offered occasionally.

PWY 1003 - Foundations of Communication (3)

This course will introduce students to the foundations of communication, preparing them to function successfully in today's professional workplace environment. Students will be exposed to the principles of communication theory and how to put them into practice through exercises in both formal and informal settings. Students will develop their communication skills from various perspectives including intrapersonal, interpersonal, small group, organizational, cultural, and mass media. Offered occasionally.

PWY 1004 - Foundations of the Scientific Method (3)

This course is designed to introduce students to the process and methods involved in scientific inquiry. This course will give students the opportunity to learn how hypotheses are developed and tested using the scientific process. Examples from the natural, physical, and health science disciplines are used to illustrate the concepts. Offered occasionally.

PWY 1005 - Foundations of Mathematics (3)

This course will introduce students to the foundations of mathematics, emphasizing the applications of algebra to solve real world problems. Logic and critical thinking will be developed throughout the course. Offered occasionally.

PWY 1010 - Foundations of Professional Communications and Technology (3)

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 1020 - Foundations of Professional and Career Development (3)

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 1030 - 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.

Sociology (SOC)**SOC 1105 - Introduction to Sociology (3)**

This introductory course emphasizes fundamental concepts in sociology and their application to contemporary society for the purpose of enhancing the students understanding of the world in which they live.

SOC 1205 - 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, archeology, 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 3575 - 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

Spirituality (SPR)**SPR 3610 - Spirituality: Work & 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.

SPR 3890 - Spirituality and Psychology (3)

This course will explore the interface of religion, spirituality and psychology as exemplified in the practice of psychology where many of the issues that come to the psychotherapist are existential questions such as the meaning of life, work and personal relationships.

SPR 3900 - Universal Spirituality (3)

This course explores the various approaches to Spirituality. It brings together complementary elements from different schools that build a comprehensive spirituality. Historic, geographic, gender and cultural differences are studied as expressions of a single core spirituality.

SPR 4600 - 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.

SPR 4610 - 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.

SPR 4620 - Cont Adult Spirituality 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.

Security & Strategic Intel (SSI)**SSI 1500 - Foundations of Security and Strategic Intelligence (3)**

An introduction to the program of study, providing the student with a foundation for the study of security and intelligence by identifying security concepts (securing humans, tangible assets, and information), intelligence concepts (the cycle of intelligence: collection, processing, analysis, dissemination, feedback/utilization), and the roles of security and intelligence professionals within corporate and governmental organizational contexts. Prerequisites: None

SSI 2000 - Threat and Risk Assessment (3)

An investigation of the tools utilized to identify threats and risks and then effectively assess, mitigate, and manage those risks. The course integrates components of information technology, analytics, and psychology with threat and risk analysis and spans the issues inherent in both corporate and governmental contexts. Prerequisites: SSI 1500, ENGL 1905, PSYK 1010, CMMK 1210, & CIS 2850

SSI 3000 - Coordination across Agencies, Organizations, and Departments (3)

An investigation of the roles of SSI professionals within large organizations, including creation and maintenance of effective relationships across departmental, organizational, and agency lines and exploration of the benefits for both the SSI professional and his/her organization gained through identifying and creating innovative ways to provide service and added value across these lines. Prerequisites: Grade of 'C' or better in SSI 200.

SSI 3010 - Business Continuity and Impact Analysis (3)

This course introduces students to the concept of continuity planning by providing an overview and in depth discussion of continuity, including its definition, the legal basis for continuity planning, and the continuity program management cycle. Students review the application of continuity planning to the private sector within organizations across many industries while developing familiarity with the tools associated with effective business continuity planning, such as Business Impact Analysis (BIA). Prerequisites: SSI 1500, ENGL 1905, PSYK 1010, CMMK 1210, & CIS 2850

SSI 3020 - Intelligence and its Use in National & Corporate Security (3)

Extends SSI 1500 by focusing on a deeper exploration of intelligence, the cycle of intelligence and counterintelligence within the greater framework of both national and corporate security. Students will learn how intelligence is used in both governmental and corporate decision making. The complementary roles played by various organizations and governmental agencies of the Intelligence Community, the Department of Defense, the Department of Homeland Security and other organizations are discussed. Prerequisites: SSI 1500, ENGL 1905, PSYK 1010, CMMK 1210, & CIS 2850

SSI 3030 - Global Security Management (3)

Extends SSI 150 by serving as a continuing investigation of the protection of human and tangible assets and information at a global, strategic level. It discusses the issues involved in dealing with complex policy formation that must be effective and compatible across many cultures and nations. The role of technology and its impact on private sector organizations are addressed, including topics such as social media, intellectual property/piracy, and brand protection. Prerequisites: SSI 1500, ENGL 1905, PSYK 1010, CMMK 1210, & CIS 2850

SSI 3040 - Contemporary Perspectives on Policing (3)

This course prepares the student to understand contemporary perspectives on policing and incorporate ideas related to customer service, crime prevention and community policing. The student will review a variety of policy perspectives from across the U.S. as well as have the opportunity to explore benefits and disadvantages of each. The course will culminate with the student developing his/her own in-depth philosophy on law enforcement and policing. Prerequisites: SSI 1500, ENGL 1905, PSYK 1010, CMMK 1210, & CIS 2850

SSI 3100 - Analytics in Security and Intelligence (3)

An investigation of the roles of SSI professionals within large organizations, including creation and maintenance of effective relationships across departmental, organizational, and agency lines and exploration of the benefits for both the SSI professional and his/her organization gained through identifying and creating innovative ways to provide service and added value across these lines. Prerequisites: Grade of 'C' or better in SSI 200.

SSI 3200 - Terrorism: Causes, Tactics, and Mitigation (3)

This course provides the student with knowledge regarding the issue of terrorism, including cyber-terrorism. Students will learn to identify terrorism; discuss its history; explain how terror organizations develop; and understand current, emerging and possible future threats and how to effectively mitigate those threats. Prerequisites: Grade of "C" or better in SSI 3020.

SSI 3300 - Integrated Risk Planning, Strategy and Compliance (3)

This course focuses on analyzing and evaluating the balance of value and risk as a component in the strategic development of risk management strategies. Topics include identifying, evaluating, managing, and mitigating unacceptable risks and evaluating risk tolerance positions. Prerequisites: Grade of "C" or better in SSI 3010.

SSI 3600 - Tangible Asset Security (3)

This course focuses specifically on the security of people (e.g., employees, visitors, contractors, vendors, customers) and physical assets (e.g., real estate, structures, vehicles, equipment, merchandise). Risks to the security of people and assets are discussed in detail as are ways of mitigating these risks. Legal, cultural, policy-related, and other issues faced by global private sector organizations are discussed. Prerequisites: Grade of "C" or better in SSI 3030.

SSI 3800 - Trends in Strategic Security and Intelligence (3)

This course utilizes modern, sometimes evolving, case studies through which the student develops key competencies through practical application. Whether concerning legal and regulatory issues, advances in security and intelligence technology, or scenario planning based on recent events, the course provides students with cutting-edge tools and techniques for responding to current and future security and intelligence demands. Prerequisites: Grade of "C" or better in SSI 200.

SSI 4010 - Diplomacy and Foreign Policy (3)

This course examines topics specific to the use of diplomacy and intelligence in foreign policy. Students will learn how diplomacy and intelligence impact foreign policy, how intelligence and foreign policy can impact the business conducted internationally between governments and corporate entities, and how to plan effectively for changes that occur in foreign policy. Prerequisites: Grade of "C" or better in SSI 3020.

SSI 4090 - Resilience, Recovery and Contingency (3)

This course focuses on the key elements that an organization needs to plan effective strategies for operating under adverse conditions. All aspects of the emergency management and business continuity cycle will be studied including preparedness, protection, response, recovery, and mitigation. In addition, the course will discuss resilience, recovery, and contingency through the lenses of facilities, people, and information. Prerequisites: Grade of "C" or better in SSI 3010.

SSI 4100 - Law Enforcement, Investigation and Prosecution (3)

The course investigates and requires application of the principles of criminal investigation learned within a police academy, including crime scene search and recording, collection and preservation of evidence, sources of information, interviews and interrogation, case preparation and management, and testifying effectively within a courtroom. The course sharpens the student's understanding of the investigative process with an eye on improving the comprehensive skills necessary to plan and oversee an investigation from start to finish. Prerequisites: Grade of "C" or better in SSI 3040.

SSI 4200 - Collection Assets and Capabilities (3)

This course investigates the use of human intelligence and various types of signal/cyber/electronic intelligence and how both can be collected and analyzed from open source information or by covert means. In addition, the course covers how various types of collection assets and an assessment of their capabilities can be used to influence government and corporate decisions. Prerequisites: Grade of "C" or better in SSI 3020.

SSI 4500 - Financial & Regulatory Considerations in Risk Planning (3)

This course focuses on in-depth discussion of the financial issues that must be addressed in departments that oversee security in contemporary organizations. Whether single- or multi-site, domestic or global, all security operations must consider the important financial implications of their field. With issues ranging from budgeting to finance to legal and regulatory requirements, this course provides students with an in-depth discussion of important elements regarding financial operations in private-sector security.

Prerequisites: Grade of "C" or better in SSI 3010.

SSI 4650 - Law Enforcement Administration (3)

The course provides an in-depth investigation of the nature, structure, and administrative processes of law enforcement organizations, from local to state to federal agencies. Students develop the introductory skills required to effectively administer a law enforcement department and apply the knowledge and skills they learned across the curriculum to develop the competencies required to analyze personnel roles and functions and plan departmental initiatives. Prerequisites: Grade of "C" or better in SSI 304.

SSI 4900 - Security and Strategic Intelligence Capstone (3)

The program capstone provides students with a service-learning/internship opportunity in which they work with an organization of their choice to identify and define a problem that is of importance to the organization and design and implement a solution that is deemed satisfactory by the organization, within the various constraints associated with the implementation. The capstone serves to integrate the students' program of study of security and intelligence and provides oversight into the concepts and information learned and insight into practical application over the course of a career. Final Term or Permission from Chair.

SSI 4960 - Security and Strategic Intelligence Capstone (3)

The program capstone provides students with a service-learning/internship opportunity in which they work with an organization of their choice to identify and define a problem that is of importance to the organization and design and implement a solution that is deemed satisfactory by the organization, within the various constraints associated with the implementation. The capstone serves to integrate the students' program of study of security and intelligence and provides oversight into the concepts and information learned and insight into practical application over the course of a career. Prerequisites: Senior Status, completion of all other SSI Program Requirements.

Theological Studies (THEO)**THEO 1005 - Theological Foundations (3)**

Prerequisite to all further courses. This course begins the disciplined reflection on religion in the university. Along with providing the basic vocabulary, methods of theology, and key theological concepts, it equips the student with the historical, textual, and comparative methods and skills that are foundational for further study on the university level. Offered every semester.

THEO 2355 - 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 2825 - Religion and Science (3)

This course examines the history and recent development of three discipline 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 3505 - Marriage & Christian Vocation (3)

A study of contemporary Christian theology and ethical reflections on marriage, covering sexual, gender, parenthood, divorce and family issues

THEO 3795 - Studies in Non-Christian Religious Traditions (3)

General number for new courses.

Theatre (THR)**THR 1005 - 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.

Applied Behavior Analysis (ABA)

ABA 3010 - Introduction to Applied Behavior Analysis (3)

This course is an introduction to applied behavior analysis. Applied behavior analysis is a field dedicated to the scientific application of behavioral principles and procedures to socially relevant problems. During this course, students learn the causes of behavior. Students will also learn about basic principles and procedures, such as reinforcement, punishment, and functional assessment. In addition, we will cover particular content areas including behavioral medicine, behavioral gerontology, drug and alcohol abuse, classroom management, developmental disabilities, and applications in business and industry.

ABA 5746 - Principles and Concepts in Applied Behavior Analysis (3)

This course will familiarize students with behavior analysis fundamental philosophical assumptions, and the basic concepts and principles of operant and respondent conditioning. The course will review some of the basic laboratory research that has illuminated the principles of behavior. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 5747 - Assessment and Selecting Interventions in Applied Behavior Analysis (3)

This course will develop basic knowledge of students with respect to behavioral assessment methodologies and selection and design of interventions in the field of applied behavior analysis. This course will review some of the basic assumptions and characteristics that define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 5748 - Behavior Change and Processes in Applied Behavior Analysis (3)

This course will expand basic knowledge of students with respect to behavior analysis fundamental concepts, principles and philosophical assumptions including basic behavioral principles of operant and respondent conditioning, stimulus control, and develop a working understanding of these principles in behavior change strategies and interventions in the field of applied behavior analysis. This course will review some of the fundamental applied literature that has demonstrated the efficacy of behavioral strategies and continues to define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 5749 - Behavior Change and Ethics in Applied Behavior Analysis (3)

This course will familiarize students with the ethical issues confronting those working in behavior analytic or related capacity. Students will learn the ethical responsibilities inherent to working in their chosen field. Ethical codes and cases will be analyzed. Topics will include gaining informed consent, protection of confidentiality, selection of the least intrusive behavior change methods and procedures, and protection of individual rights. The ethical standards addressed in this course will prepare students working in the field of behavior analysis or related fields for board certification in Applied Behavior Analysis.

ABA 5774 - Measurement and Experimental Design in Applied Behavior Analysis (3)

This course will develop basic knowledge of students with respect to single subject research design, measurement and application of the empirical approach to evaluation of effectiveness of interventions in the field of applied behavior analysis. This course will review some of the basic assumptions and characteristics that define the field. The material covered in this course will contribute to preparing students working in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis.

ABA 5820 - ABA Integrative Seminar I (0-1)

This is a three part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, review empirical literature pertinent to those change efforts.

ABA 5826 - Practicum I (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on applied behavioral analysis

ABA 5827 - Practicum II (3)

Students will continue to learn and to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis in applied behavioral analysis

ABA 5828 - Practicum III (3)

Students will continue to learn and to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis in applied behavioral analysis

ABA 5931 - Special Topics in Applied Behavior Analysis (3)

This course builds upon basic principles of learning and applied behavior analysis presented during previous courses in the Behavior Analysis course structure. The course will offer advanced coverage of special topics, including Clinical practice, Autism, and Organizational Behavior Management. Clinical behavior analysis focuses on the use of verbally based interventions to treat persons in outpatient/clinical settings. In behavior analysis and autism we will review diagnostic criteria and evidence based practices. The Organizational Behavior Management section of the course will provide an overview of contemporary research and practice in the field.

ABA 5990 - Thesis Research (0-6)

Students will conduct original research and begin to write a thesis that reflect independent thought and thorough knowledge of applied behavior analysis.

Biosecurity/Disaster Prep (BSDP)

BSDP 5100 - 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 5101 - 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 5102 - Introduction to Biostatistics and Decision Analysis (3)

This course will cover basic statistical methods, including common inferential statistical tests encountered in infectious disease epidemiology, emergency and public health response and medical intelligence. The course will include an introduction to decision analysis and developing and using decision trees used for optimizing choices in the face of uncertainty.

BSDP 5103 - 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 bioterrorism attack and new or re-emerging infectious diseases. (Offered annually)

BSDP 5104 - Public Health Ecology (3)

This course will present the public health triad (interactions between humans, animals, and the environment). Content includes: general human and ecological factors contributing to zoonotic and other disease transmission; notable public health threats of infectious origin; scenarios of transmissible disease outbreaks in the wake of certain ecological changes; risk assessments for biohazards.

BDSP 5105 - 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.

BDSP 5106 - Disaster Communications and Media Relations (3)

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)

BDSP 5200 - Writing for Intelligence (3)

This course is designed to provide students with the writing skills required to clearly, concisely and correctly deliver to end-users basic, current and estimative intelligence products. Students will be trained in the process of collecting, collating, analyzing, disseminating and evaluating intelligence products. The course emphasizes the importance of communicating the analyst's evidence based judgments in a clear, concise and easily understandable manner. It is designed to develop and refine the student's critical thinking skills and their ability to translate these skills into an actionable analytical product through the production of Actionable Intelligence Briefings and Travel Assessments.

BDSP 5201 - 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)

BDSP 5203 - Disaster Planning for Infectious Disease Disasters (3)

This course provides an overview of strategies for and challenges to planning for all types of disasters; emphasis is placed on biosecurity emergencies such as bioterrorism and outbreaks of emerging infectious diseases. Content includes tools and resources needed to develop and/or evaluate a facility or community all-hazards response plan and create exercises to test this plan. Prerequisite: BDSP 572. (Offered annually)

BDSP 5204 - Epidemiological Methods and Infectious Disease Surveillance (3)

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)

BDSP 5205 - Behavioral and Cultural Aspects of Disasters (3)

This course examines the behavioral and cultural implications of terrorism and other disasters. Students will study a range of adaptive and abnormal responses to catastrophic events. Cultural and psychosocial sources of resilience to terrorism will be reviewed. (Offered annually)

BDSP 5206 - 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)

BDSP 5208 - Facing the Challenge of International Bioterrorism (3)

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.

BDSP 5209 - Emerging Infections: Epidemiology and Public Health Importance (3)

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 put health impact, either potential or actual.

BDSP 5210 - Preparing for Disasters: Resiliency and Stress Inoculation (3)

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.

BDSP 5211 - Business Continuity and Pandemic Planning (3)

This course will give the student an understanding of Business Continuity Management and Pandemic Planning concepts. It will lay a foundation for recovery of people, places and technology in a business setting. This class will also focus on the unique aspects of planning for a pandemic.

BDSP 5212 - Global Health and Infectious Diseases (3)

The purpose of the research and synthesis (RAS) is for the student to demonstrate sufficient command of an area of research and advance a body of knowledge. This is achieved by independently completing an extended review paper (e.g., 50-75 double spaced pages) that critically appraises and synthesizes the research literature on a particular topic. The result of this document shall include an assessment of major theories or perspectives, key findings, research design assets and limitations, and measurement issues, and development of a future research agenda. Limited to Ph.D. program in social work students who are in their final semester of coursework.

BDSP 5300 - 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, essential untreatable diseases. Content includes the medical, social, economic and political consequences of historically significant epidemics and the complexities of managing and recovering from a highly lethal pandemic. The course will review past epidemics and pandemics, such as the Black Plague of the Middle Ages, the effects of the 15th Century introduction to smallpox in the Americas, the 1918-1919 influenza pandemic, Hoof and Mouth disease in Great Britain, hantavirus, and SARS. Chernobyl, Bhopal, and Hurricane Katrina will also be studied. Students are expected to apply historical data to contemporary epidemic simulation and planning efforts. (Offered annually)

BDSP 5960 - Capstone in Biosecurity and Disaster Preparedness (3)

Prerequisite: All other courses must be completed before enrolling in the Practicum, unless the student has special permission from the Program Associate Director or Director. Students may enroll in the Practicum during their final semester, even if they are taking another course(s) at the same time. This course is the capstone project for the Biosecurity and Disaster Preparedness programs. Students will demonstrate the skills of interdisciplinary planning and consequence management needed to respond to a bioterrorist event or naturally occurring epidemic. Students will develop an exercise using an infectious disease scenario. (Offered annually)

BDSP 5980 - Graduate Reading in Biosecurity and Disaster Preparedness (1-3)

This course provides specialized study in environmental health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

Behavioral Sc/Health Educ (BSH)**BSH 5000 - Behavioral Science and Public Health (3)**

This course introduces concepts, theories and methods employed by behavioral scientists to develop, implement and evaluate public health interventions. Selected theories of health behavior are presented. Principles program evaluation methodology are introduced. Emphasis is placed on the application of theory and method to the design and assessment of approach to solving current public health problems. For Masters students.

BSH 5100 - Health Promotion Program Planning (3)

Following the general framework of the PRECED-PROCEED planning model, this course explores the principles, theories, and essential steps of the health promotion planning process. Content includes a detailed review of the methods used in assessing. In this course, the process and methods of evaluation will be framed in terms of 'quality assurance', that is, documenting the extent to which program actions are implemented in accordance to stated objectives. Offered annually.

BSH 5200 - Historical, Philosophical and Political Bases of Public Health and Health Education (3)

This course engages students in critical thinking and discussion about the conceptual bases of public health and health education, including the philosophical and political ideologies which have shaped research and practice in both fields. Students completing this course will be able to critically consider public health programs and policies. (Offered annually)

BSH 5300 - Public Health Approaches to Address Pediatric Injury and Violence (3)

This course will introduce students to selected topics in intentional and unintentional pediatric injury control and strategies for developing and evaluating effective prevention programs. Specific topics include car related injuries and injuries from falls, burns, firearms and violence with focus on risk factors for population subgroups.

BSH 5310 - Health Communication (3)

This course provides an overview of theory and research on persuasive communication, emphasizing the application of persuasive communication principles to health education practice. Special emphasis is given to the application of new communication technologies to meet public health objectives. Students successfully completing this course will be able to analyze and critique health education and health promotion messages on the basis of theory and empirical research, and identify basic principles of persuasive communication which are applicable to health education practice. Offered annually.

BSH 5400 - Assessment, Implementation Design, and Evaluation (3)

This course reviews the theoretical bases underlying community diagnosis and community organizing, provides students with the opportunity to develop specific skills in community assessment, and assists in assessing the personal and professional challenges faced when working in diverse communities. The course also teaches students how to make decisions about the types of theory-based programs or strategies to implement based on both the community's perspective as well as need (evidence), enhancing the likelihood of intervention effectiveness. Offered every fall. For Masters students.

BSH 5410 - AIDE II (3)

The purpose of this course is to acquaint the student with the fundamentals of health program evaluation. Although the course emphasizes general evaluation methodology, specific health program and health policy applications are explored as illustrations. In addition to surveying design and measurement basics, the course explores the role of evaluation research in health program development. Offered in spring. Prerequisite: BSH 5400

BSH 5440 - 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.)

BSH 5970 - Research Topics in Behavioral Science and Health Education (1-3)

This course provides direct research experience in behavioral science and health education. Content is developed jointly between the student(s) and a faculty mentor.

BSH 5980 - Graduate Reading in Behavioral Science and Health Education (1-3)

This course provides specialized study in behavioral science and health education to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

BSH 6000 - Health Promotion Program Evaluation (3)

The course focuses on principles and procedures to evaluate health promotion and disease prevention programs. Evaluation design, reliability and validity, formative and process evaluation, and meta-analysis are introduced. The course includes intensive critique of case studies from the disease prevention program and policy literature. Case studies designed to reflect the diversity of methods and the range of possible applications are selected. (Offered annually)

BSH 6001 - Behavioral Sci & Public Health (3)

This course introduces concepts, theories and methods employed by behavioral scientists to develop, implement and evaluate public health interventions. Selected theories of health behavior are presented. Principles program evaluation methodology are introduced. Emphasis is placed on the application of theory and method to the design and assessment of approach to solving current public health problems. For Doctoral students.

BSH 6020 - Intervention Research (3)

This course helps students conceptualize, design, and conduct of behavioral intervention research in public health. Students are introduced to intervention research projects conducted to address a wide range of health problems and populations in community, health care, work-site and school settings. Students evaluate and critique these interventions in terms of research design and methodology, planning approach, and adherence to principles of participation. Students will design intervention-research projects to address a public-health problem of their choice. (Offered annually.)

BSH 6400 - AIDE I (3)

This course reviews the theoretical bases underlying community diagnosis and community organizing, provides students with the opportunity to develop specific skills in community assessment, and assists in assessing the personal and professional challenges faced when working in diverse communities. The course also teaches students how to make decisions about the types of theory-based programs or strategies to implement based on both the community's perspective as well as need (evidence), enhancing the likelihood of intervention effectiveness. Offered every fall. For Doctoral students.

Biostatistics (BST)**BST 3000 - Intro to Statistical Computing (3)**

The purpose of this course is to teach students statistical programming and data management skills in SAS and R to aid their careers post-graduation. To this end, they will learn how to use SAS and R to organize and structure data in order to compute epidemiologic measures, descriptive statistics, measures of association and other statistical tests through homework assignments, projects and in-class exercises. They will organize, prepare, interpret, and present statistical test results derived from SAS and R output to the class and through assignments. Offered in spring.

BST 3100 - Applied Biostatistics I (3)

This course covers the basic tools of applied statistics for describing categorical and numerical data and making inference to populations, including chi-square and t tests, one-way ANOVA, and simple linear regression procedures. Probability is introduced to the extent it is needed to understand statistical applications. Statistical software is used throughout the course. Prerequisite: MATH 141 - Precalculus Course offered every Fall semester.

BST 3200 - Applied Biostatistics II (3)

Linear regression (parameter estimation and tests, confounding, interaction, model building and assessment of fit, diagnostics and remedial measures,); Design of experimental and observational studies (CRD, RCBD, repeated measures, matched pairs, ANOVA, ANOCVA, Contrasts and multiple comparisons, ANCOVA), Logistic Regression (binomial distribution, multinomial distribution, Poisson distribution, and Chi-square test, CMH test, odds, odds ratio, relative risk, maximum likelihood, likelihood ratio test, model building and assessment of fit, diagnostics, McNemar's test, conditional likelihood, score test). Offered in spring. Prerequisites: BST 3000, 3100 & MATH 3110.

BST 4100 - Theory of Biostatistics I (3)

Introduction to the principles of probability, statistical distributions, and the extension of these concepts to multiple random variables. Transformations of random variables, moment-generating function technique and central limit theorem. Offered in fall. Prerequisite: MATH 2530 (Calculus III)

BST 4200 - Theory of Biostatistics II (3)

Point estimation, maximum likelihood, regression, sufficient statistics, Bayesian estimation. Interval estimation. Hypothesis testing for one and two samples. Power, likelihood ratio tests. Goodness-of-fit tests, contingency tables. Analysis of variance. Offered in spring. Prerequisite: BST 4100 (Theory of Biostatistics I)

BST 5000 - Principles of Biostatistics (3)

This course is designed as an introduction to statistical analysis for students in public health, health administration and research. Topics include basic probability and descriptive statistics, statistical inference and hypothesis tests, linear and logistic regression, and non-parametric statistics. Content is taught for conceptual understanding and application. Statistical software is used throughout the course. (Offered every semester.)

BST 5020 - Theory of Biostatistics (3)

This course introduces the principles of probability and biostatistical inferences. Topics covered: role of statistics in scientific research, discrete random variables, continuous random variables, expectation and variance, moments and moment-generating functions, marginal and conditional probability, independence, functions of random variables, sampling distribution, the central limit theorem, methods of statistical estimation, hypothesis testing and confidence interval, and likelihood ratio test. (Offered annually.)

BST 5030 - Statistical Programming and Study Planning: SAS (3)

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: BST 5000 or BST 5020, or permission of Instructor.

BST 5100 - Introduction to General Linear Modeling (3)

This course presents a unified approach to the application of linear statistical models in biomedical and health services research. Topics include simple and multiple linear regression, Pearson's r and non-parametric correlation, analysis of variance (ANOVA), and logistic regression. Both the theory and application of the general linear model (GLM) are presented. (Offered annually.)

BST 5200 - Survival Data Analysis (3)

This course treats statistical methods for analyzing survival data derived from laboratory, clinical, and epidemiological studies of humans. Both parametric and nonparametric approaches are presented. Focus will be in the practical applications of these methods to clinical and epidemiological research. The SAS and SPSS statistical packages will be used for data management and analysis. Prerequisite(s): (BST 5000 or BST 5020) & BST 5030 & 5100 (Offered every Fall)

BST 5210 - 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. Prerequisite(s): (BST-5000 or BST-5020) & BST-5030 & 5100 (Offered every Fall)

BST 5220 - Multilevel and Longitudinal Data Analysis (3)

This course will focus on applications of various statistical methods for analyzing longitudinal, or repeated measures, data. The core concepts will cover multilevel analysis, growth curve modeling, and structural equation modeling.

BST 5230 - Bayesian Statistics (3)

The Bayesian approach to statistics is an alternative to the traditional methods based on hypothesis and significance testing. Bayesian statistics uses prior information and combines it with observable data to quantify knowledge after observing data in what is called the posterior. Simulation is used to approximate this posterior distribution.

BST 5310 - Social Network Analysis (3)

Advance seminar covering social network analysis methods, with an emphasis on using network analysis software to model social and health science network data. Topics include background and history of network analysis; network data collection and management; network graphics; network measures of centrality, cohesion, and structural equivalence; multiplex and longitudinal network analysis.

BST 5400 - Applied Data Management (3)

This course is an advanced course on data management for graduate students in the College for Public Health and Social Justice. Students will learn advanced concepts and techniques of research data management with particular emphasis on applications in public health. Students will learn to use multiple data management and data analysis software packages including Excel, Access, MySQL SPSS, SAS and R. Prerequisite(s): BST-5000 or BST-5020

BST 5420 - Sampling Theory and Survey Design in Public Health (3)

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 survey and the use 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 5960 - Capstone in Biostatistics (3)

The capstone course will emphasize practical aspects of being a successful statistician, including communicating with nonstatisticians, orally and in writing. Sample size determination, an important problem in biostatistics, will be studied both analytically and using simulation.

BST 5970 - Research Topics in Biostatistics (1-3)

This course provides direct research experience in biostatistics. Content is developed jointly between the student(s) and a faculty mentor.

BST 5980 - Graduate Reading in Biostatistics (1-3)

This course provides specialized study in biostatistics to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

BST 6100 - Causal Inference (3)

This course is an introduction to causal inference with application in public health and social justice. Topics include the potential outcomes model, the theory behind and application of randomized trials, and application of causal inference techniques to observational studies. Students will perform analyses with propensity scores, instrumental variables, and graphical causal models (DAGs) and investigate mediation in the causal framework. The focus of the course will be application of methods as opposed to statistical theory.

Prerequisite(s): BST-5030 and 5100. (Offered periodically)

BST 6200 - Spatial Statistics and Disease Mapping (3)

Statistical methods for disease data that include geographic information. Methods include spatial scan statistics, kriging, measures of autocorrelation Moran's I , regression with exposure data and covariates. Disease maps and relative risk estimation. Mapping and geographic information systems. Bayesian methods of estimation for conditional autoregressive models.

Prerequisite(s): BST-5000 or BST-5020. Pre/Corequisite: BST-5230 or permission of instructor. (Offered every Spring)

Criminology & Criminal Justice (CCJ)

CCJ 1010 - Introduction to Criminal Justice (3)

This course serves to introduce students to the three main components of the criminal justice system: the police, courts, and corrections. Topical coverage in this course includes: background information of definitions/classification of offenses, crime data, and victims and offenders; police organization, roles, functions, and responsibilities; court organization, processes, and outcomes; and, punishment issues such as probation, jail, prison, and community corrections.

CCJ 1020 - Introduction to Criminal Justice: Service Learning Intensive (3)

This course serves to introduce students to the three main components of the criminal justice system: the police, courts, and corrections. The course utilizes an experiential approach to understand the nature of crime and populations at risk to explain the human dimension of criminal justice. Topical coverage in this course includes: background information of definitions/classification of offenses, crime data, and victims and offenders; police organization, roles, functions, and responsibilities; court organization, processes, and outcomes; and, punishment issues such as probation, jail, prison, and community corrections.

CCJ 2000 - Research Methods in CCJ (3)

This course provides an overview of the scientific method, the philosophy and goals of science, and a detailed study of qualitative and quantitative methodologies. Topics covered include: research design, conceptualization, operationalization, measurement issues, sampling types and procedures, surveys and other data collection instruments, experimental research approaches, qualitative approaches, and evaluation research techniques.

CCJ 2050 - Multiculturalism for the CJ Professional (3)

This class examines how race, sex and culture impact the operation of the criminal justice system and affect employees, victims and perpetrators. Emphasis will be placed on sensitizing students to how social and demographic factors influence the lived experience of those associated with the criminal justice system.

CCJ 2150 - Criminology: The Nature of Crime (3)

This course provides an introduction to the various theories of criminal offending. Particular attention is paid to both the individual and the contextual level factors that contribute to or facilitate propensities toward criminal behaviors. Through the course materials, lectures, and discussions, students will begin to understand the nature of crime.

CCJ 2200 - Law Enforcement (3)

This course provides an overview of the role that law enforcement plays in the criminal justice system. The topics covered include the history and organization of the police, patrol and other law enforcement activities, police community relations, police discretion, and legal issues in policing.

CCJ 2250 - Institutional and Community Corrections (3)

This course serves to introduce students to major contemporary issues in both institutional and community corrections in the United States. Topics covered include detention, sentencing, intermediate sanctions, adult institutions, probation, parole, and correctional staffing and personnel issues. The procedures, practices, and personnel involved are also examined. Students will learn about the wide array of effective punishments and treatment programs that constitute alternatives to incarceration, and which are designed to meet the level of risk posed by, and the need of, each individual. These include probation, parole, electronic monitoring, house arrest, day-treatment centers, boot camps, restitution, fines and more.

CCJ 2500 - Statistics in CCJ (3)

This course serves to introduce students to the quantitative skills, methods, and techniques necessary for analyzing the implementation and impact of programs and policies, specifically those related to criminology and criminal justice. Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. This is an introductory course in quantitative statistical analysis that covers the properties/characteristics and distributions of data and variables relevant to CCJ as well as both descriptive and inferential statistical approaches to analyzing research questions.

CCJ 2930 - Special Topics (3)

**
BIOLOGY OF EVIL
**Do the darkest parts of our nature have a biological component? Criminology, as a discipline, has been dominated by sociological theories of antisocial behavior that have argued against a biological component to adverse human outcomes. The end result of this dominance is that generations of criminology students are taught that social processes and environmental influences are paramount in explaining variation in criminal behavior. At the same time, evolutionary and genetic explanations of antisocial behavior have largely been censored from the discipline. Findings from biology, evolutionary psychology, behavioral genetics, molecular genetics, and neuroscience, however, have converged to show that every human behavior, prosocial, antisocial and criminal, is influenced (to varying degrees) by genetic factors. This course is designed to make you fluent in what has been termed by the psychologist Steven Pinker as the new sciences of human nature.

CCJ 3100 - Juvenile Justice & Delinquency (3)

This course introduces students to the fundamentals of juvenile justice and delinquency. Particular emphasis is placed on the decision-making processes of police, courts and correction officials, charged with the apprehension and processing of juvenile offenders. This course also surveys youth crime and delinquent behavior. Particular focus is placed on individual and social factors contributing to such behavior; notable crime/delinquency causation theories; and the prevention, control, and treatment of youth offending. An assessment of efforts directed at the prevention and control of delinquency and the rehabilitation of juvenile offenders is made in light of major theoretical perspectives on delinquency.

CCJ 3150 - Contemporary Theories of Crime (3)

This course builds on the material covered in CCJ-2150, Introduction to Criminology, by concentrating on developments in theories of crime in the latter part of the 20th century and into the new millennium. Special attention will be paid to integrated, developmental, and life course theories. The course will include a service learning dimension that places students in community agencies that work with offenders or with individuals who live in high-risk environments so that students develop a more personal understanding of the human side of crime and justice.

CCJ 3200 - Ethics in Criminal Justice (3)

The primary objective of this course is to familiarize students with the major ethical themes and debates in criminal justice. Accordingly, the research, both empirical and theoretical (normative), that has been conducted with regard to policing, courts, and corrections (as well as a number of particular ethical issues) will be the major focus of the course discussions. In the end, students should not only be familiar with the broad conceptual debates and controversies surrounding criminal justice alternatives, but should also have firm understanding of the different ways in which ethical evaluations of those alternatives are made.

CCJ 3300 - Corporate & White Collar Crime (3)

This course presents information on the various types, causes, and measurement of white-collar/corporate criminal offenses. Students will understand and consider the competing theories currently used to explain white-collar/corporate criminality as well as explore the use of a myriad of criminal punishments to prevent/deter corporate and personal misconduct and sanction this kind of behavior should it occur. The course also provides illustrations of different key cases along with their financial and social costs.

CCJ 3350 - Understanding Serial Killers (3)

This course examines the phenomenon of serial killers in both theory and practice. The course also examines the extent to which criminological theory can explain observed behavior in serial killers. In this course we will also scrutinize how law enforcement deals with serial killers and how law enforcement can optimize the chances of apprehension through the application of modern and conventional investigative techniques.

CCJ 3400 - Victimology & Victimization (3)

This course provides students with a comprehensive introduction to the study of victims of crime. Course materials cover a broad variety of victim-related topics, including: perspectives on and explanations of victimization, various patterns of victimization, social characteristics of victims, victims' roles in criminal offending, victims' treatment by criminal justice decision makers (e.g., police, attorneys, judges), and efforts designed to reduce the various consequences associated with being a crime victim.

CCJ 3401 - 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.

CCJ 3500 - Race & Crime (3)

This course will examine the distribution of crime within subgroups in American society and the role of criminological theory and empirical evidence in the explanations of criminality. The course will provide students the opportunity to critically assess the nature of the association between race/ethnicity and justice. Using an experiential learning model, students will participate in service learning in the St. Louis metropolitan area to understand how social conditions may also contribute to the associations between race/ethnicity and crime. Through this interactive learning method students will explore the facts and fiction of the nexus between race and crime.

CCJ 3550 - The Science of Evil (3)

Do the darkest parts of our nature have a biological component? Criminology, as a discipline, has been dominated by sociological theories of antisocial behavior that have argued against a biological component to adverse human outcomes. The end result of this dominance is that generations of criminology students are taught that social processes and environmental influences are paramount in explaining variation in criminal behavior. At the same time, evolutionary and genetic explanations of antisocial behavior have largely been censored from the discipline. Findings from biology, evolutionary psychology, behavioral genetics, molecular genetics, and neuroscience, however, have converged to show that every human behavior, prosocial, antisocial and criminal, is influenced (to varying degrees) by genetic factors. This course is designed to make you fluent in what has been termed by the psychologist Steven Pinker as the new sciences of human nature. Offered annually.

CCJ 3600 - Mental Health & Crime (3)

Mental Health & Crime: This course will provide students with a comprehensive overview of the issues and challenges located at the intersection of mental health/illness and the criminal justice system. Attention will be focused on a range of issues, including, but not limited to, the definition of mental illness, deinstitutionalization and the criminalization of the mentally ill, the impact of mental illness on criminal proceedings, treatment/intervention effectiveness, and the reentry/reintegration of mentally ill individuals.

CCJ 4000 - CCJ Practicum (1-6)

The criminology/criminal justice practicum provides students with an opportunity to learn about and experience the criminal justice system from the inside. Students will work with criminal justice practitioners to understand the workings of various justice agencies. As an experiential course students will be required to commit at least 100 hours to the agency they select. Students will also be required to complete readings and written work as assigned by their instructor.

CCJ 4050 - Criminal Law and Procedure (3)

This course provides students with a basic understanding of substantive and procedural criminal law. Understanding criminal law and procedure is fundamental to understanding how our courts operate as well as understanding the legal constraints under which law enforcement and correctional personnel must operate. The course lays a foundation for understanding how evidence is used in the prosecution of criminal offenses.

CCJ 4150 - Criminal Investigations (3)

This class is designed to provide students with a basic understanding of the criminal investigation process. Students will learn how to properly conduct an investigation, specifically, how to properly secure a crime scene, how to properly document investigative efforts (e.g., sketch, model, and photograph a crime scenes), how to properly search a scene, how to conduct effective interviews, interrogations, and surveillances, and how to handle informants and conduct undercover work. Emphasis will be placed on understanding why proper criminal investigative techniques are so important, ethics in investigations, and how to prepare a credible and winnable case for the prosecution.

CCJ 4600 - Mentored Research in CCJ (1-3)

This course provides students with an opportunity to work with and assist a faculty member in an ongoing research project. The course requirements are tailored to the specific dimensions of the research project on which the student collaborates. These opportunities can include literature reviews, data entry and analysis, survey administration, or any other assigned task that allows the student to partner with a faculty member to learn, through a hands-on approach, the process of conducting a research project. The course requires completion of CCJ 2000.

CCJ 4910 - CCJ Internship (3)

This undergraduate criminology/criminal justice internship course provides students with an opportunity to learn about and experience the criminal and/or juvenile justice systems from the inside. Students will work with criminal/juvenile justice practitioners to understand the workings of various justice agencies. As an experiential course students are required to commit at least 100 hours to the agency they select. Students are also required to complete assigned readings and submit written work - including an internship journal and an essay. Offered fall, spring and summer.

CCJ 4915 - Externship in CCJ (1-3)

The course is designed to allow students an opportunity to immerse themselves in local communities and organizations, particularly those working with disadvantaged communities in order to understand the human side of living in risk, especially since high-risk conditions (e.g., poverty, residential instability, racial segregation, etc.) are associated with higher rates of official reported criminal offending. Students are challenged to examine the consequences of environmental stressors on populations and what that might mean to and for justice systems. The course combines the academic experience with Ignatian principles of experience and reflection, in order to gain self-awareness critical to criminal justice practice.

CCJ 4960 - CCJ Capstone (3)

This course analyzes the various actors in the criminal justice system, their decision making processes, and the policies they create and implement. The course offers an integrative framework for understanding the policies emanating from the criminal justice system. This final course provides an opportunity to integrate key concepts of criminology/criminal justice in a specific area of interest. Capstone projects are expected to demonstrate competence in critical thinking, inquiry skills, and the synthesis of knowledge through the development and presentation of an examination of a particular CCJ policy, program, and/or initiative.

CCJ 4980 - Independent Study in CCJ (1-6)

The course provides students with an opportunity to develop their own research project that will be completed independently under their own initiative. The student will receive guidance and support of the assigned faculty member. The course requires prior approval of the faculty member and completion of a contract of agreement on products to be delivered and methods of evaluating course/project outcomes.

CCJ 5000 - Applying Criminological Theory (3)

This course examines the role of criminological theory in the development of criminal justice policy. Theories examined include both macro and micro level theories that influence strategies for deploying justice personnel and developing treatment strategies. The course includes a focus on the importance of theory for the allocation of resources, identification of promising strategies for prevention and intervention, justice program success, for criminological theory organizes the way scholars and practitioners observe and explain delinquent and criminal behavior. Theories of crime also help explain how and why the justice system should respond and set policy for addressing criminal behavior.

CCJ 5100 - Ethics in the Administration of Justice (3)

This course familiarizes students with the major ethical themes and debates in criminology and criminal justice. Through analysis of empirical and theoretical research that has been conducted with regard to policing, courts, and corrections (as well as a number of particular ethical issues) students will gain the knowledge necessary to identify, understand, evaluate, and respond appropriately to ethically-challenging circumstances they are likely to encounter as criminal justice professionals. Upon completion of the class, students will be familiar with the broad conceptual debates and controversies surrounding criminology and criminal justice options and alternatives and will have a comprehensive understanding of the different ways in which ethical evaluations of those options and alternatives are made. (Offered annually.)

CCJ 5200 - Methodological & Statistical Literacy in CCJ (3)

This course aims to provide fundamental information, skills and understanding necessary for graduate students to digest, comprehend, and critique the basic methodological and statistical information that they will most likely confront in their future studies and current/future professions. The course introduces students to the essential methodological issues found and techniques utilized in today's criminological and criminal justice research and literatures. The course also builds upon the methodological foundation established in the first half by exploring and examining the most common statistical techniques used in these bodies of literature. Specific attention will be paid to providing the knowledge base necessary to critically read and review substantive research articles, evaluation reports, and government documents pervasive in criminology and criminal justice professions.

CCJ 5910 - CCJ Internship (3)

This graduate level criminology/criminal justice internship course provides students with an opportunity to learn about and experience the criminal and/or juvenile justice systems from the inside. Students will work with criminal/juvenile justice practitioners to understand the workings of various justice agencies. As an experiential course students are required to commit at least 150 hours to the agency they select. Students are also required to complete assigned readings and submit written work - including an internship journal and a program/policy proposal paper. Offered fall, spring and summer.

CCJ 5960 - MSCPP Culminating Project (0)

Each MSCPP student will prepare a graduate presentation that represents the core Criminology and Professional Practice curriculum, as well as their concentration curriculum. The purpose of the presentation is to afford students an opportunity to thoughtfully reflect upon their graduate education and to articulate the academic and practitioner-related competencies they have gained. This presentation is not only summative and integrative, but it is also meant to help students frame their educational experience in terms of value added attributes of interest to employers in the field. A panel of three CCJ faculty members evaluate the presentation on a pass/revise and resubmit (satisfactory/unsatisfactory) basis using a rubric agreed upon among the faculty. Students entering the MSCPP Program in the 2016-2017 academic year will be required to pass this project to earn their degree. The rubric for defining and grading the project is currently in development. Students who do not receive a pass/satisfactory from the majority of the faculty (2/3) on the panel will be given feedback and afforded the opportunity to revise and re-present their presentation. Students must pass/receive a satisfactory grade in order to earn their MSCPP degree. Offered in spring.

CCJ 6000 - Issues in Law Enforcement (3)

This course is designed to provide a comprehensive examination of policing in the United States. It will examine the origins and history of policing and the current state of knowledge surrounding police organizations, police subculture, police behavior, police-community relations, and methods of controlling police behavior and misconduct. The course will ultimately provide students with a critical and contextual understanding of the evolution of policing, the functions of policing in contemporary society, and the future of policing in America.

CCJ 6100 - Issues in Corrections (3)

This is an advanced seminar in corrections aimed at graduate (MS) students. This course examines both institutional as well as community corrections although the emphasis--as in real life--is placed on incarceration. Students will read (and think) extensively on timely issues surrounding contemporary corrections including: prisons, jails, probation and parole, inmate perspectives, institutional misconduct/disorder/violence, rehabilitation/treatment programming, gender, family-related concerns, and reentry. Thus, this course provides a broad foundation of information on US corrections today. (Offered annually.)

CCJ 6200 - Issues in Juvenile Justice Administration (3)

The course examines the roots of the juvenile court and its associated institutions, issues in its administration, and current issues and challenges to its functioning. From its inception in 1899 the juvenile justice system represented a unique legal institution. By design it is a system of individualized justice. The nature of the juvenile system makes administering it a challenge. The juvenile justice system must hold youth accountable for delinquent behavior while crafting individualized treatment plans. As an open system it is further pressed by the desires of external constituencies that seek retribution and punishment which are at times in opposition to individualized care.

CCJ 6400 - Issues in Jurisprudence (3)

This course provides students with a working knowledge of how the courts operate and fit within our democracy. Students will gain an understanding of the parameters of Constitutional guarantees including the Due Process Clause, the Equal Protection Clause and various guarantees contained in the Bill of Rights and how the judiciary effectuates those rights. Special emphasis will be placed on understanding how the Constitution impacts upon the operation of the law enforcement and correctional components of the criminal justice system. Sources of civil and criminal civil rights liability will be explored with an emphasis on best practices to avoid and minimize risk of liability. In addition, students will gain the tools to meaningfully access, understand and evaluate legal materials, particularly case law and statutory law. (Offered annually.)

Emergency Management (EMGT)**EMGT 1700 - Fundamentals Emerg Mgt (3)**

This course will provide an overview of the history of Emergency Management and Homeland Security in the U.S., its current status, and future in managing high consequence events. Students will examine the fundamental definitions, theories, principles, and frameworks associated with Emergency Management. Students will be required to complete selected FEMA self study courses.

EMGT 2700 - Dissecting Disasters (3)

This course will provide a broad overview of the history of natural and manmade (intentional) disasters responded to by United States agency representatives (e.g., 1918 Pandemic, Great Flood of 1923, 1994 Northridge Earthquake, September 11th, etc.). Students will analyze the complex nature of disasters, while identifying overriding themes and examining lessons learned.

EMGT 2710 - Public Health Issues in Emergency Management (3)

This course will review the role and capacity of public health and health care systems in disaster preparedness and response to all disasters. Students will examine the growing threat and public health consequences of disasters. The course will cover theory and practice in emergency management and consider implications for policy makers.

EMGT 2720 - Emergency Management Technology (3)

The purpose of the course is to provide an introductory overview of the technologies of Emergency Management. The four phases of Emergency Management will be explored and analyzed with regards to available and future technologies. Critical thinking skills will be enhanced as we explore the cost benefits of technologies.

EMGT 3700 - Mental Health Implications of Emergency Management (3)

This course will provide an introduction to the disaster field, a detailed examination of the service delivery systems, and guidelines for attending to the mental health needs of disaster victims and responders. This course views disasters events within their ecological context and strives to create sensitivity to diverse and at-risk populations.

EMGT 4700 - Advanced Emergency Management (3)

This course will provide an overview of the history, current status, and future of Emergency Management and Homeland Security in the U.S. Students will examine associated definitions, theories, and principles. The course will introduce students to various levels of assessment, planning and operational implementation of preparedness and recovery plans. Prerequisite: HMP 1700

EMGT 4710 - Exercise Design & Evaluation for Emergency Management (3)

The purpose of the course is to provide an overview of exercises in the discipline of Emergency Management and Homeland Security. It will cover the seven major types of exercises: seminar, workshop, table top, games, drills, functional, and full-scale. The phases of Emergency Management exercises will be explored and analyzed in detail.

EMGT 4967 - Seminar in Emergency Management (0)

This is a cumulative course that documents the student's undergraduate education in emergency management. The purpose is to provide a guided process for the production of materials required by the International Association of Emergency Managers.

Environmental/Occupation Hlth (EOH)

EOH 5000 - Environmental and Occupational Health (3)

Course addresses the interaction of the physical, psychological, and social environments of individuals in which they work and live. It presents a broad survey of the major environmental issues facing contemporary society in first and third world countries. The course combines an overall ecological concern with specific elements related to personal and community health, emphasizing the interrelatedness of the two and conveying an awareness of how current environmental issues directly affect our lives. (Offered twice each year.)

EOH 5100 - 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 5200 - 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 5220 - Occupational Safety (3)

This course provides an overview of the managerial, behavioral, and engineering-technical aspects of occupational safety. Historical perspectives, regulatory compliance and industry best practices are discussed. The course also addresses current trends in worker compliance and participation as well as the technical aspects of an array of applicable regulatory standards. Specific technical aspects are explored in greater depths in support of the research paper/presentation and directed study components of the course. (Offered annually.)

EOH 5270 - Environmental Forensics (3)

This course will serve as an introduction to the field of site investigation. We will discuss the role of the environmental scientist in the field through lecture, case studies, and assignments. This course will identify the tools of the environmental scientist which are many and varied, from historical documents to chemical fingerprinting and radio-dating.

EOH 5290 - 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 5300 - Biological Hazards in Modern and Developing Countries (3)

This course addresses the nature of biological hazards at the intersection of developing and modern countries. These hazards are described by their sources, pathways, routes of entry, and health effects of infectious and allergenic agents that are found in either workplaces or the general environment. Through in-depth field exercise, lectures, and case studies, students will learn how to identify, measure, and control biological agents that are present in a variety of settings. Basic concepts from aerosol science, industrial hygiene, microbiology, infectious disease epidemiology, sanitation, behavioral science, and environmental engineering are applied to problems of infectious or allergic disease prevention and control. (Offered annually.)

EOH 5400 - 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 5500 - Environmental and Occupational Epidemiology (3)

This course presents the epidemiological methods used to investigate the health effects of occupational and environmental exposures to toxins. Epidemiological evidence concerning the health effects of selected occupational and environmental exposures will be critically reviewed and evaluated. (Offered annually.)

EOH 5600 - Policy, Science and Decisions in Environmental Health (3)

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 policy concerning particular environmental problems in the United States and the international community. (Offered annually.)

EOH 5960 - Capstone in Environmental and Occupational Health (3)

The ultimate purpose of the course is in skill building for the professional practice of EOH. A framework for solving problems throughout the many specialties of the EOH field is presented. Students are given assignments on major and challenging issues that confront the EOH investigator, program manager, and policy maker that are relevant to a range of jobs and careers throughout the profession. Students learn about the profession through an environmental and occupational health audit where scientific skills must be matched with ethical, business, managerial, political, and communication acumen.

EOH 5970 - Research Topics in Environmental and Occupational Health (1-4)

This course provides direct research experience in environmental health. Content is developed jointly between the student(s) and a faculty mentor.

EOH 5980 - Graduate Reading in Environmental and Occupational Health (1-3)

This course provides specialized study in environmental health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

EOH 6400 - Exposure Assessment Methods (3)

This area is of growing importance in research and professional areas such as industrial hygiene, epidemiology, toxicology, environmental management, engineering, and regulatory policy development. Topics include an overview of methodologies and applications, representative exposure monitoring strategies and methods, exposure categories, assessing exposure histories, and risk assessment models. (Offered annually)

Epidemiology (EPI)

EPI 4000 - Intro Epidemiology: Foundations & Practice (3)

Epidemiology forms the scientific rationale for public health assessment, assurance, and program/policy development. This course introduces students to foundational principles of epidemiology, including outcome measures, surveillance, and study design. Historical and current examples are used to demonstrate the applications of epidemiology in public health practice.

Prerequisite(s): MATH-1400 - Precalculus (Offered Every Fall)

EPI 5000 - Principles of Epidemiology (3)

This course is an introduction to epidemiology, which is the study of the distribution and determinants of disease in human populations and the application to the control of health problems. Topics will include analytic reasoning in public health and disease surveillance, descriptive and analytic study designs, and causal inference. Basic statistical measures used in the analysis of epidemiologic studies, including measures of disease frequency and measures of association, will be covered.

EPI 5020 - Epidemiology Methods II (3)

This course is offered to graduate students who desire more intensive training in epidemiologic research methods than offered in EPI-5000. This course covers observational study designs, infectious disease outbreak analysis, sampling methods, statistical power, multivariate analysis, types of bias, and causal inference. Offered annually.

EPI 5110 - Epidemiology of Infectious Disease (3)

The history of epidemiology and infectious diseases are intricately intertwined. Our understanding of Infectious Diseases requires an integration of phenomenal advances including newly recognized pathogens, explosion of diagnostic technology, hosts with unprecedented compromised states, a better understanding of dynamic demographic and sociocultural forces, and improvements in study design, analysis, and modeling. (Offered annually.)

EPI 5120 - Chronic Disease Epidemiology (3)

This course considers some of the major substantive issues and methods used in chronic disease epidemiology. Emphasis will be on the application of epidemiologic principles and methods related to cancer, cardiovascular diseases, psychiatric illness, and other chronic diseases. Topics include classification of diseases, rates, associations, etiology, prevention, and control. (Offered every year.)

EPI 5220 - 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 5230 - 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 5250 - 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 5270 - Cancer Epidemiology (3)

This course provides an overview of concepts related to cancer epidemiology, including cancer biology, etiology, surveillance, and study design. Classic examples and current topics will be used to explore the role of epidemiology in addressing disparities, policies, and population-based approaches to cancer prevent and control.

EPI 5280 - Perinatal Epidemiology (3)

Issues related to the perinatal period from the framework of epidemiologic methods will be examined in the course through critical review of epidemiologic studies and exploration of design issues for this population. The students will also learn to apply perinatal research principles to data analysis in perinatal research through in-class data analysis exercise and individual research project.

EPI 5500 - Environmental and Occupational Epidemiology (3)

This course presents the epidemiological methods used to investigate the health effects of occupational and environmental exposures to toxins. Epidemiological evidence concerning the health effects of selected occupational and environmental exposures will be critically reviewed and evaluated. (Offered annually.)

EPI 5960 - Capstone in Epidemiology (3)

The purposes of this course are 1) to develop the practical statistical skills to analyze an epidemiologic data set, and 2) to learn to write a scientific paper in the form of a journal article from the results of epidemiologic data analysis. Stratified analysis and modeling using main effects logistic regression will be emphasized. Prerequisites: BST 5000, 5100, 5200, EPI 5000, EPI 5020 Pre/Corequisites: BST 5210 (Offered annually.)

EPI 5970 - 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 5980 - 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 student(s) and a faculty mentor.

Global Health (GLOH)**GLOH 5100 - Global Health Assessment and Evaluation (3)**

This course challenges students to assess the magnitude and severity of global public health problems in low-resource settings, consider responses to those problems within a theoretical context and then design theory-based evaluation research. The purpose of this course is to prepare for developing and evaluation theory-based interventions to address global public health problems. The course introduces students to methodologies for engaging stakeholders, conducting situational analyses, developing program theory and logic models, defining evaluation purpose, and then designing evaluations to fulfill that purpose. It also requires students to analyze interventions from a theory-based perspective.

GLOH 5930 - Special Topics (3)

A course to present topics not covered in established courses based on faculty and student interests. An avenue to develop new courses on a trial basis. Offered periodically.

Health Management & Policy (HMP)**HMP 1300 - Contemporary Challenges in Health Care (3)**

This course is an introduction to the US health care system and its many challenges. Students will gain a basic understanding of private insurance operations, public financing for health care including Medicare and Medicaid the operations of hospitals and clinics, as well as health care professionals' roles in the health care system. Students will be encouraged to discover creative solutions to these challenges both from domestic programs and other countries' health care systems.

HMP 2100 - Business Sectors in Health Care (3)

This course describes and analyzes business sectors within healthcare that significantly affect cost and quality of health services. Examples are supplier (pharmaceuticals, medical-surgical supplies, medical devices, distributors, a group purchasers) financial intermediaries (HMOs, PBMs) and health care providers (hospitals, medical groups, nursing homes). Each sector is analyzed in terms of organizations, products/services, customers, and strategic business practices.

HMP 2500 - Management of Health Care Organizations (3)

This course provides students with an introductory overview of the major functional areas of health care management and shows their relevance to the delivery of health care services in a turbulent and very complex environment. Health care organizations are broadly clustered into: strategy and marketing, financial management, human resources management and data and system.

HMP 3200 - Health Care Economics & Policy (3)

The main purpose of this course is to enable students to apply economic theory and analysis to health issues and problems, by emphasizing how markets work and why they fail in the production of health and delivery of health care services. Topics covered include an overview of the US health economy; the production of health and the demand for health care; market structure; the market for health insurance, managed care, and hospital services; and the role of public policy in producing healthy populations.

HMP 3400 - Health Care Marketing (3)

The purpose of this course is to train future health services management professionals marketing and management of health services. The course is intended to present concepts and tools used in developing, implementing, and managing successful marketing strategy. The marketing processes, consumer behavior, marketing mix, controlling and monitoring marketing processes are studies relative to the unique and changing aspects of the health services industry.

HMP 3500 - Health Care Human Resources Management (3)

The focus of this course is on functions and concepts required for managing human resources in health care organizations. It integrates traditional human resource management (HRM) with ideas from other organizational behavior. Course content includes recruitment, training and development, compensation, performance appraisal, motivation, union activity, and conflict resolution.

HMP 4200 - Health Care Financial Management (3)

Corporate finance concepts and techniques are applied to health care organization decision making using relevant case studies. In addition to basic finance concepts, topics include capital acquisition, cost of capital, capital investment decisions, tools of risk analysis, and financial and operating analysis. Analyses are applied to for-profit and not-for-profit health care organizations. The course employs extensive use of spreadsheets.

HMP 4500 - Health Operations Management (3)

Course examines operational issues in health care management. Topics include systems analysis, continuous quality improvement and re-engineering, demand forecasting, facility location and design models, decision analysis techniques, linear programming, queuing and waiting models, inventory control models, and statistical quality control. The goal is to instill an understanding of the language, applications, and limitations of quantitative models with regard to decision-making and problem solving in health service organizations. Prerequisite(s): HMP-1300 and one of the following: MATH-1300, STAT-1300, DSCI 2070, OPM 2070 or PSY-2050

HMP 4600 - Strategic Management in Health Care (3)

This is the capstone course in the health administration undergraduate curriculum and is open to advanced BSHM students or others with the permission of the instructor. The purpose of this course is to assist the student in integrating strategic thinking and strategic management of health care organizations. Integration is facilitated by individual and team analysis of complex cases, including simulations.

HMP 4900 - Health Management Rounds (0)

Career development lecture series designed to expose students to the philosophical approaches, leadership styles, policy processes and decision-making strategies used by successful health care management executives, health policy makers and health policy analysts across the spectrum of the health sector

HMP 4910 - Internship (1-6)

The Health Management internship is an opportunity for experience in health care settings, including opportunities to understand how organizational decision making is made and implemented. Students, mentors, and preceptors will develop and specify the responsibilities and expected benefits. Internship sites selections are the primary responsibility of the student although some are available through the department.

HMP 4930 - Special Topics (1-3)

Topics course, content varies.

HMP 4970 - Directed Readings in Health Management (3-6)

The course provides students with an opportunity to work closely with faculty on research in health management.

HMP 4971 - Directed Research in Health Management (3-6)

The course provides students with an opportunity to work closely with faculty on research in health management.

HMP 5000 - 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 5030 - 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 5040 - Fundamentals of Economics and 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 set. Offered every Fall semester.

HMP 5100 - Quality Improvement in Health Care Management (3)

This course examines the historical development, current concepts and techniques and future trends related to the monitoring and evaluation of the quality of health care services. Cases will be used to present current issues surrounding attempts to integrate quality management and increased accountability in health care organization. (Offered annually)

HMP 5110 - 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 5130 - 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, 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 5160 - Health Care Supply Chain Management (3)

This course will provide students a comprehensive understanding for managing the health care supply chain with its unique challenges. Content is classified into: understanding external partners, traditional supply chain management functions, and critical departments that disproportionately account for health care supply costs. Students will conduct a supply-chain project in an organization.

HMP 5170 - 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 5190 - Analytical Methods for Health Management (3)

This course presents basic epidemiological and statistical methods necessary for healthcare management, including disease and outbreaks, measuring outcomes and risks, and common statistical methods. For a specific management problem, students will apply methodological skills to understand, describe, analyze, and present a health problem.

HMP 5200 - Health Economics (3)

This course examines the corporate responsibility of health services administrators in reducing environmental and occupational health risks of communities and individuals they serve and of employees and patients who use or work in the health delivery system.

HMP 5210 - 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 5300 - 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 5310 - 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 5330 - 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 5340 - Health Care Marketing (3)

The purpose of this course is to train future health services professionals in managing and marketing health services from a strategic perspective. The course is intended to present principles, theories, methods, and tools used in developing, implementing, and managing successful marketing strategy, which creates and shapes the future. The marketing process, consumer behavior, the marketing mix, and controlling and monitoring marketing processes are examined in relationship to the unique and changing aspects of the health services industry. Offered annually.

HMP 5350 - 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 5370 - 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 5380 - 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 5390 - Ethical Leadership in Health Management and Policy (3)

This applied course examines leadership through case studies in a variety of contexts and cultures. The purpose is to expand students' point of view by considering the theoretical foundations and historical perspectives of leadership, contemporary views of leadership, and student's personal exploration of ethics-based leadership in the healthcare setting.

HMP 5400 - 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 5480 - Social Justice and Social Ethics in Community Benefit (3)

Many health care organizations judge their success based on their ability to care for those who lack the resources to otherwise access care. What does justice require of such an organization? This course will apply traditional bioethical principles to community benefit decisions and explore the concept of human dignity as it relates to the special moral importance of health. This course will also provide students with opportunities to explore how personal ethics must be coupled with social ethics.

HMP 5500 - 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 5520 - 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 5550 - 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 5610 - Advanced Emergency Management (3)

This course will provide an overview of the history, current status, and future of Emergency Management and Homeland Security in the U.S. Students will examine associated definitions, theories, and principles. The course will introduce students to various levels of assessment, planning and operational implementation of preparedness and recovery plans.

HMP 5620 - Crisis Leadership (3)

Today's organizations, communities, and social systems are faced with unprecedented, increasingly complex, and more devastating and recurrent crisis events. This course provides students with an overview of crisis leadership and emergency management, the continuum between traditional and crisis leadership, and a framework for a systematic approach to related theory, models and methods.

HMP 5630 - Interpersonal Dynamics and Crisis Leadership (3)

This course introduces students to research, methods, tools and group interactive exercises to understand behavior and functioning in times of crisis. Theory, models and methods for assessment of emotional intelligence are used and the constructs are applied to enhance knowledge of personal leadership under stress or in crisis situations.

HMP 5640 - Critical Thinking and Crisis Leadership (3)

This course utilizes a multidisciplinary approach to increase understanding of Crisis Leadership within the context of critical thinking. The crisis leader is examined for effective leadership before, during and after a crisis. The focus is on systems thinking, anticipatory thinking, crisis framework, crisis family types, knowledge systems, and methods to analyze stakeholder roles and influence.

HMP 5690 - Crisis Leadership Capstone Sem (3)

This course provides the opportunity for students to apply knowledge, skills and competencies developed during completion of previous core courses required to complete the MPH in Emergency Management and Crisis Leadership. Students will apply emergency management and crisis leadership theory, models and methods studied in previous courses to analyze, interpret and create recommendations regarding systemic models for improving community resilience. A necessary foundation for successful completion of course objectives is effective use and application of systems and critical thinking skills and understanding of the role of crisis leadership examined from a perspective of improving personal and systemic resilience to prevent, prepare, mitigate, and more effectively respond and recover from crisis events.

HMP 5700 - Health Care Financial Management (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 5710 - Financial Aspects of Health Care (3)

Managed health care integrates health insurance functions with delivery of medical care. This course introduces students to financial issues faced by health care managers in a managed care environment. Topics include fundamentals of insurance, capitation rate development, risk analysis in managed care systems, cost accounting and management, and Medicare and Medicaid managed care. The course employs case analysis and team projects with local health-related organizations. (Offered annually.)

HMP 5720 - 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 5725 - Health Insurance and Managed Care (3)

Affordable Care Act implementation and consolidation within the health care industry have led to dramatic changes to the health insurance and managed care system in the United States. This course covers the fundamentals of health insurance and managed care, as well as recent changes and where the industry is headed in the future. The course will focus on the following topics: the basics of health insurance theory, an overview of the public and private health insurance system in the United States, impact of the ACA and other governmental regulations on the health system, and key components of managed care. Offered in spring. Must be enrolled in the MHA program, must not be enrolled in undergraduate level courses. Prerequisite: HMP 5000

HMP 5800 - Strategic Management in Health Care Organizations (3)

This is the capstone course in the health administration curriculum and is open to advanced MHA students or others with the permission of the instructor. The purpose of this course is to assist the student in integrating the knowledge and skills developed during the course of study in the MHA program in the context of strategic thinking and strategic management of health care organizations. Integration is supported by individual and team analysis of complex cases, at least two of which are simulations. (Offered annually.)

HMP 5830 - Applied Management Projects I: Definition and Planning (3)

This course will help students enhance their problem analysis/solution development skills for project definition and planning in the healthcare context. This is the first of a two-part series on applied projects and designed for executive master of health administration students. Instructor approval required for other students.

HMP 5840 - Applied Management Projects II: Execution and Closure (3)

This course will help students enhance their problem analysis/solution development skills for project definition and planning in the healthcare context. This is the second of two part series on applied projects and design for executive master of health administration students. Instructor approval required for other students.

HMP 5890 - 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 5900 - 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 5910 - 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.)

HMP 5960 - Capstone Seminar in Health Management & Policy (3)

As a capstone or culminating experience, the seminar integrates learning from all aspects of the curriculum through application of knowledge in individual and group exercises. The course also considers issues of current significance for health policy in the United States and internationally. Offered annually.

Maternal Child Health (MCH)**MCH 5000 - Maternal Child Health I: Foundations in Maternal Child Health (3)**

This course introduces Maternal Child Health in public health using the Life Course Model and including: key MCH legislation and programs, analysis of current health issues for mothers, children, and families from preconception to adolescence. Health disparities, MCH policies, and programs in resource-poor environments, domestically and internationally, receive attention.

MCH 5010 - Maternal and Child Health Practice: Programs, Policy & Advocacy (3)

Builds on MCH I and MCH Epidemiology and other required courses. Focus on application of assessment, program design and program evaluation skills to meet MCH population needs domestically and internationally. Attention will be given to leadership skills including program management, policy analysis and advocacy for mothers, children and their families. Prerequisites: 1) Either MCH Epidemiology or Perinatal Epidemiology, and 2) MCH I: Foundations in Maternal Child Health. Perinatal Epidemiology may be taken concurrently.

Public Health Studies (PHS)**PHS 6010 - 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 6050 - 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 6060 - 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 6900 - Professional Development (0-2)

This Professional Development course for doctoral students is designed to provide students with structured experiences and activities to prepare doctoral candidates for work in academia and other professional roles. Students will have the opportunity to gain practical experience and knowledge in manuscript writing and review, career navigation, soft skills, research communication, emerging innovations in public health, and critical appraisal of current research. Students may also elect to spend a semester focused on best practices for teaching by earning the Foundations Certificate at the CTTL. Students will enroll in the class three times throughout their time in the doctoral program. Offered fall and spring.

PHS 6910 - Teaching Internship (0)

Introduces students to the methods of undergraduate and graduate level teaching, including syllabus preparation and presentation skills.

PHS 6951 - Special Study for Exams: Written Foundation (0)

PhD students in Public Health Studies are to enroll in the semester in which they intend to take their Foundations Written Exam. Prerequisite: PHS 6050.

PHS 6952 - Special Study for Exams: Written Analytic (0)

PhD students in Public Health Studies are to enroll in the semester in which they intend to take their Analytic Written Exam. Prerequisite(s): PHS-6010 and BST-5100.

PHS 6953 - Special Study for Exams: Written Concentration (0)

PhD students in Public Health Studies are to enroll in the semester in which they intend to take their Concentration Written Exam. Students must complete the Methods and Concentration courses listed for their specific concentration as listed on their IPS form prior to taking the exam.

PHS 6954 - Special Study for Exams: Oral Exam (0)

PhD students in Public Health Studies are to enroll in the semester in which they intend to take their Oral Exam. Further instruction for scheduling the exam can be found in the student handbook. Students must complete all structured coursework and successfully pass all written exams before enrolling in this course.

Public Health (PUBH)**PUBH 2100 - Introduction to Global Health (0-3)**

This course introduces students to the concepts of public health by tracing its historical evolution. By using classic public problems and their resolutions, the philosophy, values and mission of public health are examined. The trends in global health such as epidemic responses, disease-specific programs, funding mechanisms, and capacity-building are discussed.

PUBH 2300 - Contemporary Issues in Global Health (3)

This course explores biological, environmental, social, and political factors impacting the health of populations across the globe. Topics covered will change depending on current events, but will likely include: environmental degradation, climate change, biosecurity, health education in diverse populations, and chronic and infectious diseases.

PUBH 3100 - Public Health & Social Justice (3)

Health has special moral importance for the well being of individuals and populations. We will discuss ethical issues associated with economic measures, resource allocation, priority setting, and human rights. The course is designed to evoke thoughts on personal and institutional responses to the questions of social justice and health.

PUBH 3200 - Evidence Based Public Health (3)

This course introduces students to approaches for developing and selecting public health interventions and evaluating their efficacy from a scientific perspective. With examples taken from health systems around the world, students learn how to access and interpret data systems and analytical methods and apply public health evidence to public policy making. This course will address the challenges of translating and disseminating research discoveries into communities.

PUBH 4000 - Politics and Public Health Advocacy (3)

Public health is inherently a political discipline. Practitioners require an understanding of the way public opinion and legislation on matters of public health are shaped. This course exposes students to the basics of public health policy, coalition-building, written and verbal advocacy tools, and includes several real-world experiences of advocacy work.

PUBH 4100 - Biological Basis of Public Health (3)

A basic understanding of public health biology is the cornerstone upon which rest the five core disciplines. A unique characteristic that differentiates public health from other social movements or social action is its grounding in science. The biological aspects of humans, microorganisms, and other factors such as physical environment will provide insight into this important relationship.

PUBH 4900 - Global Health Field Experience (1)

This course provides students with: 1. the background to anticipate, insofar as possible, what they might experience during an international health trip; 2. the knowledge to draw upon to make the trip more beneficial for them and the people they encounter; and 3. the opportunity to reflect constructively on the experience when they return.

PUBH 4960 - Capstone in Public Health (3)

This course enables students to demonstrate achievement of BSPH program learning outcomes through individual and group projects. Students will also synthesize public health experiences with other undergraduate coursework and experiences and engage in professional development. Offered Fall and Spring semesters. Senior public health majors only. Prerequisites: HCE3100, HMP1300, PUBH2300, PUBH3200, PUBH4000, PUBH4100, BST3100, EPI4000. Pre-Reqs that may be concurrent: PUBH4000, PUBH4100, BST3100, EPI4000

PUBH 4970 - Directed Research in Public Health (3-6)

The course provides students with an opportunity to work closely with faculty on research in public health.

PUBH 5010 - Mission and Practice of Global Public Health (3)

This course introduces students to the context of public health practice, including its legal basis, history, mission, the core functions of public health, and institutional structure of public health practice. Theoretical and practical perspectives are presented to illustrate the workings of public health at local, state, national, and global levels.

PUBH 5110 - Managerial Aspects of Public Health Practice (3)

This course presents concepts and methods of management tools useful for directing a public health agency. Topics concerning organizational design, finance and budgeting, human resources management, public relations, quality improvement, and planning are presented with examples primarily focused on state and local public health practice.

PUBH 5510 - Grant Writing (3)

This course will provide information and hands-on experience on the content and process for preparing competitive grant proposals. Lectures and discussions will examine major funding sources and their interests, core components of grant proposals, the process for preparing proposals, strategies used by reviewers to evaluate grant proposals, and techniques for writing concisely. (Offered annually)

PUBH 5600 - GIS and Public Health (3)

This is an introductory course in Geographic Information Systems (GIS) and its application in the Public Health arena. Historically, the public health system has relied on three components to accomplish its vital role in the community: the structure that supports and maintains these dedicated workers and the information and communication systems used by these organizations in collecting and disseminating accurate data for the decision-makers and the public. This course will explore portions of the last component of this mix. It will delve into the basic structure of geographic information systems (GIS), define GIS as a technology - a computer-based system for integrating and analyzing geographic data - and explore the concept that geographic patterns are inherent in data and relationships between features.

PUBH 5610 - Remote Sensing in Public Health (3)

This introductory course emphasizes the use of remote sensing techniques and methods as tools are applied to understand infectious disease and environmental health interactions. The goal of this course is to give students a combination of theoretical background, examples of applications in the literature and hands-on experience in using remote sensing hardware and software. This course will provide an introduction to the basics of remote sensing, focusing on analyzing and addressing public health issues. It is intended for graduate students and will provide information and experience to understand the basic concepts, language, and methodologies of remote sensing as related to the issues of concerns to public health professionals. It will provide a platform of knowledge and expertise from which informed decisions concerning the application of remote sensing methodologies and interpretations can be made. This course will not produce remote sensing experts in the public health arena; however, individuals who understand the concepts, can frame pertinent questions, and coordinate with remote sensing analysts or spatial scientists to investigate and solve public health questions.

PUBH 5620 - Politics and Public Health Advocacy (3)

Public health is inherently a political discipline. Practitioners require an understanding of the way public opinion and legislation on matters of public health are shaped. This course exposes students to the basics of public health policy, coalition-building, written and verbal advocacy tools, and includes several real-world experiences of advocacy work.

PUBH 5900 - Public Health Rounds (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.

PUBH 5910 - Practice Experience in Public Health (0)

This course provides supervised experience in application of public health techniques through work in a public health agency or other health care organization.

PUBH 5950 - Special Study for Examinations (0)

Registration is required for Master of Public Health students during the semester of their oral comprehensive examinations.

PUBH 5960 - Capstone in Public Health Practice (3)

This culminating experience requires students to apply the knowledge and skills they have acquired across the MPH curriculum to a situation approximating some aspect of professional practice. Each student will prepare a major paper focused on a program, service, or policy related to a significant public health problem or issue.

PUBH 5970 - Research Topics in Public Health Practice (1-3)

This course provides direct research experience in public health. Content is developed jointly between the student(s) and a faculty mentor.

PUBH 5980 - Graduate Reading in Public Health Practice (1-3)

This course provides specialized study in public health to enhance skills in literature review and problem solving. Content is developed jointly between the student(s) and a faculty mentor.

PUBH 5990 - Research Project (0)

This course is an independent directed research project that culminates the Master of Science in Public Health. Under the guidance of the academic advisor and other qualified mentor(s), each student designs and implements a research project commensurate with their professional training and interests, using the skills developed in the Masters of Science in Public Health curriculum.

Social Work (SWRK)**SWRK 1000 - Introduction to 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 2100 - Human Behavior & the Social Environment (3)

This course is designed to introduce the student to theories, bodies of knowledge, and perspectives which provide critical insight into the behavior of individuals. The critical perspective will be used to analyze and integrate the various theories of human development within the values and social justice orientation of social work.

SWRK 2200 - Human Development Through the Life Span (3)

This course is designed to introduce students to human growth and development from prenatal life through old age, according to a variety of theoretical perspectives. It includes theories and knowledge of biological, psychological, social, cultural, and spiritual aspects of human life across the life span.

SWRK 3100 - The 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 3200 - Diversity and Anti-Oppression 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 multidimensional, cross cultural generalist framework. Prerequisite: SWRK 1000; Pre/Co-requisites: SWRK 2100 or SWRK 2200.

SWRK 3300 - Social Work Practice with Individuals (3)

This is the first of three courses in the practice sequence, in which students are introduced to the competencies relevant to generalist social work practice and oral and written communication skills. Using the individual as the client system, this course provides a foundation in skills, theories and methods of generalist practice that can be built upon in the other practice courses and will also emphasize interviewing, engagement, assessment, intervention, evaluation and termination. Pre/Co-requisites: SWRK 2100 or SWRK 2200.

SWRK 3400 - Social Work Practice with Families and Groups (3)

Building upon the skills developed in SWRK-3300 (Social Work Practice with Individuals), the focus of SWRK-3400 (Social Work Practice with families and Groups) will be to expand those skills into work with families and groups. Specific theories and interventions associated with families and groups will be introduced. New skills relating to families and groups will be developed. Prerequisite: SWRK 1000

SWRK 3500 - Social Work Practice with Organizations and Communities (3)

The course utilizes a generalist practice perspective on values, knowledge and skills within a systems framework for planned change with a particular focus on work with populations of special concern to social work. Groups experiencing social and economic injustices based on racial, ethnic, socio-cultural, and gender characteristics are of special concern in this course. Students will learn skills related to maintaining and influencing organizations, community organizing and community development. Prerequisite: SWRK 1000

SWRK 3600 - Financial Ed, Lit & Capability (3)

Prerequisite: SWRK 1000

SWRK 3700 - 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. Prerequisite: SWRK 1000

SWRK 3980 - Independent Study (1-6)

Prior approval must be obtained from the undergraduate program director or from a faculty member who agrees to supervise the student in the independent study.

SWRK 4000 - Practicum Planning (0)

Pre/Co-requisites: SWRK 3300 or SWRK 3400 or SWRK 3500.

SWRK 4100 - Social Work Practicum I (5)

Students assigned responsibility for work with individuals, groups and communities in various social work sites under professional supervision. Prerequisites: SWRK 3300 or SWRK 3400 or SWRK 3500; SWRK 4000. Co-requisite: SWRK 4150. Must be Junior or Senior to enroll.

SWRK 4150 - 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. Co-requisite: SWRK 4100. Must be Junior or Senior to enroll.

SWRK 4200 - Social Work Practicum II (5)

Continuation of SWRK-4100.

SWRK 4250 - Integrative Practice Sem II (1)

Continuation of SWRK-4150.

SWRK 4980 - 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 5700 - Values and Ethics in Social Work (3)

This course is a comprehensive review of the values and ethical dimensions of social work practice.

SWRK 5701 - Social Justice: Human Liberation and Community-Building (3)

This course explores the meaning of social justice, community-building, human liberation and environmental parity within the context of social work practice. Based on social work's historical mission of intervention in high-risk communities while advocating for social reform, this course is aimed at teaching students the history, theory and practice realities of community-building locally and globally.

SWRK 5702 - Social Policy (3)

This course focuses on social policy within the context of its historical development and its current functions within contemporary society. It examines the substance of policy choices, the values and beliefs that underlie these choices, the political process through which the choices are made, and the potential roles of social workers in that process.

SWRK 5703 - International Social Work (3)

These courses are offered in a rotation in the summer session or January intercession. Section 04-The Ghana Experience-This is a two week experiential course in Ghana, West Africa, which features concentrated study, lectures, and interactions with the people of Ghana. The course involves an in-depth examination of global, social, and economic issues of development; and explores the agencies, elements, and patterns of responses used to address hunger, health care, education and other issues impacting the people of developing countries. Section 05-Resources and Distributive Justice Issues in India-The program is divided into two settings, urban and rural. In approximately half the course, students will study urban issues through lectures and fieldwork in Mumbai. In the second half of the course, students will examine rural issues in the same format in Dahanu. The program content includes Indian political, social and economic history and current social and environmental issues. Fieldwork in both settings provide students with practical hands-on experience.

SWRK 5704 - Spirituality in Clinical and Healthcare Practice (3)

This course provides a framework for examining religious experience within the context of social work values. The purpose is to develop knowledge and skills for spiritually sensitive clinical and/or healthcare practices. Students have the opportunity to reflect upon their personal beliefs and values and integrate these experiences into their professional practice in ways that are responsible, sensitive and competent. Models of spiritually sensitive practice are developed and critiqued.

SWRK 5705 - Practice in Global Issues (3)

This course is designed to provide students with a working foundation for social work and public health practice in a global context. It is intended for students preparing to go on their international practicum or internship or those who are interested in working in a country other than their own. While this course is not intended to be a prerequisite for SWRK 703, it is highly encouraged. Course offered in the spring.

SWRK 5707 - Policy Practice for Social Justice (3)

In this course, students will gain leadership skills to effectively advocate for social policy and economic justice. Course content will prepare students to use a range of tools and skills to effectively change or enhance societal structures. Social work skills in policy practice with oppressed and vulnerable groups will be explored in the student's area of concentration.

SWRK 5708 - 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 policy analysis as a systematic means of approaching this topic.

SWRK 5710 - Policy Leadership for Community and Organization Practice (3)

This course will explore conceptual, analytical, and strategic parameters of effective policy leadership for community work. It seeks to provide for the community social worker both perspective and guidance for facilitating changes in community policy forums, decision-making structures, and policy implementation arenas. An operational goal of the course is to increase the community policy development skill repertoire of the MSW professional to inform and enhance effective community practice.

SWRK 5711 - Social Work and the Law (3)

This course is an overview of the U.S. legal system and how the law impacts social work practice at different levels and in a variety of settings. The course includes content on legal issues related to competency, nonprofit management, criminal justice, and family matters.

SWRK 5715 - Practice with Families and Communities Experiencing Poverty (3)

This course is designed to examine the needs of families and communities of all sizes that are struggling with poverty. A variety of poverty reduction models are examined to develop an understanding of multilevel assessment and practice interventions focused on empowering families and communities. Patterns of social and economic injustices that result in the inequitable distribution of resources and opportunities are also examined.

SWRK 5716 - Diversity and Anti-Oppression Practice (3)

This course focuses on human diversity within and between groups and anti-oppression interventions in social work practice. The content includes perspectives on discrimination and oppression based on race, gender, class, age, sexual orientation, ethnicity, mental and physical disability, and/or spiritual orientation. Course addresses how group membership affects access to resources, services and opportunities and relates to risk factors for specific population groups.

SWRK 5717 - Foundations of Non-Violent Peacemaking (3)

This seminar course focuses on essential knowledge and skills necessary to engage in the peacemaking process. Students explore and analyze their own understanding of the concepts of peace and conflict and examine the role of peacemaking in light of those understandings. Models for peacemaking are examined. Practical skills associated with the peacemaking process including conflict mediation/resolution and reconciliation are discussed.

SWRK 5718 - Care of Elderly: Interdisc App (2-3)

Designed to focus on an integrated approach for health care delivery to the elderly. Emphasis is on the physiological, psychological, socio-cultural, spiritual, ethical, and political/legal theoretical basis for care of the elderly. Opportunities are provided to acquire a knowledge about the elderly from the various disciplines in relation to practice, education, and research.

SWRK 5720 - School Social Work (3)

This course provides the student with the basic knowledge and skills needed by the school social worker. Content includes the historical development of school social work; education and special education laws and mandates; school social work processes including referrals and assessments; and the social work roles of clinician, broker, advocate, educator, consultant and researcher in the school.

SWRK 5721 - Community Theory & Practice (3)

In this course, students gain advanced knowledge and skills for community practice. Course content focuses on theories of community and social systems as well as practice theories emphasizing social change, empowerment, and promotion of social and economic justice for culturally diverse and at-risk communities. The roles of community organizer, community developer, and social planner are emphasized in this course.

SWRK 5725 - 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 5729 - Social Work in Corrections (3)

This course presents the issues and trends within adult and juvenile corrections. This course will assess adult and juvenile correctional systems, including jails and prisons, probation, parole, and alternatives to incarceration. Treatment of substance abuse, health problems, and mental illness are examined within the context of correctional settings and offender populations.

SWRK 5731 - Fall Inter-Professional Team Seminar (0)

This course is designed to provide students with a learning experience focused upon client system centered care as members of an interprofessional team. The purpose of the team will be to provide education, consultation, and/or direct care for medically underserved individuals/families using an interprofessional plan of care. The interprofessional team will identify a pertinent health-related issue with their chosen population. They will cooperate, collaborate, communicate, and integrate in order to provide a holistic approach to care. Each professional will use his or her knowledge and expertise to maximize the productivity of the interprofessional team to improve health outcomes. Seminars will provide opportunities for students to discuss and reflect on how service activities express the professional obligation to work as change agents for a more just society. Registration and attendance in one Fall section of Saint Louis University's Inter-Professional Team Seminar is required for all MSW students in the Clinical concentration.

SWRK 5732 - Spring Inter-Professional Team Seminar (0)

This course is designed to provide students with a learning experience focused upon client system centered care as members of an interprofessional team. The purpose of the team will be to provide education, consultation, and/or direct care for medically underserved individuals/families using an interprofessional plan of care. The interprofessional team will identify a pertinent health-related issue with their chosen population. They will cooperate, collaborate, communicate, and integrate in order to provide a holistic approach to care. Each professional will use his or her knowledge and expertise to maximize the productivity of the interprofessional team to improve health outcomes. Seminars will provide opportunities for students to discuss and reflect on how service activities express the professional obligation to work as change agents for a more just society. Registration and attendance in one Spring section of Saint Louis University's Inter-Professional Team Seminar is required for all MSW students in the Clinical concentration.

SWRK 5733 - Advanced Social Work Practice (3)

Students will learn the practice skills needed to effectively integrate services, care, and support for individuals and families facing health, mental health and substance use problems. Building on students' foundational knowledge of general practice skills this course will emphasize practice and implementation of approaches designed to enhance effective communication, consumer engagement, motivation and empowerment with clients as a member of a collaborative inter-professional team. Through the use of case vignettes, role-plays, and small group activities students will gain experience and skills necessary to be effective in a variety of roles in integrated physical and behavioral health care settings. This is a Concentration Core Course for MSW students in the Clinical concentration. Prerequisite: SWRK 5750. Pre/Corequisite SWRK 5842.

SWRK 5734 - Human Behavior and the Social Environment Pt. II (3)

This course explores theories of human behavior as it relates to health, illness, disability, diversity, and environmental factors. This is a Concentration Core Course for MSW students in the Clinical concentration.

SWRK 5735 - Complementary Approaches to Healing in Social Work Practice (3)

This course introduces the student to alternative and complementary schools of thought in medicine, including allopathic, anthroposophic, ayurvedic, Chinese, chiropractic, homeopathic, naturopathic, and osteopathic approaches to healing.

SWRK 5737 - Organizational Theory and Leadership (3)

In this course, students develop an understanding of theories of organization and leadership as applied to human service organizations. Students examine the theories most commonly used for understanding and leading human service organizations. Particular attention is given to understanding the dynamic environment within which social work and other human service leaders operate. (NOTE: This course is no longer taught. The content was integrated into SWRK-5785 Organizational Programming and Planning).

SWRK 5739 - 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 5741 - Family Interaction under Stress (3)

This course examines the contemporary U.S. family as one of the major social institutions and as a social system. A range of theoretical perspectives are presented as analytical tools for exploring the nature of family interaction under stress. Emphasis is placed on systems. This course examines the contemporary U.S. family as a major societal institution and social system. A range of theoretical models is presented as analytical tools for probing the nature of family interaction under stress. Emphasis is placed on the interactional, systems, and life cycle perspectives as comprising a comprehensive theoretical framework for understanding the types of stresses encountered by families over time and the attempts by family members to cope with these stresses.

SWRK 5742 - Evidence Based Practices in Community Mental Health (3)

This course focuses on a person-centered, recovery-oriented and evidence-based framework for social work practice with individuals diagnosed with psychiatric disabilities and/or substance use disorders. Students develop skills in the assessment, diagnosis, treatment planning and intervention of major psychiatric and substance use disorders. The nature and diagnosis of psychopathology and the ethical integration of the DSM into clinical social work practice is critically analyzed. Emphasis will be placed on understanding the complex nature of co-occurring medical, mental health and substance use disorders and in the integration of a range of evidence-based interventions in the area of mental health and substance use practice.

SWRK 5744 - Substance Abuse Interventions (3)

The overall goal of the course is to increase student knowledge about alcohol and drug abuse/dependency and the recovery process. This course surveys the theoretical, practice, policy, and research literature that deal with the etiology, dynamics, treatment, and prevention of substance use disorders in contemporary U.S. society. The view conveyed in this course is that substance use and abuse, its causes, its effects, and its remedies are extremely broad, systemic, multi-level, and multivariate.

SWRK 5745 - Health and Mental Health Interventions with Older Adults

This course explores skills and competencies needed to effectively work with older adults and their families. It provides an overview of health and mental health issues with an emphasis on holistic and systemic assessments and social work practice interventions. The environmental, psychosocial, biologic and spiritual influences on health and mental health are highlighted. Clinical, programmatic and policy interventions known to promote healthy behaviors are discussed. Attention is paid to social justice, ethics and the law, particularly as it relates to economic deprivation and oppression leading to the inequitable distribution of health services to older adults.

SWRK 5746 - Principles and Concepts in Applied Behavior Analysis (3)

This course familiarizes students with the fundamental concepts and principles and philosophical assumptions of behavior analysis as well as the basic concepts of operant and respondent conditioning. Students review some of the basic laboratory research that has illuminated the principles of behavior. The material covered contributes to prepare students to work in the field of behavior analysis and related fields for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 5747 - Assessment and Selecting Interventions in Applied Behavior Analysis (3)

This course develops students' basic knowledge with respect to behavioral assessment methodologies, and the selection and design of interventions in the field of applied behavior analysis. This course reviews some of the basic assumptions and characteristics that define the field. The material covered prepares students to work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 5748 - Behavior Change and Processes in Applied Behavior Analysis (3)

This course expands students' basic knowledge with respect to behavior analysis fundamental concepts and principles and philosophical assumptions including the basic behavioral principles of operant and respondent conditioning. This course develops students working understanding of the use of these principles in behavior change strategies and interventions in the field of applied behavior analysis. Students review some of the fundamental applied literature that demonstrates the efficacy of behavioral strategies and that continue to define the field. The material covered prepares students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 5749 - Behavior Change and Ethics in Applied Behavior Analysis (3)

This course familiarizes students with the ethical issues confronting those working in a behavior analytic (or related) capacity. Students learn the ethical responsibilities inherent to working in their chosen field. Ethical codes and cases are analyzed. Topics include gaining informed consent, protecting confidentiality, selection of the least intrusive behavior change methods and procedures, and protecting individual rights. The ethical standards prepare students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 5750 - Social Work Practice with Individuals, Families, and Groups (3)

This course prepares students to apply a generalist perspective and systems framework to direct social work practice with individuals, families, and groups. This course emphasizes the basics of communication, interviewing, relationship building, and professional use of self, skills essential to effective social work assessment, intervention and evaluation. Theories and practice skills related to social work with individuals, families, and groups will be the primary focus.

SWRK 5751 - Social Work Practice with Communities and Organizations (3)

This course prepares student to apply a generalist perspective and systems framework to social work practice with communities and organizations as well as task/problem-solving groups within larger systems and settings.

SWRK 5752 - Advanced Clinical Skills for Substance Use Disorder Counseling (3)

Students in this course will achieve competence in the theory and techniques of assessment and stage-appropriate treatment of persons with substance use and co-occurring disorders. Offered annually in fall.

SWRK 5753 - 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. Prerequisites: SWRK 5750; Pre/Corequisite: SWRK 5742.

SWRK 5754 - Divorce Mediation (3)

This course will prepare social work students to provide divorce mediation based on the core social work value of client self-determination. Students will learn interest-based negotiation theory and skills of divorce mediation for use in social work practice. This course discusses the basics of family law including equitable property division, parenting responsibility and distribution of financial responsibility.

SWRK 5755 - Social Work Practice in the Health Field (3)

This course provides the framework for social work practice in the health care field. This course will cover the array of social work practice approaches and nature of interdisciplinary practice in various health settings such as clinics, hospice, skilled nursing care, and hospitals.

SWRK 5756 - Clinical & Public Health Approaches to Working with Veterans (3)

This course is designed to assist students, current practitioners, administrators, evaluators, and policy makers to understand the basic orientation, clinical approaches, and public health strategies that are effective in providing health and mental health care to Veterans. This course is to understand how to implement and use the Department of Veterans Affairs (VA) and Department of Defense (DoD) evidence best practices and program for the assessment and management of Traumatic Brain Injury (TBI), Post Traumatic Stress Disorder (PTSD), Substance Use Disorders (SUD), and for the prevention of suicide. A central focus of the course is on measurement based care, thus we will review the epidemiology, risk factors, and clinical assessment and measurement of mental health and co-occurring conditions the Veteran populations. Additionally, we will apply this data using the evidence based tools and consensus guidelines developed specifically by and for use in the VA/DoD health care systems with case vignettes on various Veteran populations.

SWRK 5757 - Foundations of Family Practice (3)

This course involves a survey of the family practice field in its epistemology, cultural influences, and models of practice. The course strives to integrate theoretical ideas into an understanding of practice applications, including methods and techniques. Students will integrate the general systems approach with family practice models in social work settings. Content will include both historical and present-day family practice models.

SWRK 5758 - Clinical Approaches to Chronic Health Conditions (3)

Students will learn the medical, psychosocial, spiritual and functional aspect of chronic physical illness and disability in order to thoroughly assess the impact on patients, families and larger systems. Evidence-based psychosocial interventions for specific chronic health conditions will be presented.

SWRK 5760 - Behavioral Interventions with Children & Adolescents (3)

Using a systems framework, viewing the child in environment, this course teaches students behavioral learning theories for work with children who have a wide range of challenging behaviors. These practice skills are essential for working with children in schools, residential treatment, juvenile justice system, foster care, outpatient psychiatric case management, etc. Students will learn to educate, consult, and collaborate with families and/or caregivers in the use of these methods.

SWRK 5761 - Evidence-Based Practice with Children and Youth (3)

This advanced clinical practice course in the Clinical Concentration builds upon the foundation level practice course and prepares students for direct social work practice with children and youth across child serving, behavioral health and integrated settings.

SWRK 5762 - Diagnosis and Assessment in Clinical Practice (3)

This course is designed to assist in the development of skills related to the diagnosis and assessment of psychopathology. Issues related to the etiology of psychopathology and the historical construction and development of diagnostic categories will be assessed. Special emphasis will be placed on the exploration, understanding and critical analysis of the nature and diagnosis of psychopathology and the integration of the DSM-IV-TR into clinical social work practice. While students will develop skills in the ethical use of the DSM-IV-TR in their practice, they will at the same time critically analyze the nature of clinical diagnosis as it relates to issues of gender, culture, age, sexual orientation, political power and socioeconomic status. Ethical issues to the integration of the DSM-IV-TR will be explored and the relationship between psychiatry and social work will be analyzed. Students will be challenged to develop solutions to the paradigmatic and ethical dilemmas associated with the use of the medical model and psychiatric diagnosis within the profession of social work.

SWRK 5763 - Loss, Grief and Healing (3)

This course explores the process and stages of loss and change as well as the counseling implications for social workers. Topics include the impact of losses and changes resulting from material loss, relationship loss, intrapsychic loss, functional loss, role loss and systemic loss.

SWRK 5764 - Child, Youth and Family Services & Policies (3)

This course provides social work knowledge and skills directed toward helping children and families involved with social service systems due to child abuse and neglect and other risk factors. The course will address issues of abuse, neglect, foster care, adoption, family treatment models, and case management.

SWRK 5768 - Health & Mental Health Policy (3)

Health care system of the United States from medical, sociological, political and economic perspectives; policy issues and alternatives.

SWRK 5769 - Marital/couples Counseling (3)

This is an introductory theory and skill development in course in marital and couples counseling. The focus is on developmental and on-going marital and couples relationship challenges.

SWRK 5771 - Intimate Partner Violence (3)

The focus of the course is on ways to reduce the incidence and impact of intimate partner violence. Students address and examine the theoretical understandings for violence against women and other intimate partner violence as well as the need for direct services, community organizing, and public policy changes that will help end intimate partner violence.

SWRK 5772 - Cognitive Behavior Therapy for Social Work Practice (3)

Students in this course will learn basic knowledge and skills of cognitive-behavior therapy as they relate to stage-appropriate assessment and treatment of persons with co-occurring mental illness and substance use issues. These skills will include developing a therapeutic alliance, problem formulation, assessment of maladaptive thoughts and schemas, cognitive restructuring, exposure therapy, development of various coping skills and relapse prevention. Students will learn how to integrate other treatment approaches such as harm reduction, motivational interviewing, and mindfulness with cognitive-behavioral approaches in order to assist people to achieve and maintain therapeutic goals.

SWRK 5773 - Approaches to Trauma Care (3)

This is an introduction to the study of trauma ranging from violence, natural disasters, child abuse and other forms of traumatic experience and its impact on client populations served in the field of social work. The implications of trauma are explored through various theoretical frameworks and assessment practices that address the biological, psychological, sociological and spiritual effects on individuals, families and communities. Theories and models of crisis intervention are presented, as well as their application in clinical practice with survivors of violent events and natural disasters. Students also examine and develop skills necessary to utilize evidence-based treatments with specific populations.

SWRK 5774 - Measurement and Experimental Design in Applied Behavior Analysis (3)

This course develops students' basic knowledge related to single subject research design, measurement and application of the empirical approach to evaluation of effectiveness of interventions in the field of applied behavior analysis. Students review some of the basic assumptions and characteristics that define the field. The material covered prepares students for work in the field of behavior analysis/related field and for board certification in Applied Behavior Analysis. Course content supports the social work value of social justice to provide professional services to persons with disabilities.

SWRK 5775 - Advanced Social Work Practice in Trauma with Children & Youth (3)

This course will introduce students to the common concepts (general theory and foundational knowledge), which informs evidence-based assessment and intervention with traumatized children and adolescents. Strength-based practice will be highlighted along with a focus on the identification of protective and promotive factors that foster resiliency and post-traumatic growth. Trauma is broadly defined and includes children and adolescents exposed to traumatic events including, but not limited to natural disasters, war, abuse and neglect, medical trauma, and witnessing interpersonal crime (e.g. domestic violence) and other traumatic events. The course will highlight the role of development, culture and empirical evidence in trauma-specific interventions with children, adolescents and their families. It will address the level of functioning of primary care giving environments and assess the capacity of the community to facilitate restorative processes.

SWRK 5776 - Advanced Social Work Practice in Trauma with Adults (3)

This course will introduce students to the common concepts (general theory and foundational knowledge), which informs evidence-based assessment and intervention with traumatized adults. Strength-based practice will be highlighted along with a focus on the identification of protective and promotive factors that foster resiliency and post-traumatic growth. Trauma is broadly defined, and includes adults exposed to traumatic events such as natural disasters, war, child abuse and neglect, sexual trauma, surviving life threatening accidents/injuries, and witnessing interpersonal crime (e.g. domestic violence), etc. The course will highlight the role of age, culture and empirical evidence in trauma-specific interventions with adults, with a specific emphasis on trauma treatment for Veterans in VA primary and specialty care settings (e.g. Prolonged Exposure, Cognitive Processing Therapy.)

SWRK 5777 - Advanced Clinical Family Practice (3)

This course is designed to help you develop knowledge and skills about various approaches to family practice from a social work perspective. An examination of the basic theoretical assumptions underlying family systems approaches and the practice principles that evolved from them is offered. An exploration of evidence-based practices and the application of these practices with various populations will be a focus of this course. An important aspect of the course is a consideration of the ramifications for social justice and other social work values and ethics from a family systems perspective. Offered annually in spring.

SWRK 5778 - Motivational Interviewing (3)

Students in this course will learn the theory and skills of motivational interviewing as they relate to stage-appropriate assessment and treatment of persons with co-occurring health, mental health and substance use issues. These skills will include: (1) using empathy and the skills of open ended questioning, affirmation, reflective listening and summarizing to develop discrepancies between behaviors and goals; (2) rolling with resistance; (3) eliciting, recognizing and reinforcing change talk; and (4) negotiating a change plan. Students will learn how to integrate motivational interviewing with assessment and treatment planning skills as well as other relevant interventions such as harm reduction, medication, and cognitive-behavioral approaches in order to assist people in achieving and maintaining therapeutic goals.

SWRK 5784 - Evaluation of Social Work Practice (3)

The course is designed to equip social work students with the knowledge and skills to engage in effective social work practice evaluation. Students will learn to identify and apply a variety of evaluation methods and use theoretical and conceptual models to assess processes and outcomes of practice with individuals, families, groups, organizations and communities to advance practice, policy and service delivery. Offered in spring.

SWRK 5785 - Organizational and Program Planning (3)

In this course, students are introduced to the basic conceptual and methodological principles and skills necessary for planning practice in human service organizations. Students examine the role of strategic and operational planning in charting the future of a well-run, human service organization. They acquire an appreciation for and critical perspective on the interconnectedness of organization and environment, anticipating trends, considering social change, needs and social problems, and planning for resource utilization, programmatic response and assessing program impact. Particular attention is given to the essential elements of designing a response to be used in requests for proposals and grant applications.

SWRK 5786 - End of Life Care and Social Work Practice on an Interprofessional Team (3)

This course prepares students to work with clients who are experiencing a life threatening illness. Students will explore physical, psychological, spiritual, emotional and sociocultural concerns typically encountered by clients and families confronted with a terminal illness. Emphasis will be given to the significance of the interprofessional approach to providing this kind of care with a focus on the professions of social work and nursing.

SWRK 5786 - Death, Dying, and Grief: Professional Practice and Self-Awareness (3)

This course explores the physical, psychological, spiritual, emotional, and sociocultural concerns typically encountered by clients and families confronted with dying, death, and grief. Course content will include personal death awareness, the integration of theoretical perspectives, and evidence-based practice interventions. Throughout this course, students will be encouraged to examine their own values and attitudes concerning issues related to death and grief and how these will impact their professional practice.

SWRK 5787 - Research Methods I (3)

This course is designed to equip social work students with the knowledge and skills to engage in effective research at the programmatic, policy, and direct levels of practice. It is the first in a 2 course sequence. Research Methods I focuses on students becoming not only effective consumers of research literature but also understanding the fundamentals of empirical research. The course accentuates the application of optimal methodologies and techniques necessary to examine the impact of services with clients, to assess the effectiveness and efficiency of human service programs and to investigate the efficacy of social and public policies. It focuses on conceptualizing and designing an applied research project culminating in a research proposal.

SWRK 5788 - Research Methods II (3)

This course is designed to equip social work students with the knowledge and skills to engage in effective research at the programmatic, policy, and direct levels of practice. It is the second in a 2 course sequence. Research Methods II focuses on executing the fundamentals of empirical research. It nurtures the students' ability to evaluate social work services, human service programs and/or social and public policies in order to improve them. The course accentuates the application of optimal methodologies and techniques necessary to examine the impact of services with clients, to assess the effectiveness and efficiency of human service programs and to investigate the efficacy of social and public policies. Students should emerge from the course able to execute an applied research project including refining a research study; collecting, managing, analyzing data; and report writing. The course culminates in a completed research project. Prerequisite(s): SWRK-5787 and one of the following, which may be taken concurrently: SWRK-5822, SWRK-5823, SWRK-5824, SWRK-5832, SWRK-5833, SWRK-5842 or SWRK-5843.

SWRK 5790 - Feminist Approaches to Social Work Practice (3)

The course is designed to clarify feminist issues and to illustrate how a feminist perspective in social work practice can facilitate individual and social change. Characteristics, values, techniques and areas of feminist practice are explored and distinguished from other theoretical models.

SWRK 5797 - Financial Education, Literacy and Capability Practice (3)

The course examines the role of social work within financial capability practice. This course focuses on financial literacy, financial education initiatives, and financial empowerment practices for individuals and families across the life cycle and communities. Social policy and policy change efforts related to these areas are also examined. Special attention is given to oppressed populations and communities experiencing poverty and near-poverty.

SWRK 5798 - Introduction to Non-Profit Organization Management (3)

This course examines the roles of the nonprofit sector and nonprofit organizations in contemporary society. The role of nonprofit organizations as vehicles for citizen participation and as commercial enterprises will be highlighted. The challenges facing nonprofit organizations in contemporary society will also be analyzed.

SWRK 5799 - Social Entrepreneurship (3)

This course introduces students to the concept and practice of social entrepreneurship. It reviews the historic and contemporary approaches to and models of social entrepreneurship. It explores the range of issues and challenges associated with social entrepreneurship. Particular attention will be given to microenterprise, venture philanthropy, social venture capitalism, social return on investment and business planning for social enterprises.

SWRK 5801 - Urban Issues Symposium (3)

In this interdisciplinary course, which is taught in cooperation with the School of Public Health, the School of Law, and other academic units at the university, students develop practical knowledge and skills required to successfully advocate for individuals and families grappling with various problems associated with housing.

SWRK 5808 - Social Work, Education, and Individuals with Exceptional (3)

This course provides the student with a working knowledge of the learning, psychological, cognitive and social characteristics of youth and children with exceptionality. Current methods of practice within the educational setting, interventions, strategies, and modifications for use within the general education classroom are examined.

SWRK 5809 - Sex Therapy in Clinical Practice (3)

This course deals with assessing and treating the sexual problems most commonly presented by individuals, and couples, including disorders of desire, aversion, orgasm, and pain. The principle of sex therapy will be covered from social constructionist and system perspectives, taking into account history, context, meaning, and relational components. Foundational and contemporary theories of sex therapy will be covered.

SWRK 5810 - Urban Ecology: Communities and Neighborhoods (3)

Ecology is the study of the relationships of species to environments. Human ecology is the study of the characteristics of spatially defined communities and the spatial arrangements of land uses within these spatially defined communities. This approach arose at the University of Chicago during the early part of the 20th Century and enjoyed great popularity in academic circles up until the 1950s. This course will explore the methods and theories that contribute to our ecological understanding of urban neighborhoods and communities.

SWRK 5812 - Introduction to Geographical Information Systems (3)

This course is designed to provide an overview of the conceptual, technical, and procedural aspects of Geographic Information Systems (GIS).

SWRK 5813 - Issues in Public Administration (3)

This course examines the role of public administration in the U.S., including historic evolution and current issues such as privatization, quotas, affirmative action, and whistle-blowing.

SWRK 5814 - Urban Economic Development (3)

This course examines factors determining business, industrial, and commercial location, techniques used in analyzing metropolitan growth, and methods used by industrial development organizations to attract business firms.

SWRK 5815 - Introduction to Public Sector Budgeting (3)

This course deals with the economic and political aspects of public budgeting at all levels of government. It features an in-class budget simulation.

SWRK 5819 - Foundation Integrative Practice Seminar (1)

This seminar is designed to provide opportunities for students to integrate foundation and a generalist perspective of social work theories, methods, values, and ethics with practicum experiences. Additionally the seminar will focus on maximizing learning experiences in the student's practicum and in gaining knowledge of other target populations and social service settings. Students will gain skills in peer consultation and support, case presentation, researching for practice-based literature, and in approaching various practicum challenges. SWRK 5821 or 5841 must be taken as a prerequisite as a corequisite.

SWRK 5820 - Concentration Integrative Practice Seminar (1)

This seminar provides an opportunity for students in the first Concentration Practicum SWRK-5822 Practicum II, to integrate theoretical constructs and information gained in the classroom with the application of social work practice. The seminars are designed to provide additional integration of coursework and daily practice; enhance a student's knowledge and skill base through peer sharing; and provide a supportive opportunity for students to debrief on practice challenges. SWRK 5843 or 5832 or 5822 must be taken as a prerequisite or corequisite.

SWRK 5821 - MSW/ABA Foundation Practicum (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 240 hours in the field. Restricted to student in the Applied Behavioral Analysis Concentration. All other SWRK students should register for "Foundation Practicum I" under SWRK 5841. * Must take in first 18 hours. Prerequisites: SWRK 5702, 5725, 5751 (may be taken concurrently), 5750 (may not be taken concurrently).

SWRK 5822 - MSW/ABA 1st Concentration Practicum (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field. Prerequisite: SWRK 5821. Corequisite: SWRK 5820.

SWRK 5823 - MSW/ABA 2nd Concentration Practicum (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field. Prerequisite: SWRK 5822. Corequisite: SWRK 5830.

SWRK 5824 - MSW/ABA 3rd Concentration Practicum (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 240 hours in the field. Prerequisite: SWRK 5823. Corequisite: SWRK 5840.

SWRK 5828 - Fund-raising for Non-Profit Organizations (3)

This course focuses on the cycle, stages and progression of fund development for formal, nonprofit organizations and grassroots associations. It introduces the concept of advancement, development, relationships and cultivation for nonprofit organizations. It emphasizes the importance of developing relationships within and matched to the stages and activities of institutional advancement and development.

SWRK 5829 - Post Modern Approaches to Family Practice (3)

This course is designed to develop knowledge and understanding of, skills related to, and the ability to think critically about postmodern approaches to family practice from a social work perspective. An examination of the basic philosophical/theoretical assumptions underlying several postmodern approaches and the practice principles that have evolved from them is offered. Students are introduced to some of the seminal sources relative to postmodern thinking in addition to those describing the following approaches to family practice: the reflecting team; solution-oriented-therapy; solution-focused therapy; narrative therapy; and therapeutic conversations. An important aspect of the course is a consideration of the ramifications for social justice and other social work values and ethics of a postmodern stance.

SWRK 5830 - ABA Integrative Practice Seminar II (0)

This is the second part of a three-part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, reviewing empirical literature pertinent to those change efforts. Prerequisite: SWRK 5820. Corequisite: SWRK 5823.

SWRK 5831 - Foundation Practicum I (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 300 hours in the field.

SWRK 5832 - Community & Organization 1st Concentration Practicum (2)

Students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field. Prerequisite: SWRK 5841. Corequisite: SWRK 5820.

SWRK 5833 - Community & Organization 2nd Concentration Practicum (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field. Prerequisite: SWRK 5832.

SWRK 5840 - ABA Integrative Practice Seminar III (0)

This is the third part of a three-part graduate level course (three seminars) that will ensure that students are able to successfully complete all three ABA practica. Students will understand and apply professional and ethical behavior analysis service in clinical contexts by conducting behavioral interventions, designing, implementing and monitoring behavior change programs and, reviewing empirical literature pertinent to those change efforts.

SWRK 5841 - MSW Foundation Practicum (2)

Must be taken within the first 30 hours of enrollment in the program. The foundation practicum requires students to have a generalist perspective social work experience with micro, mezzo, and macro activities. This practicum consists of 300 hours in the field. Prerequisites: Foundation courses. SWRK students in the ABA concentration should register for SWRK 5821. * Must take in first 18 hours * Prerequisites: SWRK 5702, 5725, 5750, 5751 (may be taken concurrently), 5750 (may not be taken concurrently). Corequisite:

SWRK 5842 - Clinical 1st Concentration Practicum (2)

Clinical students will learn to integrate knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field. Prerequisite: SWRK 5821 or 5831 or 5841 (may not be taken concurrently). Corequisite: SWRK 5820

SWRK 5843 - Clinical 2nd Concentration Practicum (3)

Students will continue to build on their knowledge, values, and skills to develop a professional level of practice with specific emphasis on their area of concentration. This practicum consists of 300 hours in the field. Prerequisite: SWRK 5842. Corequisite: SWRK 5820.

SWRK 5844 - Elective Practicum IV (3)

This elective provides additional practicum experience in an area of special interest to the student. Prerequisite: SWRK 5819 and 5841.

SWRK 5971 - Social Work and Pharmacology (3)

This course introduces students to the mechanisms of action, side effects, major drug interactions, and therapeutic uses of major classes of drugs. The role of social workers in medication management will also be addressed, particularly the skills needed to effectively collaborate with clients, families, and other health providers on medication-related issues. Special consideration will be given to the medication needs of special populations, including persons with mental illness, children, pregnant women, elderly persons and racial/ethnic minorities, as well as prescription drug abuse, over-the-counter medications and herbal remedies.

SWRK 5980 - Independent Study (1-3)

This offers students the opportunity for individual and independent study of a particular area related to social work theory or practice. Prior approvals by the student's academic advisor, Director of the MSW Program, and faculty member directing and evaluating the study are required.

SWRK 6000 - Foundations of Theory Development in Social Work (3)

This required course is designed to equip doctoral students with the knowledge and skills to engage in effective theory development and synthesis. The course considers some of the major historical currents in the philosophy of science that undergirds contemporary scientific research and accentuates emerging ideas in science that cross-cut traditional boundaries. The course culminates in a theoretical synthesis paper suitable for submission to a peer reviewed journal. (Offered every fall)

SWRK 6010 - Principles of Statistics and Data Analysis (3)

This required course serves to introduce doctoral students to the quantitative skills, methods, and techniques necessary for scientific analysis, particularly the social and behavioral sciences. Students will learn the vocabulary associated with scientific thinking and research, data collection, data analysis, data presentation, and interpretation and discussion of analytical results. Students will also be introduced to STATA, the statistical software program that will be used in subsequent analytical courses. This introduction will include instruction on data entry, data manipulation, and conducting basic data analysis and interpretation of results. (Offered every fall)

SWRK 6020 - Research Design & Measurement (3)

This course is designed to equip social work PhD students with the knowledge and skills to engage in effective descriptive, explanatory, and intervention research. The course accentuates the application of optimal methodologies and measurement techniques vis-a-vis a particular research question or study objectives. It focuses on conceptualizing and designing a research project culminating in a research proposal. (Offered every spring.)

SWRK 6030 - Multivariate Data Analysis (3)

This required course is the second of two required courses on quantitative analyses for doctoral students at the School of Social Work. The course is designed to equip students with the knowledge and skills to apply linear regression to empirical social work research. In the course students will learn the concepts of regression, simple regression, multivariate regression, regression diagnostics, and the goodness of fit. The course also involves categorical predictors, transformation of variables, collinearity, variable selection, and generalized linear models. A list of topics is provided in the course schedule. (Offered every spring)

SWRK 6040 - Research Area Synthesis (3)

The purpose of the research area synthesis (RAS) is for the student to demonstrate sufficient command of an area of research and advance a body of knowledge. This is achieved by independently completing an extended review paper (e.g., 50-75 double spaced pages) critically appraises and synthesizes the research literature on a particular topic. The result of this document shall include an assessment of major theories or perspectives, key findings, research design assets and limitations, and measurement issues, and development of a future research agenda. Limited to Ph.D. program in social work students who are in their final semester of coursework.

SWRK 6990 - Dissertation (0-12)

The ability to extend the knowledge base in Social Work is a qualification distinctive to the doctoral degree. A candidate for this most advanced, earned degree must present substantial evidence of this ability by presenting and defending a piece of original and independent research on a topic of importance that has been previously unresolved within the major field. This is perhaps the most valuable stage in doctoral training. Prerequisite: Successful completion of all doctoral coursework and written and oral exams. Limited to SWRK doctoral students.

Education (ED)

ED 1200 - Human Growth & Development (3-4)

Study of maturation in childhood, adolescence, and early adulthood designed for those entering the teaching profession. Emphasis is placed on biological, health, social, cognitive, and affective development. (Taken by all Renaissance candidates.)

ED 1400 - Education of the Exceptional Individual (3)

Study of the concept of exceptionality, specifically addressing the implications of atypical educational development. Alternative instructional strategies, educational decision-making, special education resources, inclusive programming, and related issues are examined.

ED 1500 - Surv of Science & Geography (4)

This course is a survey of the concepts, development and basic principles of physics, astronomy, biology, chemistry and geography with emphasis on: the scientific method, use of scientific tools, metric system, beginning chemistry, electricity, magnetism, light, severe weather immunology, reproduction, genetics, technology, geological time periods, evolution, and earth geography, in terms of man/land relationships and place formation.

ED 2000 - Candidate Exp: Educntl Obsrvtn (1)

A field-based course that offers an introduction to the professional obligations and responsibilities of teachers. Must be completed prior to enrollment in a 3000 level education course.

ED 2001 - Candidate Experiences: Educational Observations in Elementary School (1)

A field-based course that offers an introduction to the professional obligations and responsibilities of teachers. Must be completed prior to enrollment in a 3000 level education course.

ED 2002 - Candidate Experiences: Educational Observations Middle School (1)

A field-based course that offers an introduction to the professional obligations and responsibilities of teachers. Must be completed prior to enrollment in a 3000 level education course.

ED 2003 - Candidate Experiences: Educational Observations Special Education (1)

A field-based course that offers an introduction to the professional obligations and responsibilities of teachers. Must be completed prior to enrollment in a 3000 level education course.

ED 2100 - Teaching and Learning: Trends and Issues (3-4)

Study of contemporary issues in education: philosophical underpinning, innovations, current problems, and proposed changes. Topics will include discussion of the role of social context and socio-cultural background in learning, curriculum development, No child Left Behind, and school-agency alliances for fostering learning.

ED 2200 - Today's Diverse Educational Environment: Trends and Issues (3)

Integrative course designed to explore, evaluate, compare and contrast schools and related social institutions with a focus on inter- and intra-cultural relationships. Teacher candidates will be introduced to the principles of human relation skill development.

ED 3000 - Cand Exp: Serv & Prep Tchng (2)

An examination of the educational process through structured field assignments and observations. Teacher certification candidates only.

ED 3001 - Candidate Experiences and Preparatory Teaching in Elementary School (2)

An examination of the educational process through structured field assignments and observations. Teacher certification candidates only.

ED 3002 - Candidate Experiences and Preparatory Teaching in Middle School (2)

An examination of the educational process through structured field assignments and observations. Teacher certification candidates only.

ED 3003 - Candidate Experiences and Preparatory Teaching in Special Education (2)

An examination of the educational process through structured field assignments and observations. Teacher certification candidates only.

ED 3200 - Classroom Inclsn & Fam Supprt (3)

Directed investigation of educational strategies that promote inclusion for all learners. Examination of family support systems in education.

ED 3300 - Special Education: Counseling and career Development (4)

The course presents approaches to counseling students with mild-moderate disabilities and their families and addresses the issues of transition and care development. Candidates will focus on understanding, developing, and implementing approaches to interact with students and their families. Exploration of theories and methods that enhance positive relations with students and parents. Investigation of transitional programs and vocational options for students with disabilities. Field visitations required. Pre-requisite: Admittance into the Teacher Preparation Program.

ED 3400 - Interactive Communication in the Learning Environment (3)

Introduction to the methods of creating structure in the school environment. Preparation for implementing communication and behavior management strategies in the school environment. Prerequisite(s): ED-3000 and admission to the teacher preparation program.

ED 3480 - Fundamentals of Neurology and Learning (3)

An examination of neurological structures including embryonic development and maturation of the nervous system. Discussion of conditions and disease that may impact the development of the central nervous system, including syndromes and traumatic brain injury. An introduction to cognitive neuropsychology.

ED 3600 - Disabilities Studies I (4)

An introduction to the profession of special education with information regarding the characteristics of persons with the various disabilities included IDEA. History, theoretical foundations and practices related to the social, emotion, health, and learning characteristics of individuals with mild-moderate disabilities. The course includes an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of school age individuals with mild-moderate disabilities and the implications these characteristics have for educational practice. Problems of definitions, screening, diagnosis, classification systems, transition, future planning, classroom management, and multicultural issues are introduced. Prerequisite: admission to the teacher preparation program.

ED 3640 - 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(s): ED-3600 Disabilities Studies I.

ED 3800 - Candidate Experiences: Classroom 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(s): successful completion of ED-3000 and appropriate methods courses.

ED 3801 - Candidate Experiences: Classroom Teaching in Elementary School (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(s): successful completion of ED-3001 and appropriate methods courses.

ED 3802 - Candidate Experiences: Classroom Teaching in Middle School (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(s): successful completion of ED-3002 and appropriate methods courses.

ED 3803 - Candidate Experiences: Classroom Teaching in Special Education (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(s): successful completion of ED-3003 and appropriate methods courses.

ED 4100 - Principles of Education: Inclusion, Diversity, Behavior Management, and Technology (3-4)

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 4200 - Assmnt in the School Env (4)

Investigation into the development, interpretation, and use of standardized psychological and educational tests in the school environment. Overview of informal assessment instruments and assessment techniques, including portfolio design and evaluation. The course is designed with an emphasis on formulating instructional plans based on formal and/or informal assessment. (Taken by all Renaissance candidates). Prerequisite: Admission to the Teacher Preparation Program.

ED 4210 - School Curriculum and Instruction: Elem/Special Education (3)

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 4220 - School Curriculum and Instruction: Middle School (3)

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 4230 - School Curriculum and Instruction: Secondary Education (3)

Explores foundation for curriculum development and instruction classroom organization and structure, lesson planning, and evaluation. Discussion of topics including scope, sequence, and curriculum articulation; curriculum change in educational settings; and the principles and objectives that influence these processes. (Taken by all Renaissance candidates.) (Also taken by Special Education candidate.)

ED 4260 - 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 4280 - Classrooms Without Borders II (3)

This course will continue to examine the ideas and events that teachers can implement in the classroom for enrichment of the curriculum. Candidates will gain a better understanding to the resources of the community and how to incorporate its economic, political, intellectual, and cultural offerings into the classroom. Upon completion of the course, the candidate will know how to incorporate a variety of innovative subjects into the classroom curriculum. All classes will be field based. Pre-requisite: acceptance into the Teacher Preparation program.

ED 4300 - School Curriculum and Instruction (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 4320 - Aesthetic Educ & Physical Educ (1)

Integration of the fine arts (visual, music and dramatics) and physical movement in the classroom. Candidates will learn to select, design, adapt, and assess creative arts and physical activities that are developmentally appropriate, meaningful, challenging and that lead to positive learning outcomes and the development of positive dispositions toward aesthetic and physical expression. Taken by Elementary Renaissance Program Alternative Certification candidates.

ED 4330 - Tchng Mthds in the Fine Arts (2)

This course will focus on the art and music education curriculum. Candidate 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 4340 - 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 extra-curricular endeavors. Prerequisite: acceptance into the Teacher Preparation Program.

ED 4350 - 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 4380 - 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 4410 - Teaching Methods in Elementary School in Mathematics, Science, and Social Science (3)

Explores and discusses content, objectives, and methods in elementary curriculum content; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection organization, and presentation of instructional material. Addresses mathematics, social studies and science. (Also taken by Special Education candidate.)

ED 4420 - Teaching Methods in Middle School Language Arts (3)

Explores and discusses content, objectives, and methods in middle school language arts instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection organization, and presentation of instructional material.

ED 4430 - Teaching Methods in Middle School Social Science (3)

Explores and discusses content, objectives, and methods in middle school social science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection organization, and presentation of instructional material.

ED 4440 - Teaching Methods in Middle School Science (3)

Explores and discusses content, objectives, and methods in middle school science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection organization, and presentation of instructional material

ED 4450 - Teaching Methods in Secondary English (3)

Explores and discusses content, objectives, and methods in secondary English instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection organization, and presentation of instructional material.

ED 4460 - Teaching Methods in Secondary Social Science (3)

Explores and discusses content, objectives, and methods in secondary social science instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material

ED 4470 - Teaching Methods in Middle School Mathematics (3)

Explores and discusses content, objectives, and methods in middle school mathematics instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 4480 - Teaching Methods in Secondary Mathematics (3)

Explores and discusses content, objectives, and methods in secondary mathematics instruction; emphasizes application of knowledge from research and learning theory. Examines procedures useful for developing and improving curricular units. Addresses the effect of individual differences upon selection, organization, and presentation of instructional material.

ED 4500 - Reading Methods I: Primary Grades (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 4510 - Reading Methods II: Diagnostic & Intervention (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 4520 - Strategies in Literacy Instruction (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 4530 - 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 4540 - Strategies of Literacy Instruction: Elementary/Special Education (3)

Examines research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes practicum experience.

ED 4550 - Strategies of Literacy Instruction: Middle School (3)

Examine research and best practices affecting literacy development and instruction. Emphasizes the application of instructional strategies for developing reading and writing skills in the content area. Includes practicum experience.

ED 4560 - Teaching Methods in Elementary Language Arts and Children's Literature (3)

Emphasizes reading and writing development and instruction at the fluent stage. Emphasizes the application of instructional strategies for developing reading and writing skills in the content areas of the elementary curriculum. Includes teaching all genres of children's literature.

ED 4580 - Child's 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 4600 - 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 4620 - Disabilities Studies I (4)

An introduction to the profession of special education with information regarding the characteristics of persons with the various disabilities included IDEA. History, theoretical foundations and practices related to the social, emotion, health, and learning characteristics of individuals with mild-moderate disabilities. The course includes an introduction to the educational and psychological characteristics (cognitive, emotional, and social) of school age individuals with mild-moderate disabilities and the implications these characteristics have for educational practice. Problems of definitions, screening, diagnosis, classification systems, transition, future planning, classroom management, and multicultural issues are introduced. Prerequisite: admission to the teacher preparation program.

ED 4640 - 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(s): ED-3600 Disabilities Studies I.

ED 4680 - 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 4850 - 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.

ED 4911 - Professional Internship I (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves ongoing 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 4912 - Professional Internship II (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves ongoing 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 4913 - Professional Internship III (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves ongoing 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 4914 - Professional Internship IV (1)

Formative examination and reflection of the educational process and practice through candidate's classroom experiences and observations. Involves ongoing 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.)

Education - Ed Foundations (EDF)

EDF 2010 - Foundations of Early Childhood Education (3)

A systematic analysis of how social issues impact schools forcing continual change and reform. Each part of educational system will be analyzed including organization philosophy, environment, management, and assessment. Field experiences are required and structured to focus on early childhood education (pre-K & K).

EDF 2020 - 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 2030 - 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 2040 - 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 2240 - 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. Offered annually.

EDF 3620 - Multicultural Issues 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.

EDF 3710 - 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 3840 - 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.

EDF 3890 - School & Community (3)

This course is designed to acquaint pre-service teachers with the theories, practices, skills, and knowledge of school and community partnerships. This course explores the question 'what role does the family and community play in the educational development of children?' There is a focus in this course to develop understandings of diverse contexts when working with communities, families, children. In this course students will study themselves, the schools, communities, families, and children in the contexts of future teaching situations.

EDF 3980 - Independent Study (1-3)

Independent Study.

EDF 4800 - Institute Ed. Psychology (1-3)

The course is periodically offered on various topics and issues in areas of educational psychology. As needed.

EDF 4835 - Foundations of Catholic Education (3)

This course examines the foundations and special dimensions of education a Catholic school including: 1) Self-knowledge and Spiritual Development; 2) The foundations of governance in a Catholic school including the following topics: canon law and Catholic education; mission, vision, and the role of parents in Catholic education; 3) The historical foundations of Catholic education in the United States 4) Church documents on Catholic Education. Offered annually.

EDF 4980 - Independent Study (1-3)

Independent Study

EDF 5000 - Theory of Education (2)

An exploration of the nature of education as an academic discipline. (Offered annually.)

EDF 5200 - The Learning Process (2-3)

Study of the relationship of learning theory to classroom practice. (Offered occasionally.)

EDF 5210 - Ind Differences in Abilities (2)

Origin and extent of individual differences with their implication in improvement of instruction. (Offered occasionally.)

EDF 5230 - Motivation in Learning (2)

Application of theories of motivation to classroom practice. (Offered occasionally.)

EDF 5270 - 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 5300 - Adv Educational Psychology (3)

Prerequisite(s): EDF-423, PSY-1010, 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 5600 - 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 5610 - 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 5700 - Adv. Growth & Development (3)

EDF-4710, PSY-1010. or equivalent course. A balanced and systematic multidisciplinary look at all stages of human growth and development through the life span. In family and school contexts the perspective includes contributions from education, biology, developmental psychology, sociology, and cultural anthropology. Research, including its many discoveries and controversies, is examined at all stages. In addition, critical topics into which research is increasingly gaining insight are explored. (Offered annually.)

EDF 5835 - Foundations of Catholic Education (3)

This course examines the foundations and special dimensions of education a Catholic school including: 1) Self-knowledge and Spiritual Development; 2) The foundations of governance in a Catholic school including the following topics: canon law and Catholic education; mission, vision, and the role of parents in Catholic education; 3) The historical foundations of Catholic education in the United States 4) Church documents on Catholic Education. Offered annually.

EDF 5980 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

EDF 6050 - 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 6100 - Studies in Educational Philosophy (3)

This course offers students an advanced introduction to philosophy of education, covering major historical and contemporary thinkers and issues in the field. The course readings and activities are intended 1) to facilitate and deepen students' thinking about philosophical questions in education, 2) to help students recognize how these questions are both manifest in and exert influence over contemporary education-related discourses, and 3) to draw out the implications that various answers to these questions might have for educational and social policy and practice. Students also learn about and engage in philosophy as a method of inquiry and research. Offered in fall and spring.

EDF 6110 - SEM: Philosophy of Education (3)

The seminar in Philosophy of Education is intended to facilitate students' exploration of a particular topic of philosophical interest within education. Topics are typically developed by the course instructor and might include, but are not limited to, social justice, global education, educational equality, and democratic education. Offered in spring.

EDF 6200 - Reading in Educational Classic (3)

A study of selected writings now considered classics in the field of education. (Offered occasionally.)

EDF 6300 - Studies: Catholic Education (3)

An intensive study of selected problems and issues related to Catholic educational programs. (Offered occasionally.)

EDF 6310 - SEM: Catholic Education (3)

An investigation of selected educational topics related to Catholic educational programs. Permission of Instructor only.

EDF 6400 - 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 6410 - 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 6420 - SEM: History of European Educ (3)

An investigation of selected European educational developments as related to the history of the period. Permission of Instructor only. (Offered every other year.)

EDF 6450 - History of American Education to 1865 (3)

Lecture and discussion about educational ideas and events in the American colonies, the United States and its territories as they relate to the history of the period. (Offered occasionally.)

EDF 6460 - History Amer Educ Since 1865 (3)

Lecture and discussion about the educational ideas and events in the United States since 1865 as they related to the history of the period. (Offered annually.)

EDF 6500 - SEM: Education Psychology (3)

Special topics chosen by the Instructor. (Offered occasionally.)

EDF 6600 - Education in American Culture (3)

A critical study of the many problems and issues in American education from various frames of reference. (Offered occasionally.)

EDF 6650 - SEM: History of American Educ (3)

An investigation of selected educational developments as related to the history of the period. (Offered annually.)

EDF 6830 - Educational Assessment: Principles and Practice (3)

This course addresses the principles and practical applications of educational assessment for learners of all ages and ability levels. It examines the relationship between assessment and instructional decision-making and includes a study of formal and informal assessments. It provides an overview of legal, ethical, cultural and sociopolitical issues in assessment.

EDF 6850 - SEM: Comparative Education (3)

Investigation of relationships between education and society or education of different societies. (Offered occasionally.)

EDF 6870 - SEM: Current Educational Prob. (3)

Study and critical comment on significant research recently published. Selection of problems from sources such as educational journals, superintendents' reports, yearbooks. (Offered occasionally.)

EDF 6980 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

Education - Higher Ed Admin (EDH)**EDH 1020 - The First-Year Seminar -Madrid (1)**

Welcome to Saint Louis University. And to Madrid. A practical approach to the transitions that first-term students make at the Madrid campus. The course offers useful suggestions and mechanisms to respond to the pressures of meeting new people, living in a new culture (both that of the university and that of Spain), and making tough 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. Prerequisites: SWRK: 5750, 5751, 5787, 5702, 5819, 5841

EDH 5250 - History of American Higher Education (3)

Historical trends and theoretical foundations that gave rise to modern American colleges and universities. Offered every Fall semester.

EDH 5350 - Student Development Theory I (3)

This course will introduce you to the exploration and analysis of attitudes and characteristics of the college student population in context of higher educational institutions in the United States. Theoretical concepts and empirical findings will be examined that help to describe the college student relation to changing demographics, culture, and development. The intent of the course is to familiarize you with today's higher education setting and strategies for enhancing these environments to maximize student learning and development. Throughout the course, attention will be paid to the impact of learning and development. Throughout the course, attention will be paid to the impact of the campus environment on diverse student populations and a variety of student groups.

EDH 5400 - Law and Higher Education (3)

Exploration and analysis of selected problems involving legal restrictions and/or protections for colleges and universities.

EDH 5470 - Legal and Ethical Issues (3)

This course is intended to provide students pursuing a degree in Student Personnel Administration in Higher Education with a background in legal and ethical issues confronted by practicing professionals. A lecture, discussion and problem solving format is used in studying the course material. The course includes a discussion of selected law cases and ethical principles and their interrelation with the American College Personnel Association Statement of Ethical Principles and Standards.

EDH 5500 - Catholic Higher Education Administration and Leadership (3)

This course offers an overview of leadership and student affairs administration within Catholic higher education. Through a review of literature, as well as in-class discussions, students will understand the unique aspects of working at a Catholic institution. Students will also critically examine and reflect upon various contemporary issues pertaining to student affairs administration at Catholic colleges and universities. Offered fall and spring.

EDH 5600 - Student Personnel Administration (3)

Survey of patterns, problems and trends in student personnel.

EDH 5640 - Student in Higher Education (3)

Exploration and analysis of attitudes and characteristics of the college student population in context of the institutional climate.

EDH 5650 - Intervention Skills (3)

This course is designed to promote an understanding of strong interpersonal communication skills among student personnel administrators. The course will focus on developing skills necessary for facilitating career and educational decision-making, conflict management, and promoting the development of interpersonal relationships and healthy lifestyle habits. This course also focuses on goal-setting and creating strategies for behavior change, and developing an understanding of the kinds of issues that often affect college students.

EDH 5750 - Current Issues: Higher Education (3)

Survey of recent significant developments, trends, and analysis of differing points of view concerning policies and practices of American colleges and universities.

EDH 5910 - Internship: Higher Ed Admin (1-6)

Supervised experience in appropriate administrative offices. Permission of Instructor required. Offered every Fall and Spring Semester.

EDH 5915 - Intern: Student Personnel Admin (1-3)

Supervised experience in appropriate student personnel administrative offices. Permission of instructor required.

EDH 6050 - Disability in Higher Education & 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.

EDH 6060 - Disability Administration in Higher Education (3)

This pragmatic course explores the field of disability education and students with disabilities in higher education as related to disability services administration. Students will engage in practical lessons from this discipline, experience disability administration roles and responsibilities, and explore ways to create access and inclusion in the higher education setting. Offered in spring.

EDH 6070 - Evidence Based Decision Making (3)

This course will introduce graduate students to the basics of educational research. It will provide an overview of basic statistical techniques which are used in educational research; the fundamentals of qualitative and quantitative educational research methodologies; designing educational research proposals; and how to read and evaluate published articles which report educational research.

EDH 6150 - Organization and Administration of Higher Education (3)

Designed to improve the student's ability to conceptualize the total field of administration through studies of administrative theory, behavior, processes, organization, and current research.

EDH 6160 - Global Perspectives: Comparative Systems in Higher Education (1-3)

This 1-3 credit hour course provides graduate students in Higher Education Administration and related fields opportunities to explore trends and issues of global higher education including faculty roles and responsibilities, organization and structure, student demographics, academic programs and more. Participants will attend seminars and visit selected partner universities in Spain and possibly other countries. Offered in spring.

EDH 6580 - Financial Admin in Higher Educ (3)

General introduction to the multiple aspects of financial administration in higher education including administrative organization budgeting and financial reporting, fund accounting, purchasing, management of endowment funds, loan funds.

EDH 6600 - Curriculum in Higher Education (3)

Survey of practices and problems in the development of curricula in American colleges and universities. Offered in spring.

EDH 6700 - College Teaching (3)

Critical analysis of practices, expectations, strategies, and responsibilities of the college teacher based on an analysis of the teaching-learning situation.

EDH 6970 - Research Topics in Higher Ed (1-3)

Discussion of theories of research and the process of hypothesis development. Offered every Spring semester.

Education - C&I and Teacher Ed (EDI)**EDI 2000 - Children's Literature and Media (3)**

This course surveys a wide variety of literature and media created for children in order to develop understanding and appreciation. Students will become familiar with: various genres and their characteristics; ways children's literature and media is used to develop literacy; notable authors and illustrators; ways critically analyze literature and media from diverse perspectives. Students will keep a literature log, share books with children, investigate websites, discuss literature and media, and write papers. Prerequisites: None.

EDI 2900 - 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 advocates. Meets new core curricular requirement in cultural diversity: Prerequisite: Upper-level sophomore status.

EDI 2940 - Portfolio Development I (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 3000 - Foundations of Literacy and Language Arts (3)

Develops an understanding of integrated literacy/language arts processes. Guidance and practice in planning in and organizing for instruction in reading, writing, listening, speaking, viewing, and visually representing in early childhood through eighth grade inclusive classrooms. Reading and language arts theory, content, and methods. Prerequisite: Foundations of Education

EDI 3010 - Methods in Teaching Elementary Mathematics (3)

Instructional techniques and learning materials, including manipulative 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 3020 - Methods in Teaching Elementary Creative Arts and 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 3030 - 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. Prerequisite EDI-452.

EDI 3050 - Bridging Realities: An Interdisciplinary Immersion in Belize (3)

Weekly seminar and 10 day faculty/staff led trip will immerse you in the cultural, linguistic, and pedagogical practices in Belize City. Students will engage the material through ethical, academic and spiritual frameworks that synthesize past information and experiences with the new paradigms encountered through the course. Application Required.

EDI 3060 - Methods in Teaching Elementary 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 3070 - Methods in Teaching Elementary Social Studies (2-3)

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 3090 - Elementary Methods of Teaching Language Arts (2)

Focus on the elements in language arts program. Includes development of childrens language and thinking skills, written communication and grammar, listening and speaking skills, spelling and handwriting. Emphasis is on the process of developing effective communication skills and integrating content areas. Includes Practicum experience. Spring semester

EDI 3200 - Reading/Writing Content Fld (3)

Teaching reading and writing in the content fields in Middle and Secondary schools. Developmental reading for average and above average students as well as remedial techniques for poor readers will be explored. Improving reading rate, motivation, critical reading, reading in special content areas, writing across the curriculum. Includes practicum. Fall semester.

EDI 3240 - 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 3300 - Curriculum and Methods in Teaching Secondary English (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 3305 - Practicum in Teaching Secondary English (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 3310 - Curriculum and Methods in Teaching Secondary Science (3)

Methods and materials for teaching science to students in secondary schools. Includes practicum experience. Fall semester.

EDI 3315 - Practicum in Teaching Secondary Science (3)

Methods and materials for teaching science to students in secondary schools. Includes practicum experience. Fall semester.

EDI 3320 - Methods in Teaching Secondary Mathematics (3)

Methods and materials for teaching mathematics to students in secondary schools. Emphasis on the NCTM Standards. Includes practicum experience. Fall semester.

EDI 3340 - Curriculum and Methods in Teaching Secondary Social Studies (3)

Methods and materials for teaching social studies to secondary students. Includes practicum experience. fall semester.

EDI 3345 - Practicum in Teaching Secondary Social Studies (3)

Methods and materials for teaching social studies to secondary students. Includes practicum experience. fall semester.

EDI 3350 - Curriculum and Methods in Teaching World Languages (3)

Techniques of teaching a foreign language to secondary school students. Analysis of learning and teaching approaches. Includes practicum experience. Offered fall and spring semester.

EDI 3355 - Practicum in Teaching World Languages (3)

Techniques of teaching a foreign language to secondary school students. Analysis of learning and teaching approaches. Includes practicum experience. Offered fall and spring semester.

EDI 3461 - Health for Education Majors Pre K - Secondary (2-3)

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 3500 - Curriculum and Methods in Teaching Middle School English (3)

Methods and materials for teaching language arts to students in grades 5-9. Includes practicum. Fall semester.

EDI 3505 - Practicum in Teaching Middle School English (3)

Methods and materials for teaching language arts to students in grades 5-9. Includes practicum. Fall semester.

EDI 3510 - Curriculum and Methods in Teaching Middle School Science (3)

Methods and materials for teaching language arts to students in grades 5-9. Includes practicum. Fall semester.

EDI 3515 - Practicum in Teaching Middle School Science (3)

Methods and materials for teaching science to students in grades 5-9. Emphasis on NSTA standards. Includes practicum. Fall semester.

EDI 3520 - Curriculum and Methods in Teaching Middle School Mathematics (3)

Methods and materials for teaching mathematics to students in grades 5-9. Emphasis on the NCTM standards. Includes practicum. Fall semester.

EDI 3525 - Practicum in Teaching Middle School Mathematics (3)

Methods and materials for teaching mathematics to students in grades 5-9. Emphasis on the NCTM standards. Includes practicum. Fall semester.

EDI 3540 - Curriculum and Methods in Teaching Middle School Social Studies (3)

Methods and material for teaching social studies to students in grades 5-9. Includes practicum. Fall semester.

EDI 3545 - Practicum in Teaching Middle School Social Studies (3)

Methods and material for teaching social studies to students in grades 5-9. Includes practicum. Fall semester.

EDI 3550 - Principles of EC Education (3)

Exploration of theories and strategies for teaching the young child. Includes 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 3893 - 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 3940 - Portfolio Development II (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 the level include selection of 8 artifacts and composition of 8 medication statements representing 8 of the ten standards addressed by the portfolio. A student must receive a grade of 'S' prior to student teaching. Prerequisite ED 297.

EDI 3980 - Independent Study (1-3)

Independent Study. Every semester.

EDI 4000 - Literacy Assessment and Instruction for Diverse Learners (3)

Examines characteristics and uses of formal and informal literacy assessment tools for children in grades 1 & 6; strategies for incorporating results into literacy instruction; state content and performance standards for literacy; and strategies for providing in-depth intervention, remediation, and acceleration. Students in this course will develop a diagnostic case study that links assessment, instruction, and reflective practices. Includes 1.5 hours of fieldwork per week. Prerequisite(s): EDI-2000 & EDI-3000

EDI 4100 - Literacy and Language Arts in an Integrated Curriculum (3)

Strategies for helping children develop comprehension in content areas including use of various text organizers and graphics; use of multiple source of information and technology; and integration of content areas with a focus expository text. Includes 1.5 hours of fieldwork per week. Prerequisite(s): EDI-2000 & EDI-3000

EDI 4200 - Disciplinary Literacy Assessment and Intervention for Secondary Students (3)

Assessment of student literacy skills in the content fields in middle and high school and development of appropriate classroom interventions. Use standardized literacy assessment data and classroom assessments to determine and respond to student strengths needs in accessing and producing print and digital texts. Includes practicum. Prerequisites: EDI 3200 Reading and Writing in the Content Fields, EDF 4240 Growth, Development, and Learning. And Secondary School Curriculum Methods in English EDI 3300, Math EDI 3320, Science EDI 3310, or Social Studies EDI 3340. Pre/Co-requisite: EDSP 4480 Teaching Methods for Inclusive Classrooms

EDI 4210 - Methods of Technology Integration (3)

This course emphasizes the authentic use of technology by students in the PK - 12 learning environment. Topics include technology concepts and operations, designing learning environments, teaching and learning with technology, assessment and evaluation, professional practice and social, ethical, legal and human issues. This course meets the compute requirements for teacher certification. Prerequisite: EDI 3893

EDI 4250 - 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 4260 - 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 4270 - 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 4290 - Mathematics for Diverse Learners (3)

Materials and methods suitable for teaching children experiencing difficulty in learning mathematics. Includes practicum experience. Fall semester.

EDI 4440 - Assessment in E.C. (3-4)

Emphasis on use of developmental screening and diagnostic measures and translation of the results into appropriate practice. Focus on informed and formal measures and the incorporation of observation into the assessment process for children with and without disabilities. Includes family involvement, ethical considerations and development of individual plans. Incorporates field experience.

EDI 4450 - 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 4480 - Integrated EC Curriculum I (3)

Basic methods for curriculum development for young children (Birth - Grade 3) with emphasis on developmentally appropriate practice. Includes learning strategies, selection of materials, development of daily programs, and organization of environment. Focus on integration of language/literacy, mathematics, art, music, drama and movement. Includes field work. Pre requisite EDII-452.

EDI 4490 - Integrated EC Curriculum II (3)

Advanced methods for curriculum development for young children (birth - grade 3) with emphasis on developmentally appropriate practice. Focus on planning, implementation and evaluation of integrated curriculum with special emphasis on language/literacy, science, social studies, safety, nutrition and health. incorporated application of research. Includes field work. Prerequisite EDII-448.

EDI 4510 - Counseling in EC (3)

Focus on approaches to working with young children and their families in the school, home and community. Exploration of theories and methods which enhance positive relations with children and families. Emphasis on a family systems approach. Prerequisite EDII-452.

EDI 4540 - Field Experience: EC Practicum (5)

Classroom experience under guidance of master teacher in an early childhood setting (birth - grade 3). Incorporated application of theories in the learning environment. Opportunities for development and implementation of appropriate activities with individuals and groups. Field experience focuses on children at various developmental levels including children with disabilities.

EDI 4550 - Practicum: Elementary Ed (1-4)

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 4560 - Practicum: Middle School (1-4)

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 4570 - Practicum: Secondary Ed. (1-4)

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 4700 - Organisation/Mgmt Ctr EC (3)

Orientation to personnel goals of early childhood, patterns for coordination of professional and paraprofessional, volunteer, and parent efforts, policy formation: facilitating communication, management approaches. Offered occasionally.

EDI 4720 - Families as Educational Partners (3)

Survey existing community resources, investigate parenting styles, and examines various areas of home/school cooperation. Spring semester.

EDI 4790 - Seminar: EC Topics (3)

Exploration of current topics in early childhood. As needed.

EDI 4810 - 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 4820 - 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 4830 - 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 4840 - 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 4860 - 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 4870 - 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 4880 - Senior Inquiry: Non-Certification (3)

Senior inquiry. Offered annually.

EDI 4940 - Portfolio Development III (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 5240 - 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 manipulative in elementary mathematics and a focus on NCTM's agenda for action. Meets certification requirements for middle school principals. Offered occasionally.

EDI 5390 - 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 5430 - Basic Human Anatomy for Teache (3)

Workshop designed as a hands on examination of basic human anatomy for junior high and high school teachers. A combination of demonstrations, lectures by physicians, and laboratory experiences. Review of the anatomy and functions of the central nervous, senses reproductive, cardiovascular, respiratory, gastrointestinal, and musculoskeletal systems. (offered every summer sessions).

EDI 5440 - 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 5600 - 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 5620 - 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 5700 - 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 5830 - Tech Teach Read in Content Are (3)

Specialized reading techniques for special subject matter areas. Developing higher level thinking skills of evaluation and judgment for mature readers for middle, junior and senior high school levels. Special attention to strategies for improving adult reading. Meets certification requirements for middle school principals. (offered occasionally).

EDI 5950 - Special Study for Exams (0)

Special Study for exams.

EDI 5980 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDI 6040 - Seminar Childre's Lit (3)

A comparative review of the rationales of the various approaches to teaching literature to children, review of the most current materials and instructional strategies. (offered occasionally).

EDI 6230 - Seminar in Instruction (3)

An exploration of a particular area as designated in the current semester schedule of classes. (offered occasionally).

EDI 6250 - Practicum C&I (1-3)

Open only to doctoral students. A series of planned and supervised field experiences in instructional leadership. (Prior permission of guiding professor required).

EDI 6310 - The Supv Process in Elem Sc (3)

An overview of the research and current practices/models of school supervision and instructional management at the elementary school level. (offered occasionally).

EDI 6320 - Supv Process Sec School (3)

An overview of the research and current practices/models of school supervision and instructional management at the secondary school level. (offered annually).

EDI 6410 - Elem School Curriculum (3)

A survey of current curriculum patterns, problems and proposals. Students work with both traditional and innovative programs, exploring the rationale and research in support of selected curriculum segments. (offered annually).

EDI 6420 - Secondary School Curriculum (3)

A survey of current curriculum patterns, problems and proposals. Students work with both traditional and innovative programs, exploring the rationale and research in support of selected curriculum segments. (offered annually).

EDI 6430 - Middle School C&I (3)

Theories and practice relating to design and evaluation of curriculum will be presented with special attention to curriculum development in a Catholic School. (offered annually).

EDI 6440 - Curriculum Dev in Parochial Sc (3)

A survey of current middle school research, philosophy, internal and external influences, and instructional practices. Students work with both traditional and innovative programs with the purpose of exploring the rationale and research in support of selected curriculum and instruction (offered annually).

EDI 6450 - Curriculum Development (3)

Practice in using the processes of curriculum development through examination of existing programs., developing new segments of curriculum, making curriculum guide revisions or structuring the process of revision. (offered occasionally).

EDI 6460 - Curriculum Theory (3)

A seminar exploring existing approaches to curriculum theory, its historical development and current issues. (offered annually).

EDI 6480 - Seminar in Curriculum (2-3)

An exploration of a particular area of curriculum as designated in the current semester Schedule of classes. Offered occasionally.

EDI 6950 - Special Study for Written Comprehensive Exams (0)

Special Study for exams.

EDI 6960 - Project Guidance (0-4)

Project Guidance.

EDI 6980 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDI 6990 - Dissertation Research (0-6)

Dissertation Research.

Education - Ed Leadership (EDL)**EDL 3010 - School Law for Teachers (1)**

A study of cases, statutes, regulations, and practices dealing with teacher and student rights and responsibilities, academic freedom and classroom management. Every semester.

EDL 3910 - Internship in Orientation Leadership (0-1)

This course is an experiential education internship with the SLU 101 Summer Orientation program for selected SLU 101 Leaders. It is open to all disciplines and provides students with theoretical and skill-based knowledge to apply in leadership positions including student development theory, group management, role modeling, and other related issues.

EDL 3915 - Internship in Peer Instruction (0-1)

This course serves as an internship for students selected as peer instructors for the University 101 (EDH101) program. This internship is designed to provide students with knowledge to apply to the classroom setting, including student development theory, classroom management and teaching techniques, paraprofessional role modeling, and other related issues.

EDL 5000 - Educational Leadership Non-Certification Practicum (3)

Graduate students in the M.A. and Doctorate in Educational Leadership are required to participate in a 3 hour field experience course. If the student is not seeking certification, this course addresses application of course concepts in field experiences. Offered annually.

EDL 5100 - Foundations of Ed Admin (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 fall and spring.

EDL 5150 - Special Dimensions of Ed Admin (1-3)

Roles of the principal and the institution will be explored with special emphasis given to the unique aspects of parochial schools. (Offered occasionally).

EDL 5190 - Building Level Administration and Community Relations (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. Offered periodically.

EDL 5200 - School-Community Relations (2-3)

A study of the nature, scope, principles, and practices of public relations including organization and administration.

EDL 5300 - School Law (1-3)

An introduction to legal sources and documents related to schools. Selected case studies will be used to examine legal issues related to school students, teachers and administrators.

EDL 5450 - Managing the Building Level Curriculum (3)

This course is designed to strengthen students' knowledge and skills as instructional leaders by identifying and researching current and emerging curricular issues. Students will learn to coordinate and synthesize curriculum development utilizing appropriate instruction designs, manage delivery and resources as they relate to curriculum, and utilize assessment results. Students will conduct and report results of a building level audit of curriculum supports and implementation.

EDL 5500 - Professional Seminar (2-3)

The purpose of this course is to integrate all MA Program Coursework by having students apply their learning through authentic experience and learning community formats. Prerequisite: Completed most M.A. Program Work - In final 9 hours.

EDL 5600 - Program Evaluation (2-3)

This course will introduce you to the theories, patterns, issues, and trends in student personnel administration in higher education. It will familiarize you with functions and responsibilities of the college student personnel work, including assessment and budgetary processes, and provide you with the opportunity to analyze and discuss various problems, concepts and issues in the field. This course is intended to help you learn about the student personnel administration of institutions of higher education in the United States so that you may be more effective managers and leaders in those institutions.

EDL 5630 - The Principalship (3)

An overview of elementary, middle, and senior high school administration with an emphasis on the philosophy, organization, curricula and developmental needs of students and staff. Course will focus on solution of critical problems: change, innovation and interpersonal communication. (Offered every Fall).

EDL 5730 - Building Level Professional Development and Teacher Evaluation (3)

This course investigates how schools can support educator improvement as reflective professional practitioners through high quality professional development and how the system of evaluation can incorporate and integrate this type of development. Participants review and analyze the MO Evaluation System Model and practice conducting observations and providing feedback. This course addresses the knowledge base to prepare students to complete the ETS tasks 2 & 3. Offered annually.

EDL 5910 - Intern: Educational Administration - Elementary (2-6)

Students work in elementary schools under the direction of a successful practicing administrator and thereby gain on-the-job experience in administration and supervision. (Offered every semester).

EDL 5913 - Internship: Building Principal (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 5914 - Internship: Educational Administration-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 5980 - Graduate Reading Course (1-3)

Prior permission of guiding professor.

EDL 6060 - Research Design and Analysis for Educational (3)

Students will use the SPSS software program to explore quantitative research designs which are appropriate in educational leadership and higher education environments. This will include experimental, quasi-experimental and archival study designs. The students will use SPSS to build and analyze data bases. Student will learn how to use the SPSS program to perform preliminary analysis on data bases including using descriptive statistics, creating charts and graphs to describe data and checking scale reliability. Students will also learn how to select and conduct the appropriate statistical test to analyze data using the SPSS program. Specific tests to be covered include: correlation, multiple regression, t-tests for means, one-way analysis of variance ANOVA, two way between group ANOVA, analysis of covariance ANCOVA and the nonparametric Chi Square tests. No specific knowledge of statistics is needed beyond EDR-5100 Introduction to Inferential Statistics or an equivalent introductory statistics course.

EDL 6100 - 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 6110 - 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 6140 - 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 6200 - Ethics of Ed Leadership (3)

Course centers on identifying, analyzing, and developing effective methods for confronting ethical issues in educational leadership. Case studies will be utilized to emphasize the interplay between theory and practice. (Offered annually.)

EDL 6300 - Advance School Law (2-3)

Prerequisite: EDAL-530. Detailed examination of Missouri school laws, legal research, analysis of selected cases. (Offered every Fall semester.)

EDL 6400 - 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 6450 - 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 6470 - 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 6500 - School Finance (1-3)

Principles of taxation, developing school finance formulas, and role of federal, state, and local governments in financing education. (Offered every Fall semester.)

EDL 6510 - Seminar: Advanced Religious Education (3)

An advanced seminar for those with adequate work in philosophical and psychological foundations dealing with curricular or administrative aspects of program leadership. Specific topics of concern will vary from semester to semester. Offered periodically in summer.

EDL 6690 - 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 6700 - 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 6730 - District Level Professional Development and Teacher Evaluation (3)

This course considers the importance and difficulty of motivating educators to seek life long personal improvement as reflective professional practitioners through high quality professional development and how the system of evaluation can incorporate and integrate this type of development. Strategies of adult motivation and techniques of adult behavioral change are studied. Current systems of staff evaluation are analyzed and specific evaluative techniques and methods are practiced using the MO New Evaluation System Model. Offered annually.

EDL 6770 - 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 6970 - Research Topics (3)

Discussion of theories of research and the process of hypothesis development.

EDL 6971 - Research Topics for EdD (3)

Discussion of theories of research and the process of hypothesis development. Same as EDL 6970, but for Ed.D. students.

EDL 6980 - Graduate Reading Course (1-3)

Prior permission of major professor required.

EDR 3890 - Quant. & Qual. Meth in Res (3)

This course will begin with an introduction to the philosophical base, a survey of different modes of inquiry. Using this philosophical base, a survey of different modes of inquiry both quantitative and qualitative will be studies using several examples from the disciplines within the College. Emphasis in the course will be placed on the students actively reading and critiquing research from a variety of disciplines as well as in developing a proposal for research study while working in interdisciplinary teams.

EDR 3891 - Quant. & Qual. Meth in Res (3)

This course will begin with an introduction to the philosophical base, a survey of different modes of inquiry. Using this philosophical base, a survey of different modes of inquiry both quantitative and qualitative will be studies using several examples from the disciplines within the College. Emphasis in the course will be placed on the students actively reading and critiquing research from a variety of disciplines as well as in developing a proposal for research study while working in interdisciplinary teams.

EDR 4970 - 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 5100 - Intro to Inferential Stats: Ed (3)

This course is a survey of basic statistical methods including descriptive statistics, z-tests and t-tests of means and proportions, chi-square analyses, correlation and regression analyses, and analysis of variance. The statistical package for the social sciences (SPSS) will also be used. (Offered every Fall semester)

EDR 5200 - Test Construction Techniques (3)

The Test Construction course is designed to assist educators in learning how to create useful and psychometrically sound examinations. It provides a research based overview of the different testing formats and the advantages and limitations of each format.

EDR 5400 - 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 5500 - Evaluation of Ed. Programs (3)

Prerequisite: EDR1540 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 5600 - Gnrl Rsch Methods for Educ (3)

This course provides a survey of the techniques, methods and tools of research in education. Included is general discussion of the research process followed by examination of several different study designs such as observational, experimental, descriptive and sample survey. The course also provides an overview of different methods of sampling, data collection and analysis frequently used in research literature. (Offered every Spring semester)

EDR 5950 - Special Study for Exams (0)

Special Study for Exams

EDR 5980 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDR 5990 - Thesis Research (0-6)

Research

EDR 6000 - Professional Writing (3)

General theory of research: some emphasis on educational applications and quantitative approaches. Offered annually.

EDR 6010 - Doctoral Residency (0-3)

Prior permission of guiding professor.

Education - Research (EDR)

EDR 6070 - Evidence Based Decision Making (3)

This course will introduce graduate students to the basics of educational research. It will provide an overview of basic statistical techniques which are used in educational research; the fundamentals of qualitative and quantitative educational research methodologies; designing educational research proposals; and how to read and evaluate published articles which report educational research.

EDR 6100 - Intermed Applied Stats for Ed (3)

This course provides background in many applied statistical techniques. A focus of the course is to develop students' understanding of multiple techniques so that they may judge the legitimacy of statistical results in articles and choose appropriate statistical methods. Topics include effect size, ANOVA, ANCOVA, MANOVA, regression and correlation, test construction, and multiple nonparametric tests. SPSS will be utilized throughout the course. This course can be used as a final statistics course or as a bridge for those students who want to pursue more advanced courses. Prerequisite(s): EDR-5100. (Offered every Spring)

EDR 6150 - Single Subject Experimental Research Design (3)

This course is an advanced quantitative research course concentrating on single subject research design and analysis for educators. It is designed to prepare students to design, conduct, and evaluate research using single subject designs. An understanding of the salient features as well as the advantages and disadvantages of these research methods is provided. Students will also analyze published research that uses these methods. Offered in spring in even years. Prerequisite: EDR 5600 General Research Methods for Educ

EDR 6400 - Advanced Qual Research for Ed (3)

The primary purpose of this course is to provide students with the skills needed to conduct publishable qualitative research in education. Multiple qualitative methods will be used. An additional goal is to provide students with the tools or results that will be useful to them in their future work.

Prerequisite(s): EDR-5400. (Offered every Spring)

EDR 6500 - Mult-level Regression Models (3)

This class introduces students how to analyze multilevel data where observations are nested within larger clusters, such as repeated measures nested within individuals, individuals nested within classrooms, and classrooms nested within schools. Advanced topics include longitudinal data analysis, discrete dependent variables, meta-analysis, and power and design considerations. Offered occasionally. Prerequisite(s): EDR 6100 or equivalent.

EDR 6650 - Seminar: Reading Research (3)

Research techniques and findings are extensively reviewed. Offered occasionally.

EDR 6710 - Sem: Current Res in Ed Psych (3)

A detailed review of research in the field of educational psychology. Offered occasionally.

EDR 6950 - Special Study for Exams (0)

Special study for exams.

EDR 6970 - Research Topics in Higher Education (3)

Research

EDR 6971 - Research Topics EdD (3)

Same as EDR 6970 except this course is for Ed.D. students.

EDR 6980 - Graduate Reading Course (1-3)

Prior permission of guiding professor required.

EDR 6990 - Dissertation Research (0-12)

Research

Education - Special Education (EDSP)**EDSP 3560 - 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 3980 - Independent Study (1-3)

Independent Study. Every semester.

EDSP 4010 - Law and Disabilities (1)

Discussion of local, state and federal laws pertaining to the disabled. Every semester.

EDSP 4240 - Classroom Organization and Management (EC, ECSE, ELEM, SpEd) (2-3)

In this course students will examine classroom organization and behavior management in EC, ECSE, Elementary and Special Education settings. Causes of problems, prevention techniques and models for management will be explored. Family, community and advocacy issues will be addressed. This course is to be taken prior to the professional semester.

EDSP 4250 - Classroom Organization and Management (Mid, Sec, SpEd) (2-3)

In this course students will examine classroom organization and behavior management in middle, secondary and special education settings. Causes of problems, prevention techniques and models for management will be explored. Family, community and advocacy issues will be addressed. This course is to be taken prior to the professional semester.

EDSP 4260 - Beh Mgmt Lab: EC/EL/SpEd/ECSE (1)

This is a problems based course designed to provide the early childhood, elementary and special education student teacher with opportunities to discuss, apply, and develop strategies for handling classroom management/behavior issues that arise during the student teaching semester. This course is an extension of EDSI-424.

EDSP 4270 - Beh Mngmt Lab Mid, Sec. SpEd (1)

This is a problems based course designed to provide the middle, secondary and special education student teacher with opportunities to discuss, apply and develop strategies for handling classroom management/behavior issues that arise during the student teaching semester. This course is an extension of EDSI-425.

EDSP 4310 - 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 environment. Alternative instructional strategies, special education resources, family programs, multi-cultural issues introduced. Every semester.

EDSP 4320 - 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 4330 - 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 4340 - Princip & Methodlogy 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 4350 - 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 4360 - 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 4370 - 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 4380 - Student Teaching in Early Childhood Inclusive Classrooms (6-10)

Involves full time student teaching in a class for young children with special needs under the direction of an experienced teacher and a university supervisor. Enrollment as needed. Prerequisite EDSI-453 and admission to teacher education program.

EDSP 4390 - 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 4400 - 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 4410 - 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 4430 - 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 4440 - 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 4460 - 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 4470 - Teach Meth for Inc Class EC/EL (3)

Course focuses on the inclusion of all students in the general early childhood and elementary classrooms. Emphasis will be on the development of intervention strategies, differentiations of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students with disabilities. Included field work. Prerequisite EDSI-431.

EDSP 4480 - Teach Meth Incl Clall Mid&Sec (3)

Course focuses on the inclusion of all students in the general middle and secondary classrooms. Emphasis will be on the development of intervention strategies, differentiation of instruction for all students, facilitation of social acceptance, participation in the IEP process and collaboration with other professionals. Includes strategies for gifted students and students with disabilities. Includes field work. Prerequisite EDSI431.

EDSP 4510 - Counseling in Special Education (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 4530 - Currcul. Method & Matl ECSE (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. Prerequisite EDSI-448.

EDSP 4540 - Supervised Practicum in Early Childhood Special Education (3)

Individual, small group and/or classroom teaching experience under the supervision of a master teacher and a University supervisor. Seminar included. Prerequisite EDI 3550.

EDSP 4600 - 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 4620 - 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 individual 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 4640 - Seminar in ECSE (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 EDSI441.

EDSP 4650 - 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 4700 - 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 4840 - Professional Development Seminar (Mid, Sec, EdSp) (2-3)

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 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 4880 - Senior Inquiry in Special Ed (3)

Offered every semester.

EDSP 4980 - Independent Study (1-3)

Independent Study

EDSP 5260 - 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 5300 - Teaching the Gifted (3)

A review of the research, literature, materials, methods, and philosophies underlying education of gifted children and youth. Offered occasionally.

EDSP 5310 - 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 5450 - 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 5530 - Fundamentals in Neurology (3)

An examination of neurological structures and theoretical explanations fundamental to behavior. Offered annually.

EDSP 5540 - Individual Intelligence Testin (3)

Covers theoretical and applied aspects of intellectual assessment of children and adolescents and provides supervision in the administration, scoring and interpretation of individual intelligence tests (Stanford-Binder, WPP-SI, WISC-R, WAIS-R). Course fulfills Mission certification requirements for School Psychological Examiner and Remedial Reading Teachers. Offered occasionally.

EDSP 5550 - 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 5600 - Seminar: Special Education (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 5610 - Seminar: Metal Retardation (3)

Prerequisite EDSI443 or equivalent. A graduate level study of the etiology, developmental characteristics, diagnosis, educational programs, family implications, social aspects of mental retardation. Offered occasionally.

EDSP 5620 - 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 5630 - 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 5640 - 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 5940 - 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 5950 - Special Study for Exams (0)

Special Study for exams.

EDSP 5980 - Graduate Reading Course (3)

Prior permission of guiding professor required.

EDSP 6020 - History and Philosophy of Special Education (3)

This course is an examination of the history of special education services and the philosophical basis for those services. A discussion of the varying forms of special education services, and the philosophical and cultural reasons for the development of these services. Offered periodically.

EDSP 6030 - Ethics of Special Education Leadership (3)

This course is intended to promote students' understanding of ethical considerations in the profession of special/disability education; the potential influences of personal and professional values in ethical decision making; and how to evaluate issues and make ethical decisions. Students will review ethical frameworks from which their decisions are influenced, and will analyze selected social issues in special education. Students will prepare a statement of their own personal ethics. Offered in spring during even years.

EDSP 6060 - Media and Disability Issues (3)

This course focuses on issues related to disability and its representation in the mass media, including television, film, print and online news articles, advertising, documentary, comic art, photography, and the Internet. Examples of course topics include the impact of stigma and stereotyping on the view of persons with a disability, the various models of media representation of disability, and content and textual analysis of the representation in the media of persons with a disability.

EDSP 6110 - Special Educ Administration (3)

Designed to prepare the administrator for management of programs in special education. The focus is on budget, legislation, organization, management, local, state and federal programs pertaining to special education discussed, as well as the preparation of grant proposals. Evaluation of programs and personnel. Offered occasionally.

EDSP 6150 - Adv. Professional Dev (3)

Preparation of students for advanced responsibilities in career roles as special educators. Application of academic learning to professional situations. Offered occasionally.

EDSP 6500 - Advanced Seminar in Special Education (3)

An in depth examination of critical issues in special education. Course will be sectioned according to area of specialization. Offered occasionally.

Geographic Information Science (GIS)

GIS 2170 - GIS in Civil Engineering (3)

This course discusses the fundamental concepts of GIS, and the methods and software used to solve civil engineering programs. The course also covers skills to deal with remote sensing data, basic and differential GPS surveying to prepare students for today's growing business needs in civil engineering companies and government agencies. Students may only apply credits toward their graduation requirements from one of the following courses: EAS-2170, BIOL-4170, EAS-4170, or SOC-4650.

GIS 4010 - Introduction to GIS (3)

This class introduces concepts, science, and theory of GIS and provides hands-on learning experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. (Offered every fall.)

GIS 4020 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS, including remote sensing for GIS, geospatial statistics and social, economic, and environmental aspects of GIS. Each subject is presented by a professor who specializes in the subject area. (Offered every spring.)

GIS 4040 - Introduction to Remote Sensing (3)

This course include fundamental knowledge on the physics of remote sensing; photogrammetry; multispectral, hyperspectral, and thermal imaging; RADAR; and LIDAR. Principles are reviewed in lectures, and lab assignments cover image processing, environmental modeling, and analysis. The course objective is to demonstrate applications of remote sensing in environmental sciences with software training in ENVI&IDL and SARscape. (Offered every fall.)

GIS 4060 - Geospatial Methods in Environmental Studies (3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment. Geospatial methods to be discussed include: spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, and varies applications of the techniques with special attention in environmental studies such as risk assessment and mitigation, environmental modeling, natural resource management, water/air pollution & control, forest fire mapping, health and environmental change analysis etc.

GIS 4090 - Programming for Remote Sensing/GIS (3)

This course introduces introductory programming concepts in RS/GIS. By completing the course, students will be able to use and write scripts to customize RS/GIS applications. Students will choose one or more RS/GIS platform and explore some common functions, then use programming languages (IDL, Python, Java and PHP) to automate procedures, develop custom applications. Topics include ArcIDL, extending ENVI and IDL, designing program code to handle various coordinate systems, projections, and GIS web mapping applications which utilize relational database systems (e.g. PostgreSQL and ArcSDE).

GIS 4100 - Microwave Remote Sensing: SAR Principles, Data Processing and Applications (3)

The course covers principles of synthetic aperture radar (SAR), SAR satellites and data sources, SAR image processing, interpretation and applications. Popular data processing techniques, including SAR intensity processing, InSAR and DInSAR techniques, polarimetry tools/classification methods, Persistent Scatterer Interferometry are discussed through detailed step-by-step lab work on the processing chain including measuring earthquake deformation, land subsidence, landslides, building sinking, and tree height/health estimation, DEM generation, and various environmental applications. Students will have experience on ordering, processing and interpreting SAR data, and an opportunity to discuss advantages and limitations of SAR remote sensing for their specific research, and to explore RADAR w/ LiDAR for its common applications in vegetation assessment and terrain characterization.

GIS 4110 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

GIS 4960 - GIS Capstone (3)

In this course, students will consolidate their coursework and demonstrate their mastery of professional remote sensing and/or GIS competencies through ongoing research projects. Depending on whether students' interest are in remote sensing or GIS, topics will cover spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, InSAR, and various applications of techniques. (Offered as needed.)

GIS 5010 - Introduction to GIS (3)

This class introduces concepts, science, and theory of GIS and provides hands-on learning experiences. After successful completion of the course, students will be able to demonstrate fundamental techniques of geospatial analysis and mapping. (Offered every fall.)

GIS 5020 - Intermediate GIS (3)

This course covers intermediate and advanced topics in GIS, including remote sensing for GIS, geospatial statistics and social, economic, and environmental aspects of GIS. Each subject is presented by a professor who specializes in the subject area. (Offered every spring.)

GIS 5040 - Introduction to Remote Sensing (3)

This course include fundamental knowledge on the physics of remote sensing; photogrammetry; multispectral, hyperspectral, and thermal imaging; RADAR and LIDAR. Principles are reviewed in lectures, and lab assignments cover image processing, environmental modeling, and analysis. The course objective is to demonstrate applications of remote sensing in environmental sciences with software training in ENVI&IDL and SARscape. (Offered every fall.)

GIS 5060 - Geospatial Methods in Environmental Studies (3)

For students and professionals in Environmental Sciences, this course explores an integrated GIS and remote sensing approach to solve real-world environmental problems. Through hands-on projects, the course will also prepare students for today's growing business needs in innovative server-based GIS solutions, relational databases and web mapping in an enterprise environment. Geospatial methods to be discussed include: spatial analysis, web GIS, database design, management and data mining with integration of GIS, remote sensing and GPS, and varies applications of the techniques with special attention in environmental studies such as risk assessment and mitigation, environmental modeling, natural resource management, water/air pollution & control, forest fire mapping, health and environmental change analysis etc.

GIS 5070 - Research Methods (3)

Analysis of research procedures as practiced in geospatial science. Research objectives, literature searches and review, data collection design, data analysis techniques, and modes of presentation. Offered every fall.

GIS 5080 - Digital Cartography and Geovisualization (3)

Readings, discussion, and hands-on investigation of advanced cartography topics and contemporary geovisualization issues. Analytic cartography, spatial analysis, and visualization techniques. Offered every spring.

GIS 5090 - Programming for Remote Sensing/GIS (3)

This course introduces introductory programming concepts in RS/GIS. By completing the course, students will be able to use and write scripts to customize RS/GIS applications. Students will choose one or more RS/GIS platform and explore some common functions, then use programming languages (IDL, Python, Java and PHP) to automate procedures, develop custom applications. Topics include ArcIDL, extending ENVI and IDL, designing program code to handle various coordinate systems, projections, and GIS web mapping applications which utilize relational database systems (e.g. PostgreSQL and ArcSDE).

GIS 5100 - Microwave Remote Sensing: SAR Principles, Data Processing and Applications (3)

The course covers principles of synthetic aperture radar (SAR), SAR satellites and data sources, SAR image processing, interpretation and applications. Popular data processing techniques, including SAR intensity processing, InSAR and DInSAR techniques, polarimetry tools/classification methods, Persistent Scatterer Interferometry are discussed through detailed step-by-step lab work on the processing chain including measuring earthquake deformation, land subsidence, landslides, building sinking, and tree height/health estimation, DEM generation, and various environmental applications. Students will have experience on ordering, processing and interpreting SAR data, and an opportunity to discuss advantages and limitations of SAR remote sensing for their specific research, and to explore RADAR w/ LiDAR for its common applications in vegetation assessment and terrain characterization.

GIS 5110 - Interferometric Synthetic Aperture Radar (3)

This course focuses on providing application oriented forum on InSAR for geoscientists. Principles of InSAR, DInSAR, timeSAR are introduced through hands-on lab work on measuring earthquake deformation, volcanic unrest, land subsidence due to extraction of groundwater, oil, gas, and coal mining using both commercial and open-source software tools.

GIS 5120 - Geographic Information Science, Society and Sustainability (3)

Critical perspectives on the evolution of geographic information science and the roles and impacts of geospatial technologies in contemporary society.

Offered periodically as needed.

GIS 5970 - Research Topics (1-3)

A non-classroom course in which a student engages in research on a topic that is related to the student's graduate work and career goals. Offered annually.

GIS 5990 - Thesis Research (0-6)

Research that leads to a Master's Thesis and defense of the Thesis. Offered every fall and spring.

Sociology (SOC)**SOC 4660 - Intermediate Geographic Information Systems (3)**

This course covers intermediate and advanced topics in GIS including remote sensing for GIS, geospatial statistics and GIS in biogeography. Students may only apply credits towards their graduation requirements from one of the following courses: EAS-418, BIOL-4180, or SOC-466. Prerequisite(s): SOC-4650 or BIOL-4170 or EAS-4170

SOC 5660 - Intermediate GIS (3)

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

Sustainability (SUS)**SUS 4130 - Future Issues US Rail Trans. (3)**

The course will explore the enormous promise of expanded research and development focused on new U.S. rail systems and corridors and on the political and economic challenges involved in building them.

SUS 5010 - Sustainability Foundations (3)

This course covers the fundamental concepts of sustainability. It provides a survey of perspectives, frameworks, and competencies to engage in trans-disciplinary sustainability problem-solving. Students will develop an understanding for integrating critical concepts from economics and business, social and public policy, and environmental science and law to address pressing sustainability challenges. A critical component of this course will be using this understanding to advance students' capstone or thesis project through the development of a research proposal.

SUS 5020 - Environmental Aspects of Sustainability (3)

This course provides an overview of the environmental aspects of sustainability. Topics include: environmental sustainability, laws; population, environmental impact; biodiversity and ecosystems; climate change, air pollution; solid and hazardous waste management; water resources/pollution; renewable energy, mineral and soil resources.

SUS 5030 - Sustainability in Society and Cultures (3)

This course is designed to provide students with a working foundation for sustainable development in the context of social, economic and political environments and their interactions between each other. The course will explore policy questions at the global, national, and local levels, developing a well-rounded understanding of terms and concepts used to describe sustainable development. With this broader understanding students will be able to more fully appreciate universal conflicts that are present in the class environment/economy debate.

SUS 5040 - Sustainable Business Practices (3)

In today's complex business environment, organizations are constantly challenged to develop and execute innovative policies and processes that ensure profitable growth. Business leaders often believe that continued growth is not compatible with environmental stewardship, but ecological and industrial performance need not be mutually exclusive. Increasingly, competitive companies are recognizing the importance of embedding sustainability into corporate strategy and adopting business practices that are economically viable, socially equitable, and environmentally responsible. In this course, we explore key concepts, debates, and issues driving the development and execution of business practices at the nexus of sustainability and industry.

SUS 5100 - Environmental Politics and Policy (3)

Examines the politics and processes of U.S. environmental policy-making. Topics include: why government makes environmental laws; competing values influencing environmental policy; institutions, processes, and political actors that shape the creation and implementation of environmental laws; how government addresses environmental problems; how American actions influence international attempts to address environmental problems. Offered Fall Only.

SUS 5110 - Certification in Sustainability Reporting (3)

Firms and their stakeholders are increasingly embracing the importance of disclosing and reporting non-financial measures of performance related to corporate responsibility. Thus, firms are leveraging sustainability reports to disclose their environmental and social performance. This course is geared toward helping you understand how best to assess, document, manage, report, assure and communicate environmental and social (non-financial) performance via Sustainability Reporting. The course will provide guidance on key concepts, frameworks, standards and best practices for sustainability reporting, assurance and verification.

SUS 5120 - GRI Certification (1)

This seminar is comprised of two sections. In the Master Class on GRI Reporting students will Learn About GRI and the GRI Reporting Framework. In the Master Class on Materiality and Stakeholder Engagement students will learn cutting edge skills to identify and prioritize material issues (social, environmental and economic) of concern to various stakeholders following the GRI reporting framework. These Master Classes are joint efforts by GRI's Certified Training Partners ISOS Group and BrownFlynn. This seminar is available to all graduate-level students as a one credit hour elective. In addition to one course credit, it also will result in an official Global Reporting Initiative (GRI) Certification. There is a fee of \$400.00 for the certification piece, which you will be required to pay in addition to the SLU graduate tuition rate. Payment of this fee will be handled through a separate registration site accessible through the Center for Sustainability homepage: <http://www.slu.edu/x35576.xml>. If you have questions, please contact us at (314) 977-3608 or sustainability@slu.edu.

SUS 5130 - Future Issue US Rail Trans. (3)

The course will explore the enormous promise of expanded research and development focused on new U.S. rail systems and corridors and on the political and economic challenges involved in building them.

SUS 5160 - Environmental Politics and Policy (3)

Examines the politics and processes of U.S. environmental policy-making. Topics include: why government makes environmental laws; competing values influencing environmental policy; institutions, processes, and political actors that shape the creation and implementation of environmental laws; how government addresses environmental problems; how American actions influence international attempts to address environmental problems

SUS 5930 - Special Topics (3)

Special Topics course

SUS 5970 - Research Topics (1-3)

Theoretical or practical fieldwork that is not part of a thesis or master's project

SUS 5980 - Independent Study (3)

A non-classroom course in which a student explores a topic that is related to the student's graduate work and career goals.

SUS 5990 - Thesis Research (3)

Research that leads to a Master's Thesis and defense of the Thesis

Urban Planning & Development (UPD)**UPD 5000 - Foundations of Planning (3)**

This course is designed to provide the incoming planning students with the foundational concepts important to planning education and practice. It will explore the historical underpinnings of cities and city life that reveal why and how modern planning practice came into play. In doing so, students will also examine land use, transportation, economic analysis, housing, the role of government in planning, community-based plans, citizen-led planning and how contemporary planning can be shaped by poverty, race, and social class. Students will learn first-hand how to do field work within a community and additionally experience the role that consensus building plays in group decision making through a semester-long neighborhood-based group project. Offered every fall.

UPD 5010 - Planning & Development Theory (3)

This course explores the literature on planning and development theories. We will examine several themes: 1) historical foundations and justifications of urban planning; 2) values and normative frameworks in planning; 3) the factors that contribute to the growth or decline of city-focused regions. Readings pull from planning, economic geography, sociology, and urban studies to explain the spatial, industrial, and people-focused patterns of development in cities, suburbs, and regions. Offered every fall.

UPD 5020 - Land Use Planning and Analysis (3)

This course provides students with an overview of how land use decisions are made and activities involved in land use planning. Starting with the history and theory of land use planning, this course develops a conceptual framework for how the often controversial decisions are made, exploring the issues from the perspectives of the public and the private sectors. Students examine values and objectives behind the different approaches to land management and the role that the local government plays in establishing a land use program. Students also consider the necessary information required to develop a land use plan, examining the different types of data and how they might be used. Students ultimately examine land use practices at the site level, exploring development issues for a series of specific land uses. Following this class, students will have the necessary analytical skills to examine a series of land use development issues. (Offered every spring.)

UPD 5100 - Research Methods (3)

In this class, we will explore the basic methods used in planning and policy analysis. Whether as an urban planner or private developer/consultant, we all encounter policy reports and documents and are required to decipher them at some point in our careers. Many of us will also write these reports or use them as source material for grant proposals or funding requests, thus understanding the methods is essential to our work. This course provides the foundation for planning and policy analysis, examining the basic methods used in addressing planning and development problems. (Offered every fall.)

UPD 5110 - Spatial Planning Methods (3)

This is the third methods course in the required research methods sequence that UPD students are required to complete for the degree. This course is designed to introduce students to the basic spatial methods for analyzing policy problems. In the course students will learn about the characteristics of spatial research and how to identify and apply appropriate methods for answering spatial questions. Offered every spring. Prerequisite: GIS 5010 Introduction to GIS

UPD 5200 - Local Economic Development Policy and Practice (3)

This course provides an introduction to the context, theory, process, and practice of local economic development planning. Topics covered include theoretical and conceptual explanations of the economic development process; international, national, and regional factors affecting local economic development; federal, state, and local roles; contrasting economic development approaches and methods for planning and practice; equity, participation, and partnerships in economic development; and financing tools for local economic development. (Offered every spring.)

UPD 5220 - Infrastructure and Plan Implementation (3)

This course explores various systems and services that support a city and region and how function. How are they financed? How do they interact with other systems? These include all systems and services that engage in some planning function, including transportation, water, sewer, and schools. Offered every spring.

UPD 5250 - Planning and Development in St. Louis (3)

This course examines the major demographic, economic and social trends that have characterized St. Louis. It will be relevant to those with an interest in city planning and community development, but also urban history, economic development, housing and related topics. Students will study plans and projects, some of which were implemented and some not. The intent is to examine the ingredients of successful plans, programs and projects; appreciation for the consequences (both intended and unintended) of development decisions; and a better understanding of the city and the region.

UPD 5260 - Real Estate and Economic Development (3)

The purpose of this course is to teach students the fundamentals of real estate and development planning, with a focus on the interaction between public and private sectors. The desired result is to provide the students with an overview of both perspectives and strategies so that those going into either the related public or private sector fields have a broad background of how development initiatives work within the context of the public process.

UPD 5350 - Environmental Planning (3)

This course is designed to present the concepts and frameworks used for environmental planning. This course will present both the contexts within which environmental planning takes place and the frameworks, tools and substantive knowledge with which environmental planners plan. The course uses examples from urban, metropolitan and regional environmental settings. Course objectives include: exploring the relationships between ecological conditions and human settlements and to understand how human activities affect these conditions; becoming familiar with the history and values of ecological/environmental planning; and becoming familiar with the methods: planning to mitigate environmental negatives and restore and sustain ecological integrity and human quality of life.

UPD 5360 - Sustainability and the Built Environment (3)

In 1987 the World Commission on Environment and Development (aka the Brundtland Commission) was convened to address the growing concerns about environmental degradation in light of escalating human development. From that came the call to switch the world policy focus toward a more sustainable future. Sustainable development is most commonly defined as meeting the needs of our present generation while taking the needs of the future generation into consideration. The concept appears simply. Yet, the challenge lies in how we get there. What does it mean to meet the needs of our present generation? How do we define those needs? And what does it mean to take the needs of a future generation into consideration at the same time? What does all of that look like? Therein lies the policy challenge. As we enter the second decade of the 21st century, the world looks vastly different from the time when these conversations about sustainable development began. Even within the past year, the policy frame has changed dramatically, suggesting that there is room for expanding the sustainable development discourse. In this course we explore those questions at the global, national, and local scales.

UPD 5370 - Sustainable Site Planning (3)

This course covers fundamental sustainable site issues such as planning and policy strategies for sustainable communities; site planning with nature & using site analysis to design with nature, not against it; urban agriculture & growing food for sustainable cities and healthy people; soils & protecting - enriching, and valuing soils and the life within them; hydrology and the water cycle - design for water cycling and water conservation; vegetation and landscaping - nutrient cycling, food, wildlife habitat, climate mediation

UPD 5450 - Community Development Finance (3)

This course provides students with conceptual and practical tools needed to participate in the decision-making for and financing of projects, including commercial real estate, that relate to community development goals. The course introduces students to the policy and practice of community development finance, with an emphasis on the resources available to assist for-profit and not-for-profit private sector developers to undertake community development projects in markets and with populations outside of the financial mainstream. The course will include the fundamentals of decision-making about the financing of community development (i.e. real estate loan/investment underwriting), development goals, such as the building of affordable housing, community facilities, charter schools and commercial real estate development. Topics covered with include Community Development Block Grant, HOME Investment Partnership funding, Low Income Housing Tax Credits, Tax-Exempt Bond Financing, New Markets Tax Credits, and others.

UPD 5500 - Real Estate Finance (3)

The course provides practical working knowledge and capabilities in the methods and techniques used in the financial analysis of real estate development projects. We will spend the majority of our time understanding, practicing, and applying present-value mathematics, the concept of return, discounted cash flow analysis, project cost and benefits, and a complete financial analysis of a real estate development project. We will develop Excel spreadsheet capabilities and use them in all the analysis steps. Finally, we will review the loan process for commercial real estate projects. This course provides a hands-on approach to real estate finance and emphasizes the knowledge and analysis required for direct investment in real estate projects. This course will provide the skills necessary to evaluate potential opportunities in real estate. (Offered every fall.)

UPD 5900 - Planning and Development Studio (3)

This course is interdisciplinary and open to students in urban planning and design, architecture, law, business, social work, and public health. Students and faculty from Saint Louis University and Washington University work in interdisciplinary teams to respond to projects in collaboration with local partners in the St. Louis region. During class, faculty members and subject experts present on multi-disciplinary aspects of development projects to help guide the work of class teams. (Offered every fall.)

UPD 5910 - Internship (1-6)

Students are required to complete an internship during their course of study. The internship must be approved by their program advisor and must involve at least six weeks of full-time work involving a planning or development related project. At the end of their internship students are expected to write a 2,500 word essay discussing their work/project and how it relates to planning and development. In this essay, students will apply classroom knowledge to the internship experience. (Offered as needed.)

UPD 5960 - Capstone (2-3)

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.