AGC 2021 BA-ACCT 3(3,0)
Principles of Financial Accounting: PR: MAC 1105C with a “C” (2.0) or better. Nature of accounting, financial statements, the accounting cycle, assets, current liabilities, long-term debt, and owner’s equity; accounting for proprietorships and corporations. FALL, SPRING.

AGC 2021H BA-ACCT 3(3,0)
Honors Principles of Financial Accounting: PR: MAC 1105C with a “C” (2.0) or better, and consent of Honors. Same as AGC 2021 with honors level content. OCCASIONAL.

AGC 2071 BA-ACCT 3(3,0)
Principles of Managerial Accounting: PR: AGC 2021 with a “C” (2.0) or better. The purpose of this class is to thoroughly familiarize the student with the various uses of accounting information for planning and control. FALL, SPRING.

AGC 3082 BA-ACCT 3(3,0)
Accounting For Non-Business Majors: PR: Junior Standing. Accounting and reporting from an investment and managerial decision making perspective. OCCASIONAL.

AGC 3131 BA-ACCT 3(3,0)
Intermediate Financial Accounting I: PR: Pre-Accounting or Pre-Finance major or Accounting minor & AGC 2021 & AGC 2071 each with a grade of “C” (2.0) or better. Technical knowledge about accounting measurement and disclosure, as well as how financial statements are analyzed and interpreted by external users. FALL, SPRING.

AGC 3141 BA-ACCT 3(3,0)
Intermediate Financial Accounting II: PR: Accounting major or minor, AGC 3131 with a grade of “C” (2.0) or better. Accounting theory and practice related to preparation, and interpretation of external financial statements. FALL, SPRING.

AGC 3173 BA-ACCT 3(3,0)
Accounting for Decision-Makers: PR: Pre-Business (except Pre-Accounting) major & AGC 2021 & AGC 2071 each with a grade of “C” (2.0) or better. Explores the use of financial statements and managerial accounting in support of business decisions. The tax environment on businesses is also explored. FALL, SPRING.

AGC 3361 BA-ACCT 3(3,0)
Cost Accounting I: PR: Junior standing. Accounting major or minor, and MAC 1105C, ECO 2013, ECO 2023. AGC 2071, each with a grade of “C” (2.0) or better. Theory and practice of using accounting information for managerial planning, and control as well as in costing, and pricing decisions. FALL, SPRING.

AGC 3501 BA-ACCT 3(3,0)
Financial Accounting for Governmental and Nonprofit Organizations: PR: Accounting major or minor, and a grade of “C” (2.0) or better in AGC 3131. Application of financial accounting for governmental and nonprofit organizations. FALL, SPRING.

AGC 4401C BA-ACCT 3(3,1)
Accounting Information Systems: PR: Accounting major or minor, AGC 3131 and CGS 2100C, each with a grade of “C” (2.0) or better. Manual and computer-based accounting information systems. FALL, SPRING.

AGC 4651 BA-ACCT 3(3,0)
Auditing: PR: Accounting major or minor, AGC 3141 and AGC 4401C, each with a grade of “C” (2.0) or better. The standards, practices, and procedures followed in the audit function. FALL, SPRING.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Title</th>
<th>Description</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMH 2010</td>
<td>CAH-HIST History of the South Since 1865: PR: AMH 2010 and AMH 2020 or C.I. Reconstructing the &quot;solid South&quot; and the racial dilemma, progressivism for whites only, southern literature, 20th-century economic, political and social changes, and the new Reconstruction. Occasional.</td>
<td>History of the South Since 1865: PR: AMH 2010 and AMH 2020 or C.I. Reconstructing the &quot;solid South&quot; and the racial dilemma, progressivism for whites only, southern literature, 20th-century economic, political and social changes, and the new Reconstruction. Occasional.</td>
<td>AMH 2043</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>AMH 2140</td>
<td>CAH-HIST Jeffersonian America: PR: AMH 2010 and AMH 2020 or C.I. The voyages of discovery, the origins of the thirteen colonies, and their political, economic, social, and religious life in the 17th and 18th centuries. Occasional.</td>
<td>Jeffersonian America: PR: AMH 2010 and AMH 2020 or C.I. The voyages of discovery, the origins of the thirteen colonies, and their political, economic, social, and religious life in the 17th and 18th centuries. Occasional.</td>
<td>AMH 2150</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>AMH 2160</td>
<td>CAH-HIST Canadian History: Canada since Colonial times and the present, but with emphasis on the period since the British North America Act, 1867. Occasional.</td>
<td>Canadian History: Canada since Colonial times and the present, but with emphasis on the period since the British North America Act, 1867. Occasional.</td>
<td>AMH 2170</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>AMH 2190</td>
<td>CAH-HIST The Jacksonian Age and Progressivism: PR: AMH 2010 and AMH 2020, or C.I. The Rise of Industrialized and Urbanized America, The emergence of the New South and the New West, the Populist Movement, overseas expansion, Progressivism. Occasional.</td>
<td>The Jacksonian Age and Progressivism: PR: AMH 2010 and AMH 2020, or C.I. The Rise of Industrialized and Urbanized America, The emergence of the New South and the New West, the Populist Movement, overseas expansion, Progressivism. Occasional.</td>
<td>AMH 2200</td>
<td>3(3,0)</td>
</tr>
<tr>
<td>AMH 2210</td>
<td>CAH-HIST United States History: 1914-1939: PR: AMH 2010 and AMH 2020, or C.I. The Progressive reforms of Woodrow Wilson, World War I, post-war prosperity, the Depression, the New Deal, and the coming of World War II. Occasional.</td>
<td>United States History: 1914-1939: PR: AMH 2010 and AMH 2020, or C.I. The Progressive reforms of Woodrow Wilson, World War I, post-war prosperity, the Depression, the New Deal, and the coming of World War II. Occasional.</td>
<td>AMH 2220</td>
<td>3(3,0)</td>
</tr>
</tbody>
</table>
AM A 4300 CAH-ENG 3(3,0) Major American Authors: PR: Grade of C (2.0) or better in ENG 1014. A comprehensive study of selected major American literature figures. May be repeated for credit only when course content is different. Fall, Spring.

AM 4321 CAH-ENG 3(3,0) Modern American Literature: PR: Grade of C (2.0) or better required in ENG 3014. Major writers of modern American literature. Occasional.

AM 4630 CAH-ENG 3(3,0) Latino Literature: PR: Grade of C (2.0) or better required in ENG 3014. U.S. literature by writers from Latino and Latina backgrounds. Occasional.

ANG 5094 COS-ANTHRO 3(3,0) Writing in Anthropology: PR: Admission to the Ph.D. in Integrative Anthropological Sciences or MA in Anthropology programs, or C.I. Develop scholarly writing skills specific to anthropology in terms of engagement with literature, crafting of arguments, as well as the style of expression and quoting. Fall.

ANG 5100 COS-ANTHRO 3(3,0) Archeological Sciences: PR: Admission to Anthropology M.A., Maya Studies graduate certificate, or C.I. Field and laboratory methods routinely used in archeology and forensic archeology, including instrumentation. Occasional.

ANG 5166 COS-ANTHRO 3(3,0) Problems in Maya Studies: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. In-depth study of current methodological, theoretical, and/or topical problems in Maya Studies. Occasional.

ANG 5167 COS-ANTHRO 3(3,0) Maya Hieroglyphs: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. The study of Maya writing, the translation of Maya hieroglyphs, and the significance of translations to reconstructions of ancient Maya culture. Occasional.

ANG 5188 COS-ANTHRO 3(3,0) Paleoenthnobotany: PR: Admission to Anthropology MA program. C.I. Knowledge and understanding of paleoanthropological sufficient to understand, interpret, and evaluate plant data in archaeological, paleoecological, and contemporary research. Odd Spring.

ANG 5191 COS-ANTHRO 3(3,0) Mortuary Archaeology: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. Funerary customs and human remains; basic data collection, skeletal analysis, and comparative study of mortuary ritual-ancient and modern. Occasional.

ANG 5228 COS-ANTHRO 3(3,0) Maya Iconography: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. Study and interpretation of ancient Maya iconography as reflected in art, artifacts, and constructed features. Odd Spring.

ANG 5272 COS-ANTHRO 3(3,0) Culture, Inequality and Global Development: PR: Admission to Anthropology M.A., Maya Studies graduate certificate, or C.I. Origins and contemporary ramifications of underdevelopment and disempowerment in the world system from an anthropological perspective. Occasional.

ANG 5301 COS-ANTHRO 3(3,0) Anthropology of Tourism: PR: Admission to Anthropology M.A., Maya Studies graduate certificate, or C.I. Anthropology of tourism in U.S. and world regions, including impacts on local peoples, cultures, and environments. Occasional.

ANG 5486 COS-ANTHRO 3(3,0) Quantitative Research in Anthropology: PR: Admission to the MA in Anthropology program, Maya Studies graduate certificate, or C.I. Quantitative approaches to problems in anthropology, including multivariate systems, assessment of reliability, and approaches for small samples. Even Fall.

ANG 5525C COS-ANTHRO 4(3,1) Human Osteology: PR: Admission to the Anthropology M.A. program or C.I. The human skeleton and the methodology and techniques involved in the anthropological assessment of skeletal remains. Fall.

ANG 5531 COS-ANTHRO 3(3,0) Nutritional Anthropology: PR: Admission to Anthropology M.A., Maya Studies GC, or C.I. The biological, psychological, and cultural influences of the environment on food consumption and physiological status. Perspectives are cross-cultural, evolutionary, ecological. Occasional.

ANG 5560 COS-ANTHRO 3(3,0) Language and Culture: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. Language as an integral part of human culture and behavior, focusing on cross cultural issues that affect cultural competency. Occasional.

ANG 5738 COS-ANTHRO 3(3,0) Advanced Medical Anthropology: PR: Admission to Anthropology MA, Maya Studies Graduate certificate, or C.I. Advanced topics in ethnography of medical traditions and anthropological approaches to the study of health and disease. Occasional.

ANG 5742 COS-ANTHRO 3(3,0) Problems in Forensic Anthropology: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. Current issues and topics in forensic anthropology. Even Spring.

ANG 5822 COS-ANTHRO 3(3,0) Maya Field Research: PR: Admission to Anthropology MA, Maya Studies GC, or C.I. Practical application of method and theory during primary infeld research in the Maya area. Spring.

ANG 5852 COS-ANTHRO 3(3,0) GIS Methods in Anthropology: PR: Admission to Anthropology MA or GIS certificate. Overview to Geographic Information Systems (GIS) methods from an anthropological perspective. Even Fall.

ANG 5853 COS-ANTHRO 3(3,0) Advanced GIS Methods in Anthropology: PR: ANG 5852 and admission to Anthropology MA program or GIS certificate, or C.I. Advanced methods to Geographical Information Systems (GIS) from an anthropological perspective. Odd Spring.


ANT 2000 COS-ANTHRO 3(3,0) General Anthropology: An introductory survey of the four major subfields of anthropology: Social Anthropology, Physical Anthropology, Linguistics, and Archaeology. Fall, Spring.


ANT 2140 COS-ANTHRO 3(3,0) Archaeology and the Rise of Human Culture: The evolution of human society from foraging and hunting groups to the earliest cities and states. Fall, Spring.

ANT 2410 COS-ANTHRO 3(3,0) Cultural Anthropology: Global Perspectives. Local Contexts: An introduction to human diversity as exemplified among various cultures and ethnic groups. Fall, Spring.

ANT 2511 COS-ANTHRO 3(3,0) The Human Species: Human biological variation in an evolutionary perspective. Fall, Spring.

ANT 2511H COS-ANTHRO 3(3,0) Honors The Human Species: PR: Permission of Honors. Human biological variation in an evolutionary perspective. Fall.

ANT 3026 COS-ANTHRO 3(3,0) Mummies, Zombies, and Vampires: Anthropology of the Undead: PR: Sophomore standing. Anthropological exploration into the phenomenon of the undead (namely, zombies, vampires and mummies) and our fascination with this subject. Occasional.

ANT 3106 COS-ANTHRO 3(3,0) Archaeology and Popular Culture: PR: Sophomore standing. How the ancient past and archaeology appear in popular culture and are manipulated and used by modern societies. Occasional.

ANT 3107 COS-ANTHRO 3(3,0) Blood and Valor in the Viking World: PR: Sophomore standing. A comparative study of social evolution in Africa, Europe, and Asia from the earliest humans to the beginnings of recorded history. Fall.

ANT 3145 COS-ANTHRO 3(3,0) Anthropology of Counseling Societies: PR: ANT 2140 or C.I. Theoretical perspectives on ancient hierarchies of power. Fall, Spring.

ANT 3148 COS-ANTHRO 3(3,0) Life and Death in Ancient Egypt: PR: Sophomore standing. Use of archaeology and physical anthropology to examine the lives and death of both common citizens and royalty in Ancient Egypt (3200 BCE-AD 600). Spring.

ANT 3152 COS-ANTHRO 3(3,0) Cliffs, Canyons, and Deserts: Ancient Societies of the Greater Southwest: PR: Sophomore Standing or C.I. The precolombian history of the Native peoples of the U.S. Southwest, from the region’s first colonists to Puebloan and Navajo groups of the Contact era. Even Fall.

ANT 3154 COS-ANTHRO 3(3,0) A Survey of American Historical Archaeology: PR: Sophomore standing or C.I. Examines historical archaeology of the United States from the arrival of Europeans through the early 20th century to understand America’s history using archaeological principles. Even Fall.

ANT 3158 COS-ANTHRO 3(3,0) Florida Archaeology: PR: Sophomore standing. Florida prehistory from Paleo-Indian to European contact including archaeological periods, cultural areas, sites, and artifacts. Spring.

ANT 3160 COS-ANTHRO 3(3,0) Americas Before Columbus: PR: Sophomore standing. Archaeological developments of North, Central, and South America from the hemisphere’s initial peopling through the advent of European cultures. Occasional.

ANT 3161 COS-ANTHRO 3(3,0) Ancient Mexico: Aztec to Zapotec: PR: Sophomore Standing or C.I. Achievements of civilizations in Mexico (Olmec, Zapotec, etc.) as well as lesser known archaeological cultures. Occasional.

ANT 3163 COS-ANTHRO 3(3,0) Mesoamerican Archaeology: PR: Sophomore standing. An introduction to the prehistory of Mexico, Guatemala and upper Central America from earliest times through the Spanish conquest. Fall.

ANT 3164 COS-ANTHRO 3(3,0) Ancient Incas: PR: Sophomore standing, or C.I. The ancient Inca civilization, including examination of pre-Inca cultures and modern Andeans. Uses archaeological, ethnohistorical, historical, and contemporary anthropological sources. Spring.
ANT 3165 COS-ANTHRO 3(3,0) Archaeology of South America: PR: ANT 2140, or C.I. Civilizations of South America from the last ten thousand years, focusing primarily on civilizations of the Andes and other areas. Occasional.

ANT 3168 COS-ANTHRO 3(3,0) Maya Archaeology: PR: Sophomore standing. An examination of the Prehistoric Maya culture focusing on both the archaeology and current issues in the field. Occasional.

ANT 3169 COS-ANTHRO 3(3,0) Life and Death in the Ancient Andes: PR: ANT 2511 or Sophomore Standing. Demonstrates the potential of human skeletal remains for reconstructing past lifeways in the ancient Andean civilizations of South America (Peru and Bolivia). Occasional.

ANT 3173 COS-ANTHRO 3(3,0) Archaeology of Sex: PR: Sophomore standing. Cross-cultural concepts of sex, sexuality, and sexual intercourse throughout human history from an archaeological perspective. Spring.

ANT 3174 COS-ANTHRO 3(3,0) Battlefront Archaeology: PR: Sophomore standing or C.I. Provide students an archaeological perspective of fields of combat and military infrastructure from the Classic period to the early 20th century. Odd Fall.


ANT 3179 COS-ANTHRO 3(3,0) Australian Archaeology and Indigenous Cultures: PR: Sophomore standing or C.I. Explore indigenous peoples, both past and present, through historical and maritime archaeology, as a means of unraveling the full breadth of Australia's rich indigenous cultures. Odd Fall.


ANT 3241 COS-ANTHRO 3(3,0) Magic, Ritual, and Belief: PR: Sophomore standing. Patterns in religious behavior in various societies, with primary emphasis on myth, rite, taboo, and festival social phenomena. Fall, Spring.

ANT 3245 COS-ANTHRO 3(3,0) Native American Religions: PR: Sophomore standing. The religious beliefs of native New World peoples. Fall, Spring.


ANT 3273 COS-ANTHRO 3(3,0) Law and Culture: PR: or CR: ANT 2000 or C.I. An introduction to law as an organizing force in society, including a study of primitive forms of law and social control. Occasional.

ANT 3275 COS-ANTHRO 3(3,0) Anthropological Perspectives on Refugees: PR: Sophomore standing or C.I. The culturally specific causes of refugee flows, responses to refugees, cultural issues refugees experience when they seek asylum, and resettlement experiences. Even Spring.

ANT 3290 COS-ANTHRO 3(3,0) Anthropology of Plants and People: PR: ANT 2140 or Sophomore Standing. Anthropological perspectives involving the interactions between people and plants. Even Spring.

ANT 3302 COS-ANTHRO 3(3,0) Sex, Gender and Culture: PR: Sophomore standing. The traditional and changing roles of women and men viewed in a cross-cultural perspective. Fall, Spring.


ANT 3330 COS-ANTHRO 3(3,0) Anthropology of the Amazon: PR: Sophomore standing or C.I. The historical ecology and archaeology of indigenous Amazonians, including evidence from archaeological, ethnographic and linguistic studies. Occasional.


ANT 3393 COS-ANTHRO 3(3,0) American Indian Literature and Culture in Florida: PR: ENC 1102. Literature about the Apalachee, Timucua, Seminole, and Calusa tribes in Florida and Native American literature of the South. Even Fall.


ANT 3541 COS-ANTHRO 3(3,0) Biobehavioral Anthropology: PR: Sophomore standing. An introduction to the study of human behavior in terms of mutual interaction between human biology and cultural environments. Fall.

ANT 3550C COS-ANTHRO 3(2,1) Primatology: PR: One of the following: ANT 2511, BSC 2010C, or C.I. Study of species from the Order Primates, including their morphology, ecology, behavior, and geographic distribution. Odd Spring.

ANT 3610 COS-ANTHRO 3(3,0) Language and Culture: PR: Sophomore standing. The study of language in a non-western setting: language and behavior, language and perception. Fall, Spring.

ANT 3701 COS-ANTHRO 3(3,0) Engagement & Social Change: Public Anthropology: PR: Sophomore Standing or C.I. Application of anthropological methods to current human problems such as social environment, migration, globalization and health. Even Fall.

ANT 3943 COS-ANTHRO 3(3,0) Caribbean Archaeology Practicum: PR: Previous fieldwork is preferred, and C.I. Field archaeology by participating in field schools at prehistoric Lucayan sites on Eleuthera and/or Inagua Islands. May be used in the degree program a maximum of 2 times. Occasional.

ANT 4013 COS-ANTHRO 3(3,0) Anthropology of Fast Food: PR: ANT 2000 or ANT 2410 or C.I. Anthropological research on corporate fast food in diverse cultural settings. Occasional.

ANT 4027 COS-ANTHRO 3(3,0) Mummies, Life After Death: PR: ANT 2511 or C.I. Cultural practices and beliefs surrounding death; the concerns cultures and humans have had throughout the ages about the body’s decay after life, and their attempts to prevent decay and preserve bodies in a state as near to life as possible. Occasional.

ANT 4034 COS-ANTHRO 3(3,0) History of Anthropological Thought: PR: ANT 2140 or C.I. The exploration of the intellectual foundations of modern anthropology. Fall, Spring.

ANT 4051 COS-ANTHRO 3(3,0) Environmental Anthropology: PR: ANT 2140 or Junior Standing. Relationships between human cultures and the environment from an anthropological perspective. Even Fall.

ANT 4105 COS-ANTHRO 3(3,0) Saving the Plundered Past: Ethics and Controversy in Contemporary Archaeology: PR: ANT 2140 or Junior Standing. Social, economic and political contexts surrounding contemporary archaeological research and interpretation, with emphasis on ethics, heritage management, and law. Even Spring.

ANT 4115C COS-ANTHRO 3(2,1) Archaeological Method and Theory: PR: ANT 2140 or C.I. A survey of archaeological field and laboratory techniques, including the interpretation of written archaeological reports. Spring.


ANT 4153 COS-ANTHRO 3(3,0) North American Archaeology: PR: Sophomore standing. The cultural development of Native North Americans from prehistoric times to the period of the first European contact. Spring.

ANT 4170 COS-ANTHRO 3(3,0) Household Archaeology: The Archaeology of Everyday Life: PR: Sophomore Standing. The archaeological student of households and the everyday lives of people associated with daily activities across time and throughout the world. Odd Spring.

ANT 4171 COS-ANTHRO 3(3,0) Anthropology: The Battle of the Sexes?: The Archaeology of Gender: PR: ANT 2140 or Sophomore Standing. Advances in archaeological research on gender, sexuality and social identity. Even Spring.

ANT 4180C COS-ANTHRO 3(1,4) Seminar in Laboratory Analysis: PR: or CR: ANT 2000 or ANT 2140 or C.I. The processing of archaeological finds from excavation through publication. May be repeated for credit. Spring.

ANT 4183 COS-ANTHRO 3(3,0) Archaeological Sciences: PR: One of the following: ANT 2511, ANT 2140, CHS 3501, any 4000 level Criminal Justice course, or C.I. Methods and instrumentation routinely used in archaeology and forensic archaeology. Spring.

ANT 4189 COS-ANTHRO 3(3,0) Museums and Archaeology: PR: ANT 2140 or ANT 2511, or C.I. Archaeological interpretations of death; basic data collection, skeletal analysis, and comparative study of mortuary ritual - both ancient and modern. Odd Spring.

ANT 4187 COS-ANTHRO 3(2,1) Paleoenthobotany: PR: ANT 2140, Junior Standing. Provides students with knowledge and understanding of paleoenthobotany sufficient to understand, interpret, and evaluate plant data in archaeological, palaeoecological, and contemporary research. Odd Spring.

ANT 4303 COS-ANTHRO 3(3,0) Anthropology of Tourism: PR: ANT 2000, or SYG 2000, or PSY 2012 or C.I. Social theory of tourism; anthropology of tourism in U.S. and world regions, including impacts on local peoples, cultures, and environments. Occasional.
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<tr>
<td>ANT 4332</td>
<td>COS-ANTHRO</td>
<td>People and Cultures of Latin America: PR: One of the following: ANT 2000, SYG 2000, PSY 212, ANT 2410, or C.I. History and society of the peoples of Latin America, emphasizing patterns of subsistence and social organization. Odd Fall.</td>
</tr>
<tr>
<td>ANT 4352</td>
<td>COS-ANTHRO</td>
<td>African Societies and Cultures: PR: ANT 2000 or SYG 2000 or C.I. Anthropological survey of Africa examining the theoretical, cultural, and economic diversity of the continent over time. Even Fall.</td>
</tr>
<tr>
<td>ANT 4408</td>
<td>COS-ANTHRO</td>
<td>Culture, Disease, and Healing: PR: Sophomore Standing or C.I. Examining the theoretical, cultural, and environmental influences of food consumption and physiological status. Perspectives are cross-cultural, ecological and evolutionary. Occasional.</td>
</tr>
<tr>
<td>ANT 4441</td>
<td>COS-ANTHRO</td>
<td>Anthropology of Cities: PR: ANT 2100 or Junior Standing. Cities in the past and present along with the activities and social systems that create them from an archaeological and anthropological perspective. Even Spring.</td>
</tr>
<tr>
<td>ANT 4462</td>
<td>COS-ANTHRO</td>
<td>Medical Anthropology: PR: Sophomore standing or C.I. Anthropological approaches of drugs and addiction in the U.S. and internationally as topics of cultural, political, economic, and health concerns. Odd Fall.</td>
</tr>
<tr>
<td>ANT 4480</td>
<td>COS-ANTHRO</td>
<td>Global Health in Anthropological Perspective: PR: Sophomore Standing or C.I. The exploration of global health issues from an anthropological and cross-cultural perspective. Odd Fall.</td>
</tr>
<tr>
<td>ANT 4481</td>
<td>COS-ANTHRO</td>
<td>Anthropology of Drugs and Addiction: PR: Sophomore Standing, or C.I. Anthropological approaches of drugs and addiction in the U.S. and internationally as topics of cultural, political, economic, and health concerns. Odd Fall.</td>
</tr>
<tr>
<td>ANT 4482</td>
<td>COS-ANTHRO</td>
<td>Anthropology of Mental Health: PR: Junior Standing or any upper level course in Anthropology, Sociology, Psychology, or Social Work. Anthropological approaches to mental health and examines mental health and healing in cross-cultural perspective. Odd Spring.</td>
</tr>
<tr>
<td>ANT 4483</td>
<td>COS-ANTHRO</td>
<td>Health and Healing in the Ancient World: An Anthropological Perspective: PR: Sophomore Standing or C.I. A history of health and healing in the human past and how archaeologists can determine patterns and changes over time. Odd Spring.</td>
</tr>
<tr>
<td>ANT 4516</td>
<td>COS-ANTHRO</td>
<td>Human Biological Diversity: PR: ANT 2511 or BiSC 2010C or C.I. Human biological variation and adaptation. Spring.</td>
</tr>
<tr>
<td>ANT 4521</td>
<td>COS-ANTHRO</td>
<td>Forensic Anthropology: PR: One of the following: ANT 2511, CHS 3501, any 4000 level Criminal Justice class, or C.I. The study of human skeletal remains in relation to a legal context. Fall.</td>
</tr>
<tr>
<td>ANT 4525C</td>
<td>COS-ANTHRO</td>
<td>Human Osteology: PR: One of the following: ANT 2521 and ANT 3730C, or C.I. The scientific study of the human skeleton and the methodology and techniques involved in the anthropological assessment of skeletal remains. Fall.</td>
</tr>
<tr>
<td>ANT 4586C</td>
<td>COS-ANTHRO</td>
<td>Human Origins: PR: ANT 2511 or C.I. The fossil evidence for human evolution from Miocene hominids through the australopithecines and the earliest members of the genus Homo. Fall, Spring.</td>
</tr>
<tr>
<td>ANT 4824</td>
<td>COS-ANTHRO</td>
<td>Advanced Descriptive Fieldwork: PR: Students admitted only with permission of instructor. Supervised archaeological fieldwork. Spring.</td>
</tr>
<tr>
<td>ANT 4852</td>
<td>COS-ANTHRO</td>
<td>GIS Methods in Anthropology: PR: Junior standing or C.I. An overview to Geographic Information Systems (GIS) methods from an anthropological perspective. Even Fall.</td>
</tr>
<tr>
<td>APK 3132</td>
<td>ED-ENHS</td>
<td>Triathlon Training and Performance: PR: PEM 2104 Personal Fitness or C.I. Triathlon concepts, training, and performance, leading to the development of optimal fitness and an improved healthy lifestyle. Occasional.</td>
</tr>
<tr>
<td>APK 4110C</td>
<td>ED-ENHS</td>
<td>Exercise Physiology: PR: Admission to the Sport and Exercise Science Program or Fitness Training Minor, BSC 2010C or equivalent, ZOO 3736C or equivalent, and minimum overall 2.5 GPA. Metabolic, neuromuscular, respiratory and cardiovascular physiological concepts and principles with practical application to sport and exercise science. Fall, Spring.</td>
</tr>
<tr>
<td>ARA 1120C</td>
<td>CAH-LANG</td>
<td>Intermediate Arabic Language and Civilization I: PR: Permission of Instructor. ARA 1120C or C.I. Continuation of ARA 1120C. Spring, Odd Spring.</td>
</tr>
<tr>
<td>ARA 1121C</td>
<td>CAH-LANG</td>
<td>Elementary Arabic Language and Civilization II: PR: Permission of Instructor. ARA 1120C. Honors level content. Occasional.</td>
</tr>
<tr>
<td>ARA 2200</td>
<td>CAH-LANG</td>
<td>Intermediate Arabic II: PR: ARA 2200 or equivalent or C.I. Continuation of ARA 2200 with emphasis on Arabic cultures. Fall, Spring.</td>
</tr>
<tr>
<td>ARC 3181</td>
<td>CAH-SVAD</td>
<td>Advanced Topics in Digital Architectural Design: PR: Completion of Articulated Pre-Major: Architecture A.A. at Valencia College West or C.I. Continued investigation of computer-aided design programs currently utilized by professional practices. Odd Spring.</td>
</tr>
<tr>
<td>ARC 3270</td>
<td>CAH-SVAD</td>
<td>Professional Practice in Architecture: PR: ARC 3320L or C.I. Professional architecture practical experience in conjunction with supervised experiences at local, central Florida firms. Occasional.</td>
</tr>
<tr>
<td>ARC 3320L</td>
<td>CAH-SVAD</td>
<td>Architectural Design 5: PR: Completion of Articulated Pre-Major: Architecture A.A. at Valencia College West or C.I. Investigates architectural design and its relationship to regional contextual influences through a range of projects which vary in scale and complexity. Even Fall.</td>
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<tr>
<td>ARC 3463</td>
<td>CAH-SVAD</td>
<td>Materials and Methods of Construction 2: CR: ARC 4323L. Methods of assembling and selecting materials; detailed systems of construction will be investigated. Even Spring.</td>
</tr>
<tr>
<td>ARC 3502</td>
<td>CAH-SVAD</td>
<td>Architectural Structures: PR: Completion of Articulated Pre-Major: Architecture A.A. at Valencia College West or C.I. CR: ARC 3320L. Principles of structural behavior in withstanding gravity and lateral forces. Considers structural layout, load distribution, and preliminary design techniques; and examines contemporary structural systems through case studies. Even Fall.</td>
</tr>
<tr>
<td>ARC 3610</td>
<td>CAH-SVAD</td>
<td>Environmental Technology 1: CR: ARC 3321L. Principles and practices relating to control of the thermal/ atmospheric environment and plumbing in buildings. Odd Fall.</td>
</tr>
<tr>
<td>ARC 3743</td>
<td>CAH-SVAD</td>
<td>Architectural History 3: CR: ARC 3320L. Social, political, material, technological, and cultural forces on design and construction from 1850, including architect’s role in civil society and theoretical positions of architects and architectural schools. Odd Fall.</td>
</tr>
<tr>
<td>ARC 4220</td>
<td>CAH-SVAD</td>
<td>Architectural Theory 2: CR: ARC 4322L. Investigates the theoretical, historical and ideological ideas in architecture that took place during the early decades of the twentieth century. Odd Fall.</td>
</tr>
<tr>
<td>ARC 4322L</td>
<td>CAH-SVAD</td>
<td>Architectural Design 7: PR: ARC 3321L. Continues over architectural processes to solve design needs through appropriate program development and construction technology. Complete building as a final product, emphasizing on urban and suburban housing projects. Odd Fall.</td>
</tr>
</tbody>
</table>
ARC 4323L CAH-SVAD 6(0,9) Architectural Design 8: PR: ARC 4322L. Architecture designs focus on architectural detail and articulation. An investigation of landscape provides the context for this study. Even Spring.

ARC 4620 CAH-SVAD 3(3,0) Environmental Technology 2: CR: ARC 4622L. PR: ARC 3610 or C.I. Fundamentals of architectural lighting, acoustics, electrical power distribution and building communication systems. Odd Fall.

ARC 4694 CAH-SVAD 3(3,0) In the Space of Health and Wellness: PR: ARC 3321L. Considers healthcare issues, facility design, environmental impact, and disruptive technology and convergence of health, research and technology. Occasional.

ARE 2000 ED-CFCS 3(0,3) Early Childhood Art and Creativity: An examination of developmental patterns in children's artistic behaviors and appropriate instructional strategies to be implemented. Occasional. M&S fee $5.00

ARE 3944 CAH-SVAD 3(2,3) Community Art Practicum: PR: C.I. A supervised and directed experience for students to facilitate art programming in a variety of community settings. Occasional.

ARE 4250 ED-TL&L 3(3,0) Art for Exceptionalities: PR: Admission to the College of Education. Art Education Program or C.I. Concepts, principles, and methods of integrating art processes into the education of students with physical, emotional, and mental exceptionalities. Spring.

ARE 4260 CAH-SVAD 3(3,0) Methods in Art Administration: PR: ARH 3820. Theories and methodologies for designing, implementing and administering art programs for a variety of populations. Occasional.

ARE 4351 ED-TL&L 3(3,0) Teaching Art in the Elementary School: PR: Admission into the Art Education Program or Art Education Minor. Transition from university art studio practices to public school teaching of art. Organizing, designing and analyzing art experiences, activities and classroom environments for the elementary school classroom. Fall. M&S fee $5.00

ARE 4352 ED-TL&L 3(2,1) Teaching Art in the Secondary School: PR: Admission into the Art Education program or Art Education Minor. Transition from university art studio practices to High School Teaching of art. Organizing, designing and analyzing art experiences and activities appropriate for junior high and high school children. Examination of teaching methodology relative to the high school and junior high school settings. Spring. M&S fee $5.00

ARE 4356 ED-TL&L 3(3,1) Teaching Art Appreciation & Criticism in the Classroom: PR: ARH 2050 and ARH 2051. An examination of art appreciation programs and concepts toward planning curriculum for the study of art history, popular art, art criticism, and aesthetics for specific educational settings. Fall. M&S fee $8.00

ARE 4453 ED-TL&L 3(3,0) Studio Experiences in Art Education: PR: Admission into the College of Education. Art Education Program or C.I. Materials available for instruction in public schools will be explored in depth in relation to their appropriateness and productive qualities. May be used in the degree program a maximum of 3 times. Spring. M&S fee $5.00


ARE 5255 ED-TL&L 3(2,1) Arts in Recreation: Art activities and experiences appropriate for use in playground, leisure services, occupational orientation and other recreational areas. Occasional.

ARE 5359 ED-TL&L 4(4,0) Teaching Art K-12: PR: Admission to MA in Art Education, graduate standing or C.I. Transition from university art practices to public school teaching of art. Organize, design, and analyze art learning for students K-12. Occasional. M&S fee $5.00

ARE 5454 ED-TL&L 3(3,0) Studio Experiences in Art Education: PR: Graduate admission or C.I. Materials available for instruction in public schools will be explored in depth in relation to their appropriateness and productive qualities. May be repeated for credit. Spring. M&S fee $10.00

ARE 5648 ED-TL&L 3(3,0) Contemporary Visual Arts Education: PR: Graduate standing or C.I. Continued study of current programs and innovations in public school Visual Arts Programs. Occasional.

ARH 2050 CAH-SVAD 3(3,0) History of Western Art I: Painting, sculpture and architecture from the Prehistoric Era through the Renaissance. Fall.

ARH 2050H CAH-SVAD 3(3,0) Honors History of Western Art I: PR: Permission of Honors. Painting, sculpture and architecture from the Prehistoric Era through the Renaissance, with honors content. Occasional.

ARH 2051 CAH-SVAD 3(3,0) History of Western Art II: Painting, sculpture and architecture from the Baroque through the 20th century. Spring.

ARH 2051H CAH-SVAD 3(3,0) Honors History of Western Art II: PR: Permission of Honors. Painting, sculpture and architecture from the Baroque through the 20th century, with honors-level content. Occasional.

ARH 2500 CAH-SVAD 3(3,0) History of Non-Western Art: Major visual arts in various non-Western cultures. Fall Spring.

ARH 3471 CAH-SVAD 3(3,0) Art in the Last 25 Years: PR: ARH 2050 and ARH 2051 or C.I. A seminar for upper-level art students to examine current trends in the visual arts. Occasional.

ARH 3610 CAH-SVAD 3(3,0) American Art: PR: ARH 2050 and ARH 2051 or C.I. Surveys American Art to 1900. Leading artists are identified and representative examples of their work are discussed within the context of major themes, patterns, sources. Occasional.


ARH 3670 CAH-SVAD 3(3,0) Latin American Art: PR: ARH 2050 and ARH 2051 or C.I. The art of the modern era (1820 to 1990) in the Caribbean and South America: issues and characteristics of art as they reflect the cultural evolution of Latin America. Occasional.

ARH 3674 CAH-SVAD 3(3,0) Latin American Popular Visual Culture: PR: ANT 4532 or C.I. Latin American popular culture beyond "fine art," produced in Latin America, the United States, and the Caribbean. Odd Spring.

ARH 3683 CAH-SVAD 3(3,0) Southern Folk Arts: PR: Junior Standing or C.I. This course will explore contemporary issues related to folk art including definition, collecting, marketing, art criticism, tradition, innovation, and its relationship to the so-called fine arts and popular arts. Occasional.

ARH 3710 CAH-SVAD 3(3,0) History of Photography I: PR: Junior Standing or C.I. History of still photography from its earliest inception to 1900. The content of this course is designed for art majors. Occasional.

ARH 3713 CAH-SVAD 3(3,0) 20th Century Photographic History: PR: Junior Standing. The history of the evolution of still photography from the early 20th century to contemporary practice. Occasional.

ARH 3720 CAH-SVAD 3(3,0) History of Prints: PR: ARH 2050 and ARH 2051 or C.I. History of printmaking in the Western world, surveying works by the "great printmakers." Occasional.

ARH 3728 CAH-SVAD 3(3,0) History of Illustration: PR: ARH 2050 and ARH 2051. Western illustration from ancient and medieval manuscripts through nineteenth century cartoon, caricature, book, magazine illustration, and advertising. Occasional.

ARH 3820 CAH-SVAD 3(3,0) Visual Arts Administration: PR: Junior Standing or C.I. Grant applications; Personnel; copyright laws; museum practices, etc. Occasional.

ARH 3842 CAH-SVAD 3(3,0) Art History Abroad: Italy: PR: ARH 2050 and ARH 2051. C.I. in Italy and explores Italian art, architecture, artists, patrons, and culture from the Roman period through the late Baroque. Occasional.

ARH 3889 CAH-SVAD 3(3,0) Art of Walt Disney: PR: ENC 1102 or C.I. Examines the animation, art, and architecture of Disney. Occasional.

ARH 4130 CAH-SVAD 3(3,0) Greek Art and Architecture: PR: ARH 2050 and ARH 2051. Examines the art and architecture of ancient Greece from the Bronze Age through the end of the Hellenistic period. Occasional.

ARH 4150 CAH-SVAD 3(3,0) Roman Art and Architecture: PR: ARH 2050 and ARH 2051. Examines Roman art and architecture from its Etruscan origins through Constantine. Occasional.

ARH 4200 CAH-SVAD 3(3,0) Medieval Art: PR: ARH 2050 and ARH 2051. Medieval Art from the 6th through 14th centuries, including painting, architecture, sculpture and illuminated manuscripts. Occasional.

ARH 4310 CAH-SVAD 3(3,0) Italian Renaissance Art: PR: ARH 2050 and ARH 2051 or C.I. Italian Art and architecture from 1300 to 1600. Occasional.


ARH 4350 CAH-SVAD 3(3,0) Baroque Art: PR: ARH 2050 and ARH 2051 or C.I. A study of European Art in the 17th and 18th centuries. Occasional.

ARH 4352 CAH-SVAD 3(3,0) Baroque Art: PR: ARH 2050 and ARH 2051. Examines the art and architecture of the Baroque period in Italy from 1600-1750. Occasional.

ARH 4430 CAH-SVAD 3(3,0) 19th Century Art: PR: ARH 2050 and ARH 2051. A survey of the trends and developments in art during the 19th century, including the art of America and of Western Europe. Occasional.

ARH 4450 CAH-SVAD 3(3,0) 20th Century Art: PR: ARH 2050 and ARH 2051 or C.I. A survey of the art from Fauvism, Futurism, Cubism to the art of the present. Occasional.
ARH 4653 CAH-SVAD 3(3,0) Meso American Art: PR: Junior Standing or C.I. A survey of pre-Columbian and pre-Columbian Americas, from the Pre-Colombian, through the Spanish Colonial, to the 20th century. Occasional.

ARH 4800 CAH-SVAD 3(3,0) Theory and Criticism of the Visual Arts: PR: ARH 2050 and ARH 2051 or C.I. Explores criteria of art criticism, focusing on theoretical approaches to art meaning through time; art examples from various periods/cultures. Occasional.

ARH 4871 CAH-SVAD 3(3,0) Women in Art: PR: ARH 2050 and ARH 2051 or C.I. A survey of women artists from ancient times to the present as well as a study of the role Aesthetics and ideology have played in determining representations of women in art. Occasional.

ARH 5897 CAH-SVAD 3(3,0) Advanced Seminar in Art History: PR: ARH 2050 or C.I. Research methods on various topics including: major artist, monument, cultural period or theme. Occasional.

ART 2201C CAH-SVAD 3(2,4) Design Fundamentals-Two Dimensional: PR: C.I. Priority given to students whose major requires this course. Emphasis on form, Emphasis on linear, two-dimensional design problems, including problems in black and white and basic color theory. Fall, Spring. M&S fee $15.00

ART 2201C CAH-SVAD 3(2,4) Honors Design Fundamentals-Two Dimensional: PR: AR 2201C. Priority given to students whose major requires this course. Permission of Honors. Materials, processes, Form. Emphasis on two-dimensional design problems, including problems in black and white and basic color theory with Honors content. Occasional.

ART 2203C CAH-SVAD 3(2,4) Design Fundamentals-Three Dimensional: PR: C.I. Priority given to students whose major requires this course. Basic three-dimensional design using the various sculptural media. Fall, Spring. M&S fee $45.00

ART 2203C CAH-SVAD 3(2,4) Honors Design Fundamentals-Three Dimensional: PR: AR 2203C. Priority given to students whose major requires this course. Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques. Fall, Spring. M&S fee $10.00

ART 2300C CAH-SVAD 3(2,4) Honors Drawing Fundamentals I: PR: C.I. Priority given to students whose major requires this course. Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques. Fall, Spring. M&S fee $10.00

ART 2300C CAH-SVAD 3(2,4) Honors Drawing Fundamentals II: PR: ART 2302 and Consent of Honors. Priority given to students whose major requires this course. Drawing as a means of formal organization. Introduction to problems in drawing methods and media. Emphasis on description techniques. With Honors content. Occasional. M&S fee $10.00

ART 2301C CAH-SVAD 3(2,4) Drawing Fundamentals I: PR: ART 2300C or C.I. Priority given to students whose major requires this course. Continuation of ART 2300C. Fall, Spring. M&S fee $10.00

ART 2400C CAH-SVAD 3(2,4) Beginning Printmaking: Basic elements and techniques of printmaking covered. Relief, intaglio, and lithography. Assignments include practical application of printmaking and printmaking techniques. Occasional.

ART 2500C CAH-SVAD 3(2,4) Beginning Painting: PR: ART 2300C, ART 2301C, or C.I. Methods and materials of the painter. Introduction to the problems in painting. Occasional. M&S fee $15.00

ART 2701C CAH-SVAD 3(2,4) Sculpture: PR: Three semester hours in three-dimensional work, ART 2201C, ART 2203C, and ART 2301C. The challenge of communicating ideas through three-dimensional forms. Odd Fall. M&S fee $35.00

ART 2754C CAH-SVAD 3(2,4) Beginning Ceramics: PR: ART 2201C or C.I. Basic concepts of ceramic design, experience in processes of forming, decorating, glazing, and firing pottery. Fall, Odd Spring. M&S fee $35.00

ART 2823 CAH-SVAD 3(3,0) Art as Interface: An overview of art department specializations, and selected historical and theoretical information concerning the nature of interdisciplinary aesthetics. Examination of aesthetic characteristics shared by the various disciplines and how knowledge of these data is used by the profession to share information with the community. Fall, Spring.

ART 3161 CAH-SVAD 3(3,0) Mixed Media: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C. Concepts and techniques involving the creation of art objects by integrating painting, sculpture, drawing, and art history. Occasional.

ART 3170C CAH-SVAD 3(2,4) Book Binding: PR: ART 2201C, ART 2203C, and ART 2301C. Book binding techniques, methods, structures, and production of books. Occasional. M&S fee $44.00

ART 3171C CAH-SVAD 3(2,4) Materials for Artist Books: PR: ART 2201C, ART 2203C, and ART 3170C. Production of materials used for an artist in the creation of books. Occasional. M&S fee $32.00


ART 3176C CAH-SVAD 3(2,4) The Illuminated Book: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and ART 3170C. The creation of visual, illuminated responses to language from stories, fables, poetry, and books using a variety of media. Occasional. M&S fee $45.00


ART 3332C CAH-SVAD 3(2,4) Intermediate Drawing: PR: ART 2201C, ART 2203C, and ART 3170C. Intensive practice in basic drawing technique and content of ART 2201C, focusing on a variety of ceramic handling procedures, including design, glaze application and firing process. Occasional. M&S fee $35.00

ART 3824 CAH-SVAD 3(3,0) Japanese Manga & Anime: PR: ENC 1102 or C.I. Explores the real and imaginary robotic beings inhabiting the fictional worlds of Japanese Anime and Manga. Occasional.

ART 3833C CAH-SVAD 3(4,2) Processes and Ideas in Art: PR: Junior Standing. This course emphasizes the development of individual creativity and the generation of new insights concerning artistic expression. These "formative activities" must be manifested by students in the form of small sculptures and/or other forms of creativity. Occasional.


ART 3950 CAH-SVAD 0(0,0) Portfolio Review: PR: ART 2201C, ART 2203C, ART 3170C. Mending, repairing, and re-binding books from the Library and Special Collections. Occasional.

ART 3951C CAH-SVAD 3(2,4) Design Intensive: PR: Any 2000 level Art History. Interdisciplinary design course emphasizing visual literacy skills and finished design projects with real world clients. Course covers two and three dimensional design content. Occasional.

ART 4172C CAH-SVAD 3(2,4) Book Repair and Restoration: PR: ART 2201C, ART 2203C, and ART 3170C. Mending, repairing, and re-binding books from the Library and Special Collections. Occasional.


ART 4177C CAH-SVAD 3(2,4) Commercial Book Design and Publishing: PR: ART 2823 and Junior standing or C.I. Analysis of art and design elements and their interpretation from a historical perspective. Occasional.

ART 4200C CAH-SVAD 3(2,4) Advanced Drawing: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and ART 3332C. May be repeated for credit. Fall, Spring.

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ART 4402C CAH-SVAD 3(2,4)
Advanced Printmaking: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and a satisfactory portfolio review. May be repeated for credit. Fall, Spring. M&S fee $30.00

ART 4505C CAH-SVAD 3(2,4)
Advanced Painting: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, ART 3504C, and a satisfactory portfolio review or C.I. Elements of practice in printmaking. May be repeated for credit. Fall, Spring. M&S fee $15.00

ART 4644C CAH-SVAD 3(2,4)

ART 4710C CAH-SVAD 3(2,4)
Advanced Sculpture: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and a satisfactory portfolio review or C.I. The challenge of communicating concepts through three-dimensional forms. May be repeated for credit. Fall, Spring. M&S fee $45.00

ART 4765C CAH-SVAD 3(2,4)
Ceramic Handbuilding II: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, ART 2754C, and a satisfactory portfolio review or C.I. Technical skills in managing form, composition, color, and surface texture. Occasional. M&S fee $35.00

ART 4780C CAH-SVAD 3(2,4)

ART 4783C CAH-SVAD 3(2,4)
Advanced Ceramics: PR: ART 2201C, ART 2203C, ART 2300C, and ART 2301C, and a satisfactory portfolio review or C.I. An in-depth understanding of the singular and diverse properties of clay and glaze materials. Occasional. M&S fee $35.00

ART 4786C CAH-SVAD 3(2,4)
Ceramic Raw Material: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and a satisfactory portfolio review or C.I. An in-depth understanding of the singular and diverse properties of clay and glaze materials. Occasional. M&S fee $35.00

ART 4935 CAH-SVAD 3(3,0)
BFA Exhibition Seminar: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and a satisfactory portfolio review or C.I. Complete studio course for B.F.A., and a satisfactory portfolio review or C.I. This course is designed to prepare B.F.A. students for B.F.A. Exhibition. M&S fee $15.00

ART 4945C CAH-SVAD 3(3,0)
Advanced Design Lab: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C, and a satisfactory portfolio review (ART 3950) or C.I. Students design and develop visual solutions for real world clients in partnership with industry. May be used in the degree program a maximum of 3 times. Fall, Spring.

ART 4954 CAH-SVAD 3(3,0)
Scotland Study Abroad: PR: ART 2823, ART 2901C, ART 2301C or C.I. Study abroad in Edinburgh, Scotland. May be repeated for credit. Occasional.

ART 5280 CAH-SVAD 3(3,0)
Serial Content: PR: Admission to Emerging Media MFA or Digital Media M.A., graduate standing, or C.I. Serial content, story forms, interactive narrative theory and practice for art, digital media and film. Traditional and non-traditional forms of visual and interactive storytelling. Fall. M&S fee $45.00

ART 5284 CAH-SVAD 3(3,0)
Descriptive Theory & Methods: PR: Admission to Emerging Media MFA or C.I. Introduction to semiotic media, communication theory, perceptual codes, human factors and visual rhetoric. Fall. M&S fee $45.00

ART 5694 CAH-SVAD 3(3,0)
Crosscultural Electronic Art and Design: PR: Admission to MFA. Explores digital/electronic art and technology from mid-20th century to present. Explores key electronic artists and issues of the "arts electronica" into the present. Spring.

ART 5695 CAH-SVAD 3(3,0)
WebArt I: PR: Admission to MFA. Students will explore the web and experiment with pertinent software, as well as design and implement websites. Projects will be determined at the outset of each semester. Spring. M&S fee $45.00

ART 5696 CAH-SVAD 3(3,0)
Art, Design and Human Interactions: PR: Admission to MFA. Explores and designs of interaction systems and technologies in contemporary society and culture including place making, way finding, electronic interface design, and publication design. Spring.

ART 5698 CAH-SVAD 3(3,0)
Concourse I: PR: ART 5910 and ART 5280 and ART 6904, or C.I. Digital reproduction of studio works. Fall. M&S fee $45.00

ART 5811C CAH-SVAD 3(3,1)
The Professional Practice of Art: PR: ART 2201C, ART 2203C, ART 2300C, ART 2301C (no graduate level prerequisite), graduate status or standing, or consent of instructor. A look at the day to day and week to week demands of the full-time professional artist. M&S fee $45.00

ART 5910 CAH-SVAD 3(3,0)
Studio Concentration I: PR: Admission to MFA Course is the primary for production of work in studio. Students will meet periodically with faculty to discuss progress. Professor will meet with the whole class periodically in order to facilitate a group critique of work completed. May be used in the degree program a maximum of 3 times. Fall, Spring. M&S fee $45.00

ART 5941 CAH-SVAD 1(1,0)
Graduate Practicum I: PR: Web Art I, graduate status, or C.I. Candidates with cross-disciplinary interests will discuss and analyze issues in digital art making via the internet. Students will use this information to develop projects in their specialization. Occasional.

ASH 3200 CAH-HIST 3(3,0)
Ancient Near Eastern Societies: PR: EUH 2000 or WOH 2012 or WOH 2018. A study of the world’s first literate societies (i.e. Mesopotamia, Egypt, the Levant) focusing upon their primary sources (in translation). Spring.

ASH 3222 CAH-HIST 3(3,0)
Islam and its Empires: PR: Junior standing or C.I. History of the Islamic world from its origins to the 16th century. Occasional.

ASH 3223 CAH-HIST 3(3,0)
The Modern Middle East: PR: Junior standing or C.I. History of the Middle East and North Africa from the 16th century to the present. Occasional.

ASH 4243 CAH-HIST 3(3,0)
Imperialism & Decolonization in South Asia: PR: WOH 2022 or C.I. Socio-cultural, economic, and political impact of imperialism and the subsequent decolonization in South Asia. Occasional.

ASH 4402 CAH-HIST 3(3,0)

ASH 4404 CAH-HIST 3(3,0)
Modern China: PR: EUH 2000 and EUH 2001 or C.I. History of Japan from the end of the Tokugawa period to the present day. Occasional.

ASH 4442 CAH-HIST 3(3,0)
Modern Japan: PR: EUH 2000 and EUH 2001 or C.I. History of Japan from the end of the Tokugawa period to the present day. Occasional.

ASH 4550 CAH-HIST 3(3,0)
History of Modern India: PR: WOH 2022 or C.I. History of India from decline of Mughals in late 18th century to present. Occasional.

ASH 5229 CAH-HIST 3(3,0)
History of the Middle East: PR: Graduate standing or C.I. Course explores the history of the middle of the Middle East. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

ASH 5408 CAH-HIST 3(3,0)
Colloquium in Modern China: PR: Graduate status or senior standing or C.I. Course explores works of scholarship in modern China including the rise of Communism, Chinese women and Sino-American relations. Occasional.

ASH 5485 CAH-HIST 3(3,0)
U.S. China Relations: PR: Graduate standing or C.I. An in-depth study of the significant relations between China and the United States since the 18th century. Even Fall.

ASH 5925 CAH-HIST 3(3,0)
Colloquium in South Asian History: PR: Graduate standing or C.I. Addresses key themes in South Asian history through selected readings. May be used in the degree program a maximum of 3 times only when course content is different. Occasional.

ASH 6400 CAH-HIST 3(3,0)
Modern India: PR: EUH 2000 and EUH 2001 or C.I. History of India from decline of Mughals in late 18th century to present. Occasional.

ASH 6401 CAH-HIST 3(3,0)
Modern China: PR: EUH 2000 and EUH 2001 or C.I. History of Japan from the end of the Tokugawa period to the present day. Occasional.

ASH 4442 CAH-HIST 3(3,0)
Modern Japan: PR: EUH 2000 and EUH 2001 or C.I. History of Japan from the end of the Tokugawa period to the present day. Occasional.

ASH 4442 CAH-HIST 3(3,0)
Modern Japan: PR: EUH 2000 and EUH 2001 or C.I. History of Japan from the end of the Tokugawa period to the present day. Occasional.


AST 2037 COS-PHY 3(3,0) Life in the Universe: A thought provoking journey through solar system environments and extraterrestrial planets to establish the probability of life on other planets in our solar system and beyond. Occasional.

AST 3110 COS-PHY 3(3,0) Solar System Astronomy: CR: AST 2002, PHY 2035C. Interdisciplinary approach to the dynamics of the Solar System through application of Physics, Atmospheric Science, Chemistry and Geology. Even Fall.

AST 3211 COS-PHY 3(3,0) Stellar Astrophysics: PR: AST 2002 and PHY 3101. The physics and dynamics of stars, including star formation and stellar evolution. Occasional.

AST 3402 COS-PHY 3(3,0) Galaxies and Cosmology: PR: AST 2002 and PHY 2046C. Study of the different types of galaxies, their evolution, and their relationship to active galaxies and quasars, and the evolution of the universe. Odd Fall.


AST 4700 COS-PHY 3(3,0) Experimental Methods in Astronomy: PR: AST 2002, PHY 2048, and Senior standing, or C.I. Experimental design and experimental techniques in astronomy and astrophysics; spherical astronomy; physics of telescopes and of common astronomical detectors; astronomical quantification and interpretation of light. Even Fall.

AST 4762C COS-PHY 3(1,2) Astronomical Data Analysis: PR: MAC 2213 or PHY 3101. Ability to write simple computer programs, and an upper level course in astronomy or planetary science, or C.I. Theoretical data analysis and acquisition, detector physics, measurement extraction, error analysis, modeling, computer programming, statistics, interpretation, and written and oral presentation of results. Fall.

AST 5145 COS-PHY 3(3,0) Advanced Asteroids, Comets, and Meteorites: PR: Graduate standing or C.I. An advanced study of physical, chemical, mineralogical and orbital characteristics of Asteroids, Comets and Meteorites, with an emphasis on the origin of our solar system. Odd Spring.

AST 5154 COS-PHY 3(3,0) Advanced Planetary Geophysics: PR: Admission to the Physics department or C.I. The physics of planetary evolution, planetary interiors, and planetary surface processes. Even Fall.

AST 5165 COS-PHY 3(3,0) Planetary Atmospheres: PR: PHY 3220 and PHY 3101, graduate status or senior standing, or C.I. This course will examine the physical and chemical processes that govern the behavior of the atmosphere of Earth and the other planets. Even Spring.

AST 5263 COS-PHY 3(3,0) Advanced Observational Astronomy: PR: Graduate standing in the Physics department or C.I. Experimental design and experimental techniques in astrophysics; spherical astronomy; physics of telescopes and of common astronomical detectors; error analysis. Even Spring.

AST 5334 COS-PHY 3(3,0) Extrasolar Planets and Brown Dwarfs: PR: Admission to the Physics department or C.I. Substellar-mass objects, their formation, evolution, dynamics, detection, and environments. Odd Spring.

AST 5765C COS-PHY 3(1,2) Advanced Astronomical Data Analysis: PR: MAC 2213, a 3000-level or higher course in astronomy or planetary science, ability to write simple computer programs, or C.I. Advanced astronomical data formation and acquisition, detector physics, measurement extraction, error analysis, modeling, computer programming, statistics, interpretation, and written and oral presentation of results. Fall.


Astr 3012C HPA-HP 3(1,2) Clinical Skills for Athletes Trainers I: PR: ZOO 3733C or ZOO 3738C, and Athletic Training majors only or C.I. Clinical skills including functional knowledge of lower extremity/hump muscle, tendon, and ligament anatomy; advanced taping and bracing skills; and clinical assessment of general medical conditions. Fall. M&S fee $31.00.

Astr 3013C HPA-HP 3(1,2) Clinical Skills for Athletes Trainers II: PR: ZOO 3733C or ZOO 3738C, and Athletic Training majors only or C.I. Clinical skills, including functional knowledge of upper extremity muscle, tendon, ligament anatomy; advanced taping and bracing skills; and pharmacological interventions. Spring. M&S fee $31.00.

Astr 3102 HPA-HP 3(3,0) Principles of Athletic Training: PR: ZOO 3733C or ZOO 3738C, PCB 3703C, and Athletic Training majors only or C.I. The physics and dynamics of stars, including star formation and stellar evolution. Occasional.

Astr 3203C HPA-HP 3(2,1) Upper Extremity Function and Measurement: PR: ZOO 3733C or ZOO 3738C with “C” (2.0) or better and COHPA majors and Health Sciences Minors only. Upper extremity functional anatomy, manual muscle testing and goniometry. Fall/Spring.

Astr 3204C HPA-HP 3(2,1) Lower Extremity Function and Measurement: PR: ZOO 3733C or ZOO 3738C with “C” (2.0) or better and COHPA majors and Health Sciences Minors only. Lower extremity functional anatomy, manual muscle testing and goniometry. Fall/Spring.

Astr 3212C HPA-HP 3(2,2) Recognition and Evaluation of Athletic Injuries I: PR: ATR 3102. Recognition and evaluation skills required to perform an injury/illness assessment of the upper extremity head and neck, and general medical conditions and provide immediate management. Fall.

Astr 3213H HPA-HP 3(1,2) Recognition and Evaluation of Athletic Injuries II: PR: ATR 3102. Recognition and evaluation skills required to perform an injury/illness assessment of the upper extremity head and neck, and general medical conditions and provide immediate management. Spring.

Astr 4014C HPA-HP 3(2,2) Principles of Athletic Training Lab: CR: ATR 3102, PR: Athletic Training majors only or C.I. Basic athletic training skills including emergency care, taping and wrapping, goniometry and manual muscle testing. Occasional. M&S fee $34.00.

Astr 4103 HPA-HP 3(0,3) Case Studies in Sports Medicine: PR: ATR 4832L. This course will review and update student knowledge of and competency with acute care procedures and emergency planning in athletic settings. Spring.

Astr 4112L HPA-HP 1(0,1) Acute Care in Athletic Training: CR: ATR 4842L and PR: ATR 4832L. This course will review and update student knowledge of and competency with acute care procedures and emergency planning in athletic settings. Spring.

Astr 4132 ED-EHSH 3(0,3) Human Injuries: Mechanisms & Prevention: PR: Admission to the Sport and Exercise Science Program or Coaching Minor, BSC 2100C or equivalent, ZOO 3736C or ZOO 3733C or equivalent, and minimum overall 2.5 GPA. Study of human movement and analysis of techniques for the prevention and treatment of human injuries associated with sport and fitness. Fall/Spring.

Astr 4213C HPA-HP 3(2,2) Recognition and Evaluation of Athletic Injuries: PR: ATR 3102. Recognition and evaluation skills required to perform an injury/illness assessment of the upper extremity head and neck, and general medical conditions and provide immediate management. Spring.


Astr 4315C HPA-HP 3(1,2) Advanced Rehabilitation in Athletic Training: CR: ATR 3212C. Advanced knowledge, skills and techniques that the certified athletic trainer must perform during rehabilitation of injuries. Fall. M&S fee $17.00.

Astr 4512C HPA-HP 3(3,0) Organization and Administration of Athletic Training: PR: ATR 3822L. Administrative knowledge in the athletic training profession. Fall.

Astr 4832L HPA-HP 4(0,16) Practicum in Athletic Training III: PR: ATR 3822L. Advanced clinical internship with increased responsibilities under the supervision of a certified athletic trainer. Fall/Spring.

Astr 4842L HPA-HP 4(0,16) Practicum in Athletic Training IV: PR: PET 4672C. Advanced clinical internship with increased responsibilities under the supervision of a certified athletic trainer. Fall/Spring.

Astr 4933 HPA-HP 1(1,0) Athletic Training Seminar: PR: ATR 4832L and Senior standing. Capstone course reviewing competencies, proficiencies, ethics and professional development for the entry-level athletic trainer. Spring.

Astr 4940 HPA-HP 4(0-0,1-15) Athletic Training Elective Internship: PR: ATR 3822L. Students will develop their knowledge, skills, and attitudes by providing direct care of athletic injuries; understand the medical delivery system in a variety of situations; and understand the legal and ethical aspects of practicing athletic training. Occasional.

Astr 5106C HPA-HP 2(1,1) Prevention of Injury and Illness in Athletic Training Practice: PR: Admission to MAT degree program Psychological, physiological, and sociological aspects of health and wellness and the prevention of injury and illness; includes physical fitness, nutrition/hydration, flexibility and prophylactic taping/bracing. Occasional.
BCH 4054
Functional Human Anatomy for Athletic Trainers: PR: Admission to MAT degree program
Anatomical knowledge and clinical skills essential to the practice of athletic training; including knowledge of
functional anatomy, muscle testing, kinesiology, posture and gait analysis. Occasional.

BCH 4024 COM-BSBS
Medical Biochemistry: PR: CHM 2210 or
CHM 2211. Structure/function of proteins and nucleic
acids fundamental to biomedical science, biochemical
concepts important in medicine, enzymology and kinetics,
bioenergetics and metabolic processes and disorders.
Spring.

BCH 4053 COS-CHEM
Biochemistry I: PR: CHM 2211. A consideration of
proteins, carbohydrates, nucleic acids, enzymes and their
effect on biochemical systems, and inter-relationship of
intermediary metabolism. Fall.

BCH 4053H COS-CHEM
Honors Biochemistry: I: PR: CHM 2211 and
consent of Honors. Proteins, carbohydrates, nucleic acids,
enzymes and their effect on biochemical systems, and inter-relationship of intermediary metabolism. With
Honors consent. Occasional.

BCH 4054 COS-CHEM
Biochemistry II: PR: BCH 4053. Continuation of BCH
4053. Spring.

BCH 4103L COS-CHEM
Biochemical Methods: PR: BCH 4053. A laboratory
course stressing the application of the chemical arts to the
separation, identification, and quantification of materials
of biological significance. Spring. M&S fee $70.00

BME 3211 ECS-MECH/AERO
Engineering Biomechanics: PR: EML 3301 and
EML 3321 or EML 3327. Knowledge of
engineering approaches and tools that are used in the
different aspects of biomechanics. Odd Fall.

BME 5140 ECS-MECH/AERO
Materials Science for Instrumentation for
Clinical Applications: PR: Graduate standing in
Engineering, Biomedical Science, Biotechnology, Chemistry or related disciplines or C.I.
Study of engineering and materials concepts behind the
clinical diagnostics currently used and under development,
as well as technologies utilized in fabrication and
characterization of these devices. Odd Fall.

BME 5216C ECS-MECH/AERO
Mechanics Bioreactors I: PR: Graduate
standing or C.I. Part I of a two semester course. Cell
physiology and engineering principles applied to analysis of cellular
processes and protein localization on human anatomy
and physiology. Fall.

BME 5217C ECS-MECH/AERO
Mechanics of Bioreactors II: PR: BME 5575C
or C.I. Part II of a two semester course. Cell
physiology and engineering principles applied to analysis of cellular
processes and protein localization on human anatomy
and physiology. Spring.

BME 5267 ECS-MECH/AERO
Biofluid Mechanics: PR: EML 3701 and EGM 3601 or C.I.
The course will cover the physical and mathematical
principles of fluid mechanics and its application and its
relevance to human physiology and pathology. Fall.

BME 5268C ECS-MECH/AERO
Applied and Computational Biofluids: PR: EML 3701 and EGM 3601 or C.I. Principles and
foundations of applied fluid mechanics and computational
methods to the human circulation. Spring.

BME 5572 ECS-ECE
Biomedical Nanotechnology: PR: EEL 3123C
with a "C" (2.0) or better grade. Human Physiology,
Biophysics, NANOTECHNOLOGY, Nanoelectronics for
fabrication of biosensors for biomedical applications,
self-assembly, bioelectronics, moral and ethical issues.
Spring.

BOT 3018C COS-BIOL
Culinary Botany Across the Cultures: PR:
BSC 1001, Junior standing, or C.I. Culinary food
traditions and the connections between plants, people and health.
Students examine the preparation methods that enhance the
nutritional values. Occasional. M&S fee $10.00

BOT 3802 COS-BIOL
Ethnobotany: PR: A "C" (2.0) or better in both BSC
1010C and BSC 2011C, or C.I. Historical and modern
uses of plants economically important in various cultures.
Spring.

BOT 4223 COS-BIOL
Plant Anatomy: PR: BOT 3802, or C.I. A study of
development, structure and function of the principal
organs and tissue of vascular plants. Occasional.

BOT 4033C COS-BIOL
Plant Kingdom: PR: BOT 3802, or C.I. A survey of the
plant kingdom utilizing comparative morphology, structure
and functions to demonstrate relationships among extant
and extinct forms. Occasional. M&S fee $40.00

BOT 4434C COM-BSBS
General Mycology: PR: BSC 2010C, MCB 3020C or
BSC 2011C. This course is a survey of the Kingdom
Fungi, covering the major topics of fungal diversity,
structure, genetics, physiology, practical applications and
pathogenicity. Occasional. M&S fee $42.00

BOT 4503 COS-BIOL
Plant Physiology: PR: A "C" (2.0) or better in PCB
3023 or C.I. A study of methods used by plants to cope
with the environment. Occasional.

BOT 4713C COS-BIOL
Plant Taxonomy: PR: BOT 3802, or C.I. Systematic
classification and identification of vascular plants, with
emphasis on the flora of peninsular Florida. Occasional.
M&S fee $45.00

BOT 4850 COS-BIOL
Medicinal Botany: PR: PCB 3522 or a "C" (2.0)
or better in PCB 3023, or C.I. The medicinal properties
of plants and their role in both traditional and modern
medicine; history of herbal medicine and alternative
medicinal practices around the world. Even Fall.

BSC 1005 COS-BIOL
Biological Principles: I: A study of various biological
factors which affect the health and survival of man in
modern society. Designed for non-majors. Fall, Spring.

BSC 1005L COS-BIOL
Biological Principles Laboratory: CR- BSC
1005. The laboratory to accompany BSC 1005. Fall, Spring.

BSC 2010C COS-BIOL
Biological Principles Laboratory: CR- BSC
1005. The laboratory to accompany BSC 1005. Fall, Spring.

BSC 2011C COS-BIOL
Biological Principles Laboratory: CR- BSC
1005. The laboratory to accompany BSC 1005. Fall, Spring.

BSC 2043 COS-BIOL
Invasion Biology: PR: A "C" (2.0) or better in PCB
3044, or C.I. General principles of invasion ecology. The
study of addition of species into ecosystems as it provides
insights into basic ecological and evolutionary questions.
Even Spring.

BSC 2422L COS-BIOL
Biological Laboratory Techniques: PR: CHM 2210
and a "C" (2.0) or better in PCB 3044. An advanced treatment of
current issues in marine biology, emphasizing biodiversity
and marine conservation through research, service-
learning and field experiences. Even Spring. M&S fee
$45.00

BSC 2433 COS-BIOL
Invasion Biology: PR: A "C" (2.0) or better in PCB
3044, or C.I. General principles of invasion ecology. The
study of addition of species into ecosystems as it provides
insights into basic ecological and evolutionary questions.
Even Spring.

BSC 2442L COS-BIOL
Biological Laboratory Techniques: PR: CHM 2210
and a "C" (2.0) or better in PCB 3044. An advanced treatment of
current issues in marine biology, emphasizing biodiversity
and marine conservation through research, service-
learning and field experiences. Even Spring. M&S fee
$45.00

BSC 2445C COS-BIOL
Genomics Lab: Methods in Data Collection
and Analysis: PR: A grade of a "B" (3.0) or better in PCB
3065 and completion of EHS Lab Safety Training online course and practical by end of add/drop, or
instructor consent. Hands-on approach to understanding
how genomic datasets are generated in the lab, and how
they are analyzed computationally using bioinformatics
pipelines. Fall.

BSC 2484L COS-BIOL
Biogeography: PR: A "C" (2.0) or better in both PCB
3044 and PCB 4843, or C.I. Study of geographic variation
in nature, ranging from past to present and genes to
ecosystems. Occasional.
BSC 4861L COS-BIOL 3(0,3) Urban Ecological Field Studies: PR: A "C" (2.0) in BIOL 3042 or C.I. A service-learning course utilizing an interdisciplinary approach to developing models and implementing programs designed to result in environmental sustainability. Even Fall.

BSC 4937 COS-BIOL 2(0,2) Instructional Experiences in Undergraduate Biology: PR: PC B 303, Biology major with 20 semester hours and 3.0 gpa. Preparation of undergraduate students to more effectively learn biological concepts by facilitating learning in various undergraduate biology labs. Graded S/U. May be repeated for credit. Fall, Spring.

BSC 5258L COS-BIOL 3(0,3) Tropical Biology Research and Conservation: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, PSM in Conservation Biology, or Certificate in Conservation Biology, or C.I. Research and conservation in New World tropics, including a field trip to Belize. Tropical biodiversity and forest ecology: integrative conservation strategies in research and communication. Occasional.

BSC 5316 COS-BIOL 3(0,3) Marine Conservation Biology: PR: BSC 452C, Marine Biology, graduate standing, or C.I. Examine human impacts in marine ecosystems and how humans can become better stewards of these habitats. Odd Spring.

BSC 5352 COS-BIOL 3(0,3) Invasive Biology: PR: PCB 3044 or C.I. Theoretical and empirical stages of biological invasion (introduction, establishment and spread) as well as impacts on native species and ecosystems. Even Spring.

BSC 5408L COS-BIOL 3(0,3) Advanced Biology Laboratory Techniques: PR: BSC 452C. This course will emphasize those biological techniques and resources necessary for students about to begin thesis research. Individual and small group instruction in current laboratory techniques, literature searches, and hands-on practical techniques will be stressed. May not be repeated for credit. Occasional.

BSC 5418 COM-BSBS 3(3,0) Tissue Engineering: PR: Graduate standing. Introduction to Tissue Engineering with a special emphasis on the anatomy of the field, on novel methods and on cell biomaterial interactions. Occasional.

BSC 5436 COM-BSBS 3(3,0) Biomedical Informatics: Structure Analysis: PR: PCB 3522 or equivalent or C.I. Introduction of bioinformatics tools and resources on RNA and protein structure analysis. Fall.

BSC 5618 COS-BIOL 3(0,3) Phylodynamic Approaches in Biogeographic Research: PR: Admission to Biology Department graduate program or C.I. A multidisciplinary approach to understanding evolutionary relationships among organisms using phylogenetic information to address important questions in biology. Even Fall.

BSC 5665 COM-BSBS 3(3,0) Clinical Embryology and Congenital Malformations: PR: ZOO 373C or equivalent Functional human embryology in a clinically oriented way to study the human development and congenital malformations as a result of genetic, environmental and toxic conditions. Spring.

BSC 5824 COS-BIOL 4(0,4) Biogeography: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Study of geographic variation in nature, ranging from past to present and from genes to ecosystems. Even Spring.

BTE 4410 ED-CFCF 3(0,3) Course Construction in Business Education: PR: ED 385 or C.I. An overview and examination of the business curriculum and methodology integrated into the workforce frameworks. Planning and preparation of materials, managing the laboratory and involvement in career & technical student organizations. Occasional.

BUL 3130 BA-ACCT 3(0,3) Legal and Ethical Environment of Business: PR: COMM 1045C or C.I. A course in the Business Common Core program prerequisites with a "C" (2.0) or better. Analysis of the law as a dynamic and social political institution in the business environment, including contract law, torts, and ethical consideration. Fall, Spring.

BUL 3130H BA-ACCT 3(0,3) Honors Legal and Ethical Environment of Business: PR: Junior standing and business major or minor, permission of Honors. Analysis of the law as a dynamic and social political institution in the business environment, including ethical considerations with honors level content. Occasional.

BUL 4540 BA-MAN 3(0,3) Employment Law: PR: Management major or minor, MAN 302S and MAN 3301. An examination of current employment law and issues/trends in the legal environment impacting human resource management system design, HRM policy and employee relations. Fall.

BUL 5332 BA-ACCT 3(0,3) Advanced Business Law Topics: PR: Admission to graduate program, or Management major or minor in Graduate Finance. Advanced business law topics including coverage of the Uniform Commercial Code, torts, commercial paper, and secured transactions. Fall, Spring.

CAP 3104 ECS-CS 3(3,0) Introduction to Malware Analysis: PR: CIS 3360, (CGS 3269 or CDA 3103C), (CGS 3763 or COP 4600), or C.I. Introduction to using reverse engineering techniques to find and analyze the behavior of programs in binary form; assembly language, reverse engineering tools, and virtual machines. Spring.

CAP 4053 ECS-CS 3(3,0) AI for Game Programming: PR: COP 3502 with a grade of "C" (2.0) or better. Students will learn the foundational concepts of Human-Computer Interaction (HCI), including human-centered design principles, interaction modalities, design guidelines and heuristics, and interface evaluation techniques. Fall, Spring.

CAP 4057 ECS-CS 3(3,0) Web and User Experience (UX): PR: COP 3502 with a grade of "C" (2.0) or better. To meet a real world customer's needs, student teams will learn and apply user-centered principles to elicit requirements, prototype, and build a complete web-based solution. Even Fall.

CAP 4145 ECS-CS 3(3,0) Introduction to Malware Analysis: PR: CIS 3360, (CGS 3269 or CDA 3103C), (CGS 3763 or COP 4600), or C.I. Introduction to using reverse engineering techniques to find and analyze the behavior of programs in binary form; assembly language, reverse engineering tools, and virtual machines. Spring.


CAP 4453 ECS-CS 3(3,0) Robot Vision: PR: COP 3503C and MAC 2312 each with a grade of "C" (2.0) or better or C.I. Perspectives and orthographic projections; the processing of edges, regions, motion, shading, texture, object detection, recognition, and matching line learning. Spring.

CAP 4630 ECS-CS 3(3,0) Artificial Intelligence: PR: COP 3503C with a grade of "C" (2.0) or better and COT 3960. Current methods in AI: knowledge-based systems, representation, inference, planning, natural language. Programming in Lisp or Prolog required. Fall.

CAP 4720 ECS-CS 3(3,0) Computer Graphics: PR: COP 3503C and MAC 1114C each with a grade of "C" (2.0) or better, and COT 3960. Math for computer graphics, visibility and display software; problems and applications of graphic processors; display hardware; principles of programming and display software; problems and applications of graphic systems. Fall, Spring.

CAP 5055 ECS-CS 3(3,0) AI for Game Programming: PR: CS Foundation Exam or EFL 4851C or C.I. Surveys cutting-edge AI techniques for video games and board games and contrasts them with more traditional approaches. Spring.

CAP 5100 ECS-CS 3(3,0) Human-Computer Interface Design: PR: COP 4331C, graduate standing and/or approval of the Director of the Software Engineering Certificate Program. Focuses on dynamics of human-computer interaction. Provides a comprehensive overview of HCI design as a software discipline. Features a user-centered approach to Web-based application design. Fall.

CAP 5415 ECS-CS 3(3,0) Computer Vision: PR: COP 3503C, MAC 2312 and COT 3960. Image formation, binary vision, region growing and edge detection, shape representation, dynamic morphological image analysis, contour tracking, and range images, and knowledge representation. Fall.

CAP 5510 ECS-CS 3(3,0) Bioinformatics: PR: Background in programming language or molecular biology. This course introduces problems, concepts, algorithms, and applications in Bioinformatics. It covers essential topics such as sequence alignment and prediction of gene and protein structure. Occasional.


CAP 5610 ECS-CS 3(3,0) Machine Learning: PR: CAP 4630 or C.I. Examine the field of evolutionary computation, focusing on the theory and application of genetic algorithms. Spring.

CAP 5725 ECS-CS 3(3,0) Computer Graphics I: Architecture of graphics processors; display hardware; principles of programming and display software; problems and applications of graphic systems. Spring.
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UCF Courses and Descriptions

CET 4748  ECS-ECS
Wide Area Networks I: PR: CET 4483 or C.I.
Designing Wide Area Networks; determining requirements, designing the networks, structure, choosing appropriate technologies, and evaluating results. Fall.

CET 4749  ECS-ECS

CGN 3405  ECS-ECECE
Applied Numerical Methods for Civil Engineering: PR: MAC 2313 with a grade of "C" (2.0) or better, or CR: MAP 2302. Application-driven numerical solution methods for Environmental Engineering problems using linear algebra, interpolation, differentiation and integration, nonlinear systems, ODEs and IVPs, and linear programming. Fall, Spring.

CGN 3501C  ECS-ECECE
Civil Engineering Materials: PR: A grade of "C" (2.0) or better in EGN 331C and CHS 1440 or CHM 2045C or CHM 2041. The characterization of materials used in civil engineering works to include concrete, bituminous polymers and composite materials. Fall, Spring. M&S fee $30.00.

CGN 3700C  ECS-ECECE
Civil Engineering Measurements: PR: MAC 2312 and PHY 2049C both with a grade of "C" (2.0) or better. Engineering measurement, data analysis, and experimental techniques including electronics, sensors, components, and calibration. Specific applications in civil engineering including surveying, GIS, and GIS Fall, Spring.

CGN 4506  ECS-ECECE
Advanced Pavement and Civil Engineering Materials: PR: CGN 3501C, CEG 4011C. Pavement and civil engineering materials such as aggregate, Portland cement, and concrete. In addition, m/s mca, modeling, analysis, and design of those materials will be included. Occasional.

CGN 5877  ECS-ECECE
Chemistry Fundamentals IB: PR: MAC 2313 or MAC 2313L or MAC 2313L or CHM 2045, ENF 4512, ENF 4561, CWR 4203, CWR 4101 or CCE 4004. Applications of modern instrumentation and data processing technologies to infrastructure monitoring and assessment. Topics in current industry-accepted monitoring techniques, SHM for infrastructure systems, and case studies on performance-based evaluation. Odd Spring.

CGS 1060C  ECS-CS
Introduction to Computers: Digital literacy, computer hardware, peripheral components, memory devices, effects of computers on society, application of computers. Not open to Computer Science majors.

CGS 2100C  ECS-CS
Computer Fundamentals for Business: Uses of computers and software in business, including business applications, commercial packages, and the Internet. Not open to Computer Science majors.

CGS 2545C  ECS-CS
Database Concepts: PR: COP 2500C or high level programming course (C, Java, C#) with a grade of "C" (2.0) or better. Entity-relation model, relational database management systems, normal forms, performance or databases, report generation. Fall, Spring.

CGS 2585C  ECS-CS
Desktop/Internet Publishing: PR: COP 2500C or high level programming course (C, Java, C#, C++) with a grade of "C" (2.0) or better. Principles and techniques of page layout and formatting for documents and newsletters, presentation techniques, construction of web pages and design of integrated websites. Occasional.

CGS 3175  ECS-CS
Internet Applications: PR: COP 2500C or high level programming course (C, Java, C#, C++) with a grade of "C" (2.0) or better. HTML coding, using images, sound and animation, advanced text formatting, forms and CGI scripts, introduction to Javascript. Fall, Spring.

CGS 3269  ECS-CS
Computer Architecture Concepts: PR: COP 2500C or high level programming course (C, Java, C#, C++) with a grade of "C" (2.0) or better. Computer organization and current computer architectures, network file servers. Fall, Spring.

CGS 3763  ECS-CS
Operating System Concepts: PR: COP 2500C or high level programming course (C, Java, C#, C++) with a grade of "C" (2.0) or better. System calls, concept of processes, CPU scheduling, security issues, client server paradigms, and computer supported workgroups. Occasional.

GCG 5131  ECS-CS
Computer Forensics I: Seizure and Examination of Computer Systems: PR: Computer literacy and C1. Legal issues regarding seizure and chain of custody. Technical issues in acquiring computer evidence. Popular file systems are examined. Reporting issues in the legal system. Fall. M&S fee $50.00

CHI 112C  CAH-LANG
Chemical Language and Civilization I: PR: CHI 1120C or equivalent. An elementary study of the fundamental principles of chemistry, including the chain of basic chemical language skills: listening, speaking, reading and writing. Fall.

CHI 112IC  CAH-LANG
Chemical Language and Civilization II: PR: CHI 1120C or equivalent. Continuation of CHI 1120C. Fall.

CHI 2200  CAH-LANG
Intermediate Chinese I: PR: CHI 1121C or equivalent or C.I. Development of Chinese language skills at the intermediate level. Fall.

CHI 2201  CAH-LANG
Intermediate Chinese II: PR: CHI 2200. Continuation of CHI 2200 with emphasis on Chinese culture. Fall.

CHM 1020  COS-CHEM
Concepts in Chemistry: PR: High school Algebra. Concepts will be examined to provide insight into the significant role that chemistry plays in our culture. Intended as a general education course. Fall, Spring.

CHM 1032  COS-CHEM
Physical Chemistry I: PR: MAC 1105C or MGF 1106 or equivalent. An introductory study of the fundamental concepts of chemistry, primarily oriented toward Health Science majors. The "NC" grading policy applies to this course. Fall, Spring.

CHM 1032L  COS-CHEM
General Chemistry Laboratory: PR: or CR: CHM 1032. Preference will be given to students whose major requires this course. Credit for this laboratory does not apply toward the "NC" grading policy. Fall, Spring.

CHM 2040  COS-CHEM
Chemistry Fundamentals IA: PR: A minimum score of 550 (SAT) or 24 (ACT) in the mathematics section. MAC 115C recommended. Not open to students with credit in CHM 2045C. Priority will be given to students whose major requires this course or CHM 2045C. Principles of modern chemistry, units and measures, basic physical law of chemical reactivity, stoichiometry, reactions in aqueous solutions, thermochemistry. The "NC" grading policy applies to this course. Fall, Spring. M&S fee $6.00

CHM 2041  COS-CHEM
Chemistry Fundamentals IB: PR: CHM 2040 or its equivalent with a grade of C or better. Not open to students with credit in CHM 2045C. The second semester of CHM 2040. Atomic structure, periodicity, chemical bonding, states of matter, gases. The "NC" grading policy applies to this course. Fall, Spring.

CHM 2045C  COS-CHEM
Honors Chemistry Fundamentals I: PR: A passing score in the Chemistry Placement Exam. Not open to students with credit in both CHM 2045C and CHM 2041C. Priority will be given to students whose major requires this course. Principles of modern chemistry, units and measures, basic physical law of chemical reactivity, stoichiometry, reactions in aqueous solutions, thermochemistry, atomic structure, periodicity, chemical bonding, states of matter, gases. The "NC" grading policy applies to this course. Fall, Spring. M&S fee $9.00

CHM 2045C  COS-CHEM
Honors Chemistry Fundamentals I: PR: A passing score in the Chemistry Placement Exam. Not open to students with credit in both CHM 2045C and CHM 2041C. Priority will be given to students whose major requires this course. Principles of modern chemistry, units and measures, basic physical law of chemical reactivity, stoichiometry, reactions in aqueous solutions, thermochemistry, atomic structure, periodicity, chemical bonding, states of matter, gases. The "NC" grading policy applies to this course. Fall, Spring. M&S fee $9.00

CHM 2046  COS-CHEM
Honors Chemistry Fundamentals II: PR: "C" (2.0) or better in CHM 2045C or CHM 2041C. Priority will be given to students whose major requires this course. Continuation of CHM 2045C or the CHM 2041C or CHM 2041R sequence. Inorganic, forces, solutions and coligative properties, equilibria, thermodynamics, chemical kinetics, electrochemistry, nuclear chemistry. Fall, Spring.

CHM 2046C  COS-CHEM
Honors Chemistry Fundamentals II: PR: A "C" (2.0) or better in CHM 2045C and permission of Honors. Same as CHM 2046 and CHM 2046L with honors-level content. Spring. M&S fee $45.00

CHM 2046L  COS-CHEM
Chemistry Fundamentals Laboratory: PR: CHM 2046. Priority will be given to students whose major requires this course. Illustrated chemical principles and introduction to the techniques of inorganic and physical chemistry. IMPORTANT: Attendance of the first laboratory session dealing with safety procedures is mandatory; students who do not attend must immediately call the Chemistry Department, and may be dropped from the class. Fall, Spring. M&S fee $45.00

CHM 2085  COS-CHEM
Introduction to Organic and Biochemistry: PR: CHM 1032 or equivalent. An introduction to organic chemistry, stressing the chemistry of functional groups and a survey of the biochemistry of proteins, carbohydrates, lipids, and nucleic acids. Spring.

CHM 2210  COS-CHEM
Organic Chemistry I: PR: A "C" (2.0) or better in CHM 2046. Priority will be given to students whose major requires this course. Theory and applications of organic chemistry; structure, bonding, kinetics, thermodynamics, reaction mechanisms, synthesis, and stereochemistry. Structure elucidation via spectrometric techniques. Fall, Spring.

CHM 2211  COS-CHEM
Organic Chemistry II: PR: CHM 2210. Priority will be given to students whose major requires this course. Continuation of CHM 2210. Fall, Spring.

CHM 2211L  COS-CHEM
Organic Laboratory Techniques I: PR: CHM 2046L and CHM 2210. Priority will be given to students whose major requires this course. An introduction to the laboratory techniques of organic chemistry, including the preparation, reaction, and analysis of organic compounds. IMPORTANT: Attendance of the first laboratory session dealing with safety procedures is mandatory; students who do not attend must immediately call the Chemistry Department, and may be dropped from the class. Fall, Spring. M&S fee $70.00
CHM 3120 COS-CHEM 3(3,0)
Analytical Chemistry: PR: CHM 2046, CHM 2046L, Classification and instrumental analysis. Choice of preferred analytical methods and techniques is emphasized through applications involving both inorganic and organic systems. Fall, Spring.

CHM 3120L COS-CHEM 1(0,3)
Analytical Chemistry Laboratory: PR: CHM 3120 and CR: CHM 3411. Experimental exercise of quantitative methods of analysis using titrimetric, gravimetric, polarimetric and photometric analysis including statistical treatment of experimental data. IMPORTANT: Attendance of the first laboratory session dealing with safety procedures is mandatory; students who do not attend must immediately call the Chemistry Department, and may be dropped from the class. Fall, Spring. M&S fee $70.00

CHM 3215L COS-CHEM 2(0,6)
Organic Laboratory Techniques II: PR: CHM 2211 and CHM 2211L. Open-end laboratory to develop synthesis techniques and structure elucidation skills. IMPORTANT: Attendance of the first laboratory session dealing with safety procedures is mandatory; students who do not attend must immediately call the Chemistry Department, and may be dropped from the class. Fall, Spring. M&S fee $70.00

CHM 3410 COS-CHEM 4(3,1)
Physical Chemistry I: PR: CHM 2046, PHY 2049C, and MAC 2312. Rigorous treatment of atomic and molecular structure, thermodynamics, kinetics, and chemical bonding. Fall.

CHM 3411L COS-CHEM 3(3,0)

CHM 3411L COS-CHEM 2(0,6)
Physical Chemistry Laboratory: PR: CHM 3120 and CR: CHM 3111. Classical as well as modern instrumental techniques coupled with computer data processing to measure physical properties and determine atomic and molecular parameters. Spring. M&S fee $70.00

CHM 3422 COS-CHEM 3(3,0)
Applied Physical Chemistry: PR: PHY 2049C and MAC 2312. Course is applied to the study of biological and forensic science. Fall.

CHM 4130 COS-CHEM 3(3,0)
Advanced Analytical Laboratory Technique: PR: CHM 2211, CHM 3120 (with a minimum grade of "C" or 2.0) and CR: CHM 3111 or PR: CHM 3422. Modern methods of analysis including electrochemistry, spectroscopy, and separation techniques. Spring.

CHM 4130L COS-CHEM 2(0,6)
Advanced Analytical Chemistry Laboratory: PR: or CR: CHM 4130. Experimental exercise of instrumental methods of analysis. Successful students will develop practical skills performing experiments based on spectroscopic and chromatographic methods of analysis. Statistical data treatment of experimental results will be also exercised. Spring. M&S fee $70.00

CHM 4220 COS-CHEM 3(3,0)
Organic Chemistry III: PR: CHM 2211 or equivalent. Organic reaction mechanisms and retrosynthetic analysis and their application to synthetic chemistry. Even Fall.

CHM 4427 COS-CHEM 3(3,0)

CHM 4610 COS-CHEM 3(3,0)

CHM 4610L COS-CHEM 2(0,6)
Inorganic Chemistry Laboratory: PR: CHM 4610. A study of chemical principles and chemical properties and synthetic techniques in Inorganic Chemistry. Fall. M&S fee $70.00

CHM 4930 COS-CHEM 1(1,0)
Chemistry Seminar I: CR: CHM 4912, or CI in consultation with advisor; student selects faculty committee. Prepare draft seminar on undergraduate research. Attend and reports on faculty seminars. Completes CI/II ethics course. Fall, Spring.

CHM 4931 COS-CHEM 1(1,0)
Chemistry Seminar II: PR: CHM 4930. Student builds upon the seminar prepared in CHM 4930 and presents it to the student's faculty committee. Attends and reports on faculty level seminars. Fall, Spring.

CHM 5225 COS-CHEM 3(3,0)
Advanced Organic Chemistry: PR: CHM 2211; graduate status or senior standing, or CI. Theoretical and physical organic concepts of organic systems from the perspective of modern structural theory, thermodynamics, and kinetics. Odd Fall.

CHM 5235 COS-CHEM 3(3,0)
Applied Molecular Spectroscopy: PR: CHM 3120 and CHM 2211, and graduate status or senior standing or CI. Determination of chemical structure through interpretation of UV, IR, NMR and Mass Spectra. Even Fall.

CHM 5305 COS-CHEM 3(3,0)
Applied Biological Chemistry: PR: CHM 2211, and graduate status or senior standing or CI. The identification from plants, synthesis, assessment of bioactivity, and design of pharmaceuticals and agrochemicals. Fall.

CHM 5450 COS-CHEM 3(3,0)
Polymer Chemistry: PR: CHM 2211, and graduate status or senior standing or CI. An introduction to the chemistry of synthetic polymers. Synthetic methods, polymerization mechanisms, characterization techniques, and polymer properties will be considered. Even Fall.

CHM 5451C COS-CHEM 3(1,5)
Techniques in Polymer Science: PR: CHM 2211 and CHM 3140, graduate status or senior standing, or CI. A laboratory and lecture course designed to introduce students to the major polymerization mechanisms along with polymer characterization and processing methods using modern instrumentation. Odd Spring. M&S fee $63.00

CHM 5580 COS-CHEM 3(3,0)
Advanced Physical Chemistry: CR: CHM 3411 and MAC 2313, and graduate standing or senior standing or CI. Selected topics of thermodynamics, kinetics, quantum mechanics, and structure. Occasional.

CHM 5715C COS-CHEM 3(2,3)
Optical Materials Processing and Characterization Techniques: CR: CHM 3411 and CHM 4610 or equivalent. Glasses, crystals and polymeric materials will be processed and characterized for their properties. Laboratory will emphasize material and physical property relationships. Occasional.

CHS 1440 COS-CHEM 4(3,1)
Principles of Chemistry: PR: One year of high school chemistry or CHM 1032. Basic concepts of chemistry, with emphasis on problem solving, including atomic and molecular structure, states of matter, stoichiometry, equilibria, electrochemistry and thermodynamics. The "NC" grading policy applies to this course. Fall, Spring.

CHS 3501 COS-CHEM 4(2,6)
Introduction to Forensic Science: PR: Premise will be given to students whose majors require this course. Intended for majors and non-majors to provide an overview of the specialty areas in the forensic crime lab. Fall.

CHS 3505C COS-CHEM 4(2,6)
Forensic Microscopy: PR: "C" grade or better in CHM 2046 L and CHM 3501; and PR: or CR: PHY 2049C. The study of the polarized light microscope and its use in the identification and comparison of trace evidence. Fall. M&S fee $69.00

CHS 3511C COS-CHEM 4(2,6)
Trace Evidence: PR: "C" grade or better in CHS 3505C & CHM 2211. An advanced study of the techniques used to identify and compare trace evidence. Spring. M&S fee $45.00

CHS 3530C COS-CHEM 4(3,3)
Forensic Analysis of Controlled Substances: PR: "C" grade or better in CHM 2211; PR: or CR: CHS 3511C, CHM 3120, or CI. Study of presumptive tests, isolation, and instrumental techniques used in identification of controlled substances. Fall. M&S fee $68.00

CHS 3533 COS-CHEM 2(2,0)
Forensic Biochemistry I: PR: "C" or better in PCB 3063. Concepts and procedures of contemporary forensic biochemistry, including the identification of body fluids and the use of genetic markers to establish identity. Fall.

CHS 3533L COS-CHEM 1(0,3)
Forensic Biochemistry Laboratory I: PR: "C" or better in PCB 3063. Concepts and procedures of contemporary forensic biochemistry. Emphasis on techniques and procedures used in operational crime laboratories in the U.S. Fall. M&S fee $70.00

CHS 3595 COS-CHEM 3(3,0)
Forensic Science in the Courtroom: PR: or CR: CHS 3501 or CI. Forensic Science major. The special needs of the forensic scientist in preparing for and participating in courtroom proceedings. Spring.

CHS 4060C COS-CHEM 3(2,3)
Forensic Investigation Technology: PR: A grade of "C" or better in CHS 3505C or CI. Modern technology applied to forensic investigation. Occasional.

CHS 4515C COS-CHEM 4(2,6)
Forensic Crime Scene Investigation: PR: Grade of "C" or better in CHS 3511C, or CI. Procedures of forensic investigation of arson, explosives, and crime scenes. Occasional.

CHS 4534C COS-CHEM 3(1,6)
Forensic Biochemistry II: PR: CHS 3533C and CI. Advanced treatment of the theoretical and practical aspects of forensic DNA analysis and the use of population genetics and forensic data analysis for evidence interpretation. Spring. M&S fee $70.00

CHS 4537 COS-CHEM 2(2,0)
Forensic Laboratory Quality Assurance: PR: Grade of "C" or better in CHS 3501, STA 2023, CHM 3120 and CHM 3120L or CI. Concepts and principles of quality assurance and quality systems management in forensic laboratories. Spring.

CHS 4591 COS-CHEM 4(0,40)
Forensic Science Internship: PR: Senior standing, within 8 hrs. of completion of degree requirements, and 2.5 overall GPA. Credit for full-time work (one semester; 400 hours) for a professional forensic laboratory. May be repeated for credit Fall, Spring.

CHS 4615 COS-CHEM 3(3,0)
Environmental Chemistry: PR: CHM 2046, senior level in biological, molecular, chemical or engineering sciences, or CI. Principles of environmental chemistry, survey of environmental law, remediation technologies, industrial practices and environmentally responsible chemistry. Odd Spring.
UCF Courses and Descriptions

COM 3011C COS-COMM 3(1,2)
Communication and Human Relations: PR: or CR: COM 3311 or COM 3003, or CI Semantics; symbols and meaning and their relationship with human behavior. Fall, Spring.

COM 3013 COS-COMM 3(3,0)
Communication and the Family: PR: One of the following: SPC 1608, SPC 1603C, COM 1000, or CI. The ways a family of four unit interact verbally and non-verbally in conflict and in cooperation. Fall, Spring.

COM 3022 COS-COMM 3(2,0)
Health Communication: PR: SPC 1608, SPC 1603C, COM 1000, or CI. Theories and research about the role communication plays in health. Fall.

COM 3110 COS-COMM 3(3,0)
Business and Professional Communication: PR: Human Communication, Ad-PR, or R-TV Majors or Human Communication Minors only; and one of the following: SPC 1608, SPC 1603C, or CI. Theoretical and practical training in effective presentational speaking for business and professions. Fall, Spring.

COM 3120 COS-COMM 3(3,0)
Organizational Communication: PR: or CR: COM 3311 or COM 3003, or CI. A study of communication functions and problems within the contexts of hierarchies. Fall, Spring.

COM 3311 COS-COMM 3(3,0)
Communication Research Methods: PR: STA 344C and I-O Major or I-O Minor, or Human Communication major or Human Communication minor, or CI. Research methods used in communication. Understanding and interpretation of original research emphasized. Fall, Spring.

COM 3330 COS-COMM 3(3,0)
Computer Mediated Communication: PR: RTV major- Media Management & Operations specialization or Mass Communication Minor, or CGS 1060 or STA 2014C or STA 2023, or CI. Communicating through computers. The foundations and applications of online and interactive multimedia applications, including trends and limitations. Occasional.

COM 3332 COS-COMM 3(3,0)
Communication, Technology, and Change: PR: One of the following: SPC 1608, SPC 1603C, COM 1000, or CI. How new technologies influence (and are influenced by) communication in a variety of contexts, including organization and interpersonal settings. Fall, Spring.

COM 3406 COS-COMM 3(3,0)
Role of Motivation in Communication: PR: or CR: COM 3311 or COM 3003, or CI. Motivation theories that directly affect the process of human communication. Occasional.

COM 3800 COS-COMM 3(3,0)
Conflict Communication Research Methods: PR: Communication & Conflict major and either SPC 1608, or SPC 1603, or COM 1000, or CI. Survey of research methods used by conflict communication scholars; emphasis on approaches, methodologies, and analyses used to inform the process of human conflict communication. Fall, Spring.

COM 3801 COS-COMM 3(3,0)
Communication Theories of Interpersonal Conflict: PR: or CR: Communication & Conflict major and COM 3800, or CI. Examination of social dynamics, interpersonal behavior, and motivation in a variety of settings in order to analyze intergroup conflict, and violence reducing strategies and techniques. Fall, Spring.

COM 3802 COS-COMM 3(3,0)
Communication & Conflict: PR: or CR: Communication & Conflict major and 3800, or CI. Examination of major theories and concepts related to communication and conflict focusing on the influence of message content, relationships, and environments in multiple conflict scenarios. Fall, Spring.

COM 3912 COS-COMM 3(3,0)
Collaborative Experiential Research Practicum: PR: Either SPC 1608, SPC 1603C or COM 1000 and CI. Students will work as research assistants in a team, under faculty supervision, and learn first-hand the process of conducting communication/social scientific research. May be repeated in the degree program a maximum of 2 times. Occasional.

COM 4014 COS-COMM 3(3,0)
Gender Issues in Communication: PR: Junior Standing, and one of the following: SPC 1608, SPC 1603C, COM 1000, or CI. A study of how communication exchanges, both verbal and non-verbal, differ between men and women, and how these differences are manifested. Fall, Spring.

COM 4416 COS-COMM 3(3,0)
Terrorism and Communication: PR: One of the following: SPC 1603C, SPC 1608, COM 1000 or CI. How terrorism is a communication process. How mass media, symbols, linguistic devices, e-terrorism, and theoretical dimensions play a role in terrorism. How communities respond to terrorist attacks. Fall, Spring.

COM 4416H COS-COMM 3(3,0)
Honors Terrorism and Communication: PR: One of the following: SPC 1603C, SPC 1608, or COM 1000 or CI. How terrorism is a communication process. How mass media, symbols, linguistic devices, e-terrorism, and theoretical dimensions play a role in terrorism. How communities respond to terrorist attacks. Occasional.

COM 4461 COS-COMM 3(3,0)
Intercultural Communication: PR: Junior Standing, and one of the following: SPC 1608, SPC 1603C, COM 1000, or CI. Study of variables affecting messages and participants in intercultural contexts. Fall, Spring.

COM 4462 COS-COMM 3(3,0)
Conflict Management: PR: or CR: COM 3311 or COM 3003, or CI. The study of communication in everyday conflicts. Fall, Spring.

COM 4550 COS-COMM 3(3,0)

COM 4580 COS-COMM 3(3,0)
Third Party Processes & Intervention: PR: or CR: COM 3800. Identify components and skills in multiple third party processes including mediation, arbitration, and facilitation; build conflict management and process design skills. Fall.

COM 4804 COS-COMM 3(3,0)
Conflict & Communication Context: PR: or CR: Communication & Conflict major and COM 3800, or CI. Exploration of communication factors that contribute to the development of conflict across groups, cultures and societies. Fall, Spring.

COM 4805 COS-COMM 3(3,0)
Transformative Communication: PR: or CR: COM 3800. Examines various western and non-western belief/systems, and how conflict may be perceived, communicated and interpreted using metaphorical approaches to conflict management. Fall.

COM 4806 COS-COMM 3(3,0)
Communication & Conflict Case Studies: PR: Communication & Conflict major and Senior Standing, or CI. Application of communication and conflict theories to intercultural and community case studies, examining historical, political, and cultural elements of empowerment and peace-building. Spring.

COM 5312 COS-COMM 3(3,0)
Introduction to Communication Research: PR: Junior standing or CI. Provides the foundational knowledge and skills for conducting research in graduate Communication coursework including both quantitative and qualitative approaches. Fall, Spring.

COM 5932 COS-COMM 3(3,0)
Topics in Communication Theory and Research: PR: Admission to Communication M.A. program or CI. In-depth examination of a particular area of communication theory and research, emphasizing major developments, current uses, implications for research, and overall impact on the field. Occasional.

COP 2500C ECS-CS 4(3,1)
Concepts in Computer Science: Fundamental concepts and program design, data structures, algorithms, analysis and a survey of topics in CS. Not open to Computer Science majors. Fall, Spring.

COP 3223C ECS-CS 3(3,1)
Introduction to Programming with C: Program design, programming, and use of standard C math and IO libraries. Fall, Spring.

COP 3223H ECS-CS 3(3,0)
Honors Introduction to Programming with C: PR: Consent of Honors. Programming with C including pointers manipulation and use of standard C math and IO libraries. With Honors consent. Fall.

COP 3330 ECS-CS 3(3,0)
Object Oriented Programming: PR: COP 3223H or EGN 3211 with a grade of "C" (2.0) or better. Object oriented programming concepts (classes, objects, methods, encapsulation, inheritance, interfaces) and the expression of these concepts in the programming languages such as JAVA. Fall, Spring.

COP 3402 ECS-CS 3(3,0)
Systems Software: PR: CDA 3103C and COP 3520C each with a grade of "C" (2.0) or better. Design and development of assemblers, linkers, loaders, and compilers. Study memory hierarchy, program performance, and system level I/O. Fall, Spring.

COP 3502C ECS-CS 3(3,1)
Computer Science I: PR: (COP 3223H or EGN 3211) and MAC 1105C all with a grade fo "C" (2.0) or better. Problem solving techniques, order analysis and notation, abstract data types, and recursion. Fall, Spring.

COP 3502H ECS-CS 3(3,0)
Honors Computer Science I: PR: Permission of Honors and (COP 3223H or EGN 3211) and MAC 1105C all with a grade fo "C" (2.0) or better. Problem solving techniques, order analysis and notation, abstract data types, and recursion. Spring.

COP 3503C ECS-CS 3(3,1)
Computer Science II: PR: COP 3520C and COP 3330 and (MAD 2104 or COT 3100C) each with a grade of "C" (2.0) or better. Algorithm design and analysis for tree, list, set, and graph data models; algorithmic strategies and applications, and algorithmic complexity analysis; sorting and searching; practical applications. Fall, Spring.

COP 3503H ECS-CS 3(3,0)
Honors Computer Science II: PR: Permission of Honors and (COP 3520C or COP 3502C) and COT 3380 and (MAD 2104 or COT 3100C) each with a grade of "C" (2.0) or better. Algorithm design and analysis for tree, list, set, and graph data models; algorithmic strategies and applications, and algorithmic complexity analysis; sorting and searching; practical applications. With honors consent. Fall.

COP 4020 ECS-CS 3(3,0)
Programming Languages I: PR: COP 3503C with a grade of "C" or better and COT 3960. Paradigms and fundamental concepts of programming languages are presented, including: scope, binding, abstraction, encapsulation, typing etc. Design paradigms object-oriented, functional and logic programming are presented. Fall, Spring.

COP 4331C ECS-CS 3(3,1)
Processes for Object-Oriented Software Development: PR: COP 3503C with a grade of "C" (2.0) or better and COT 3960 (CS majors). Concepts, principles, processes and methods for developing large software systems featuring a team project using object-oriented design in UML and implementation in C++. Fall, Spring.
COP 4516C ECS-CS
Problem Solving Techniques and Team Dynamics: COP 3502C with a grade of "C" (2.0) or better. Design and implement solutions to problems requiring the applications of the different algorithms. Team project format. Occasional.

COP 4520 ECS-CS
Concepts of Parallel and Distributed Programming: COP 3502C and COP 3503C each with a grade of "C" (2.0) or better and COT 3960. Parallel and distributed paradigms, architectures and algorithms, and their applications to environments and languages needed to support these paradigms. Occasional.

COP 4600 ECS-CS
Operating Systems: PR: COP 3503C and COP 3402 (CS majors) each with a grade of "C" (2.0) or better and COT 3960 (CS majors). Function and organization of operating systems, process management, virtual memory, I/O management, and file management. Fall, Spring.

COP 4710 ECS-CS
Database Systems: PR: COP 3503C with a grade of "C" (2.0) or better. Storage and access Structures, database models and languages, related database design, and implementation techniques for database management systems. Fall, Spring.

COP 4910 ECS-CS
Frontiers in Information Technology: PR: CNT 4063 with a grade of "C" (2.0) or better. CR: CNT 4703CC and COP 4690 F. Students work in teams to demonstrate their knowledge of computer science and apply it to realistic and meaningful problems. Fall, Spring.

COP 4934 ECS-CS
Senior Design I: PR: COP 3402 and COP 3503C each with a grade of "C" (2.0) or better and consent of Department. PR: COP 4531C. Students work in teams to demonstrate their knowledge of computer science and apply it to realistic and meaningful problems. Fall, Spring.

COP 4935 ECS-CS
Senior Design II: PR: COP 4934 with a grade of "C" (2.0) or better and consent of Department. PR: COP 4531C. Students work in teams to demonstrate their knowledge of computer science and apply it to realistic and meaningful problems. Fall, Spring.

COP 5021 ECS-CS
Program Analysis: PR: COP 4020 and COP 4210 or C.I. Static analysis of programs including theoretical and practical limitations, data flow analysis, abstract interpretation, and type and effect systems. Tools to automate program analysis. Even Spring.

COP 5537 ECS-CS
Network Optimization: PR: Graduate standing or C.I. Techniques for modeling complex, interconnected systems as networks; optimization with graph theory, algorithms, data structures, and computational complexity; statistical methods for studying large, evolving networks. Fall.

COP 5611 ECS-CS

COP 5621 ECS-CS
Compiler Construction: PR: COP 4020 and COT 4210. Techniques in the design and implementation of compilers. Optimization, code generation, error recovery, attributed grammars. A project is required. Odd Fall.

COP 5711 ECS-CS
Parallel and Distributed Database Systems: PR: COP 4710. Storage manager, implementation techniques for parallel DBMSs, distributed DBMS architectures, distributed database design, query processing, multiprocessor systems. Occasional.

COP 5837 ECS-ECS
Advanced Web Programming: PR: COT 3100C How to build efficient interactive multituser web applications using modern web technologies such as Node.js. Occasional.

COT 3100C ECS-CS
Introduction to Discrete Structures: PR: MAC 2311C with a grade of "C" (2.0) or better. Logic, sets, functions, relations, combinatorics, graphs, Boolean algebra, finite-state machines, Turing machines, unsolvability, computational complexity. Fall, Spring.

COT 3100H ECS-CS
Honors Introduction to Discrete Structures: PR: Permission of MAC 2311C and MAC 1141C each with a grade of "C" (2.0) or better. Logic, sets, functions, relations, combinatorics, graphs, Boolean algebra, finite-state machines, Turing machines, unsolvability, computational complexity. Occasional.

COT 3960 ECS-CS
CS Foundation Exam: PR: COP 3502C and COP 3100C each with a grade of "C" (2.0) or better. Foundation examination for computer science majors. Required before CPSC 4210. A range of topics from the fields of Computer Science and upper division 4000 and 5000 level CS electives. Graded S/U. Fall, Spring.

COT 4210 ECS-CS
Discrete Structures II: PR: COP 3503C and MAC 2312 each with a grade of "C" (2.0) or better and COP 3960. Computation theory. A study of the properties of grammars and automata as formal specifications for algorithms and families of languages. Fall, Spring.

COT 4400 ECS-CS
Tools for Algorithm Analysis: PR: COP 3960 and COP 3600F. Techniques for developing and analyzing programs, including the calculation of time and space utilized. Fall, Spring.

COT 4500 ECS-CS

COT 4810 ECS-CS
Topics in Computer Science: PR: COP 3402 and COP 3503C each with a grade of "C" (2.0) or better and COP 3960. A range of topics from the fields of Computer science; application of oral and written communication skills, social, ethical and moral issues of computing. Fall, Spring.

COT 5405 ECS-CS

COT 5593 ECS-ECE
Advanced Cryptography: PR: COP 3100C This course explores the inner workings of public-key systems and higher-level cryptographic protocols. It introduces senior undergraduate students and graduate students to (1) advanced cryptographic protocols such as multi-party computation and homomorphic encryption, (2) important real-life applications such as e-cash systems, and (3) advanced topics in algorithmic number theory such as lattices and elliptic curves. Occasional.

CPO 3034 COS-POLS
Politics of Developing Areas: PR: INR 2002 or C.I. Comparative analysis of theories, problems and politics of development in Third World nations. Even Fall.

CPO 3057 COS-POLS
Contemporary Revolution and Political Violence: PR: ENC 1102 or COS-POLS 2041 or C.I. Politics and governments in selected nations, with emphasis upon comparative analysis of contemporary problems, politics, political culture, behavior, and institutions. Spring.

CPO 3103 COS-POLS
Comparative Politics: PR: ENC 1102 or POS 2041 or C.I. Theories and cases of revolutionary change and political violence in the contemporary world. Occasional.

CPO 3104 COS-POLS
Politics of Western Europe: PR: ENC 1102 or POS 2041 or C.I. An examination of the political and economic dynamics of Western Europe in the post-1945 era. Odd Spring.

CPO 3132 COS-POLS
Canadian Politics: PR: POS 2041 or C.I. Canadian politics including identity formation, political institutions, political culture, and U.S./Canada relations. Occasional.

CPO 3403 COS-POLS
Politics of the Middle East: PR: ENC 1102 or POS 2041 or C.I. An examination of the dynamics of Middle East politics, including both regional and international dimensions. Occasional.

CPO 3403H COS-POLS
Honors Politics of the Middle East: PR: Permission of Honors. An examination of the dynamics of Middle East politics, including both regional and international dimensions. Honors level content Occasional.

CPO 3614 COS-POLS
Politics of Eastern Europe: PR: ENC 1102 or POS 2041 or C.I. An examination of the political and economic dynamics of Eastern Europe in the post-1945 era. Occasional.

CPO 4062 COS-POLS
Comparative Judicial Process: PR: ENC 1102 or POS 2041 or C.I. Study of courts and judges in different contexts. Focus upon judicial recruitment, decisional patterns, and policy outcomes. Occasional.

CPO 4074 COS-POLS
Political Economy: PR: ENC 1102 or POS 2041 or C.I. Interrelationship of political and economic phenomena of both advanced industrial societies and less developed countries. Even Fall.

CPO 4101 COS-POLS
Politics of the European Union: PR: ENC 1102 or POS 2041 or C.I. Evolution of the European Union, theories of the EU and EU institutions and policies from a comparative perspective. Spring.

CPO 4123 COS-POLS
Government and Politics of Great Britain: PR: ENC 1102 or COS-POLS 2041 or C.I. Theories and cases of revolutionary change and political violence in the contemporary world of British government, society, politics and institutions, emphasizing parliamentary traditions. Britain’s foreign policy and European role will be discussed. Even Spring.

CPO 4303 COS-POLS
Comparative Latin American Politics: PR: ENC 1102 or POS 2041 or C.I. Comparative analysis of politics, society and culture in Latin America and selected countries of the region. Even Fall.

CPO 4445 COS-POLS
Comparative Political Parties: PR: ENC 1102 or POS 2041 or C.I. Theories of the formation, structures, organization, and behavior of political parties and political party systems in comparative perspective. Occasional.

CPO 4514 COS-POLS
Politics of East Asia: PR: ENC 1102 or POS 2041 or C.I. Major trends in political, economic, and socio-cultural aspects in the East Asian region. Occasional.

CPO 4541 COS-POLS
Chinese Politics: PR: ENC 1102 or POS 2041 or C.I. China’s political development since 1949. Occasional.

CPO 4553 COS-POLS
Politics of Japan: PR: ENC 1102 or POS 2041 or C.I. Evolution of the Japanese political system and how domestic and international politics influence the functioning of the Japanese economy. Occasional.
CPO 4643 COS-POLS
Government and Politics of Russia: PR: ENC 1102 or POS 2041 or C.I. Study of the origins, institutions, and functions of the Russian system, including the lingering influence of the old order on domestic and foreign policy. Occasional.

CPO 4710 COS-POLS
Women in Comparative Politics: PR: ENC 1102 or POS 2041 or C.I. A cross-national perspective on women and politics; how women behave politically in various political and economic contexts. Occasional.

CPO 4731 COS-POLS
Politics of Democratization: PR: POS 2041 or ENC 1102 or INR 2002 or Junior standing or C.I. Develops comparative frameworks and analytical skills on issues of democratization and regime change. Occasional.

CPO 4754 COS-POLS
Comparative Political Institutions: PR: ENC 1102 or POS 2041 or C.I. The course analyzes major types of political institutions from a comparative perspective including electoral laws, division of power, types of democracy, federalism, and the judiciary. Occasional.

CPO 4784 COS-POLS
Political and Economic Inequality in Comparative Perspective: PR: ENC 1102 or POS 2041 or C.I. Economic and political inequality and the nature of the state have been them across countries with different political and economic institutions. Occasional.

CPO 4794 COS-POLS
Indigenous Politics and the Environment: PR: POS 2041 or C.I. Unique environmental politics specific to indigenous peoples around the world. Occasional.

CRW 3010H CAH-ENG
Honors Creative Writing: PR: Consent of Honors. Theory and techniques of literary genres with honors level content; practice and critique of original writing by peers and critical reading of established authors. Occasional.

CRW 3011 CAH-ENG
Creative Writing for Non-Majors: PR: Grade of C (2.0) or better required in ENC 1102. Only open to non-majors. The techniques of literary genres; the practice and critique of original work by peers; critical reading of established authors. Designed for non-majors. Not open to students with credit in CRW 3101. Fall, Spring.

CRW 3013 CAH-ENG
Creative Writing for English Majors: PR: English major or minor and grade of C (2.0) or better required in ENC 1102, or C.I. Literary genres; practice and critique of peer writing; critical reading of established authors. Fall, Spring.

CRW 3053 CAH-ENG
Theory & Practice of Creative Writing: PR: English major or minor and a grade of C (2.0) or better in ENC 1102, or C.I. Examination of the genres and readings in contemporary creative writing with attention to literary technique, and discussion of issues in the field. Fall, Spring.

CRW 3120 CAH-ENG
Fiction Writing Workshop: PR: English major or minor; junior standing, and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. An intermediate level fiction writing workshop for English majors; group analysis and criticism; close reading of contemporary fiction and fiction theory. Fall, Spring.

CRW 3211 CAH-ENG
Creative Nonfiction Writing: PR: English major or minor, junior standing, and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Writers present original nonfiction writing for class response and individual conferences. Reading of key works of creative nonfiction with discussion of definitions of the genre. Fall, Spring.

CRW 3310 CAH-ENG
Poetry Writing Workshop: PR: English major or minor, junior standing, and a grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. An intermediate level poetry workshop for English majors. Group analysis and criticism; close reading of contemporary poetry and poetic theory. Fall, Spring.

CRW 3311 CAH-ENG
Readings in Poetry for Creative Writing: PR: English major or minor, junior standing, and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Intensive study of the structural characteristics of English, poetry, metrical systems, rhyme, scansion, and poetic rhetorical devices. Occasional.

CRW 3340 CAH-ENG
Literary Magazines Style: PR: English major or minor and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Examination of fiction and poetry trends in current literary magazines, identifying editorial policies in publication of contemporary literature. Occasional.

CRW 3610 CAH-ENG
Writing Scripts: PR: English major or minor and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Theory and practice of writing scripts for film and TV. Fall, Spring.

CRW 3713 CAH-ENG
Writing for Video Games: PR: English major or minor and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Basic theories and practices associated with game design. Students learn effective writing techniques for developing original video games. Occasional.

CRW 3950 CAH-ENG
Cypress Dome Editorship: PR: C.I. Responsibility for all aspects of editing The Cypress Dome-UCF's student literary journal. May be used in the degree program a maximum of 2 times. Fall, Spring.

CRW 4114 CAH-ENG
History of Prose Styles: PR: English major or minor, and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Close study of style and craft in exemplary works of fiction and creative nonfiction from various time periods. Occasional.

CRW 4122 CAH-ENG
Advanced Fiction Writing Workshop: PR: English major or minor, and grade of C (2.0) or better required in CRW 3120, or C.I. Intensive writing practice in fiction. Peer critique and group discussion of original manuscripts. Fall, Spring.

CRW 4123 CAH-ENG
Science Fiction Writing: PR: English major or minor, and grade of C (2.0) or better required in CRW 3101 and CRW 3053, or C.I. Study of science fiction literature and writing of original science fiction stories. Workshop format with critique of writing assignments. Occasional.

CRW 4224 CAH-ENG
Advanced Nonfiction Workshop: PR: English major or minor, and grade of C (2.0) or better required in CRW 3211, or C.I. Intensive reading, writing, and workshop of creative nonfiction drawing on memory, observation, journalistic research, and literary techniques. Fall, Spring.

CRW 4320 CAH-ENG
Advanced Poetry Writing Workshop: PR: English major or minor, and grade of C (2.0) or better required in CRW 3310, or C.I. Intensive writing practice in poetry. Peer critique and group discussion of original manuscripts. Fall, Spring.

CRW 4616 CAH-ENG
Advanced Scriptwriting Workshop: PR: English major or minor, and grade of C (2.0) or better required in CRW 3160, or C.I. Intensive practice in writing scripts. Peer critique and group discussion of original manuscripts. Fall, Spring.

CRW 4722 CAH-ENG
Editing for Creative Writers: PR: English major or minor, and grade of C (2.0) or better required in CRW 3101, CRW 3053 and at least one of CRW 3120, CRW 3211, CRW 3310, or CRW 3610 or C.I. Overview of editing processes, history and future of editing, issues and areas of literary and trade book publishing, and style through grammar and syntax. Occasional.

CWR 4724 CAH-ENG
The Florida Review: PR: English major or minor, junior standing, and a grade of C (2.0) or better required in CRW 3101, CRW 3053, or C.I. Hands-on experience with all aspects of Florida Review publishing, editing, and production in conjunction with this national journal. May be used in the degree program a maximum of 2 times. Fall, Spring.

CWR 4804 CAH-ENG
Creative Writing in the Community: PR: English major or minor, and grade of C (2.0) or better required in CRW 3013, CRW 3053 and at least one of CRW 3120, CRW 3211, CRW 3310, or CRW 3610 or C.I. Teaching creative writing to community groups through service-learning. Occasional.

CWR 5130 CAH-ENG
Form and Theory in Creative Writing: PR: Admission to Creative Writing MFA or C.I. On-site experience leading and sharing creative writing in community settings. May be used in the degree program a maximum of 3 times. Occasional.

CWR 5948C CAH-ENG
Creative Writing Service Learning: PR: Admission to Creative Writing MFA or C.I. On-site experience leading and sharing creative writing in community settings. May be used in the degree program a maximum of 3 times. Occasional.

CWR 3201 ECS-CECE
Engineering Fluid Mechanics: PR: MAP 2302, EGN 3311 or both with a grade of C (2.0) or better; CR: EGN 3211. Fundamentals of fluid mechanics with hydraulic applications; fluid properties, hydrostatics, dimensional analysis, energy, momentum, continuity, and steady flow. Fall, Spring.

CWR 4120 ECS-CECE
Hydrology: PR: CWR 4202C and STA 3022 both with grades of C (2.0) or better. Occurrence, distribution, and properties of fresh water on Earth and movement via physical processes of evaporation, hydrology, fluid mechanics, and computation to water resources. Fall, Spring.

CWR 4124 ECS-CECE
Hydrogeology: PR: CWR 4202C and CEG 4011C both with grades of C (2.0) or better. Fundamentals of subsurface flow and transport, role of groundwater in the hydrologic cycle, relation of groundwater flow to geologic structure, and management of contaminated groundwater. Spring.

CWR 4202C ECS-CECE
Water Resources Engineering I: PR: STA 3032 and CWR 3021 both with a grade of C (2.0) or better. Descriptive and quantitative aspect of water in the earth's environment and its engineering implications, including analysis of surface water systems, design of hydraulic structures, and stormwater management. Fall, Spring. M&S fee $21.00

CWR 4632C ECS-CECE
Water Resources Engineering II: PR: CWR 4202C with a grade of C (2.0) or better. Provision of advanced understanding of hydrology, hydrographic river routing, open/closed channel, and groundwater hydraulic and some engineering applications of these concepts. Fall, Spring.

CWR 4812C ECS-CECE
Water Resources Design: PR: CWR 4120 with a grade of C (2.0) or better and department consent. Project course for the design of storm water, potable water, sewage transmission lines, using local and state regulations. Fall, Spring. M&S fee $15.00

CWR 5125 ECS-CECE
Groundwater Hydrology: PR: CWR 4124C or C.I. Theories of groundwater movement, geological factors, analysis and design techniques, etc. Emphasis on practical considerations. Occasional.
CWR 5205 ECS-CESC (3.0)
Hydraulic Engineering: PR: CWR 4202C or C.J. Closeness to and hydrodynamics applied to natural and man-made flow of intent to civil and environmental engineering. Occasional.

CWR 5515 ECS-CESC (3.0)
Numerical Methods in Civil and Environmental Engineering: PR: CWR 4202C. This class will prepare students to advanced numerical methods theory and include code development and error assessment, while targeting civil and environmental engineering applications. Occasional.

CWR 5545 ECS-CESC (3.0)
Water Resources Engineering: PR: CWR 4120 or C.J. Systems identification and solution to complex water allocation problems, and other hydraulic engineering designs and operations using economic analysis and operations research techniques. Occasional.

CWR 5634 ECS-CESC (3.0)

DAA 2000C CAH-THEA (2(2,2)
Introduction to Theatre Dance: Basic ballet techniques and jazz technique. Recommended for students with no formal dance training. May be used in the degree program a maximum of 2 times. Occasional.

DAA 2100C CAH-THEA (2(2,1)
Modern Dance I: PR: Declared Theatre major or Dance minor and "C" (2.0) or better in DAA 2200C or department consent. Exploration of form, style, and technique in creative movement. Includes practical class work and history lectures. Spring.

DAA 2200C CAH-THEA (2(2,1)
Ballet I: PR: Theatre major, Dance minor, or department consent. Fundamentals of classical ballet; includes practical dance work as well as dance history lectures. Fall.

DAA 2201C CAH-THEA (2(2,1)
Ballet II: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2200C. Intermediate classical ballet technique, including principles, theory, and practice technique. Spring.

DAA 2300 ED-E&HS (2(2,0)
Ballroom Dance: Instruction in selected ballroom dances (foxtrot, waltz, tango, swing, samite, cha cha, tango, quickstep) focusing on dance and fitness aspects of ballroom dancing. Fall,Spring.

DAA 2351 ED-E&HS (2(0,0)
Salsa & Latin Dance: Instruction in salsa and selected other Latin dances (merengue, bachata, cha cha) focusing on Latin dance and fitness aspects of ballroom dancing. Fall.

DAA 2393C CAH-THEA (2(2,1)
World Dance: PR: Theatre major or Dance minor, and "C" (2.0) or better in DAA 2200C or department consent. Theory and applied technique with focus on one form, such as African dance, Flamenco, Irish dance, Indian dance, etc. Occasional.

DAA 2520C CAH-THEA (2(2,1)
Tap Dance I: PR: Theatre major, Dance minor, or department consent. Form, style, and technique in the basic fundamental movements of tap dance. Fall.

DAA 2521C CAH-THEA (2(2,1)
Tap Dance II: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2520C. Intermediate exploration of form, style, and technique of tap dance. Spring.

DAA 2570C CAH-THEA (2(2,1)
Jazz Dance I: PR: DAA 2200C, and Theatre major, or Dance minor, or department consent. Basic movements of American Jazz dance, including practical class work and Jazz dance history. Fall.

DAA 2571C CAH-THEA (2(2,1)
Jazz Dance II: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2570C. Intermediate Jazz dance using theory and practice in jazz technique. Spring.

DAA 3004L CAH-THEA (1(0,0)
Dance Studio: PR: Theatre Major, Theatre Minor or Dance Minor and "C" (2.0) or better in any DAA course offered by the Theatre. Periodic attendance allowed. Graded S/U. May be repeated for credit. Fall,Spring.

DAA 3208C CAH-THEA (2(2,1)
Ballet III: PR: Theatre major. Dance minor, or department consent, and C (2.0) or better required in DAA 2201C. Advanced classical ballet technique, including principles, theory, and practice technique. May be repeated for credit. Fall.

DAA 3508C CAH-THEA (2(2,1)
Jazz Dance III: PR: Theatre major, Dance minor, or department consent, and "C" (2.0) or better required in DAA 2571C. Advanced study of jazz dance, using theory and practice of jazz technique. May be repeated for credit. Fall.

DAA 3524C CAH-THEA (2(2,1)
Tap Dance III: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2521C. Advanced exploration of form, style, and technique of tap dance. May be repeated for credit. Fall.

DAA 3612 CAH-THEA (3(0,0)

DAA 3645 CAH-THEA (2(0,VAR)
Choreography Practicum: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2200C. Student performance in a concert dance work. May be repeated for credit. Spring.

DAA 3684 CAH-THEA (1(0,VAR)
Dance Performance: PR: Theatre major, Dance minor, or department consent, and C (2.0) or better required in DAA 2200C, or DAA 2201C, or DAA 3208C and audition. Student performance in a concert dance work. May be repeated for credit. Spring. M&S fee $15.00

DEP 5057 COS-PsyCH (3(0,0)
Developmental Psychology: PR: Graduate standing or C.J. Psychological aspects of development including intellectual, social, and personality factors. Spring.

DIG 2000 CAH-SVAD (3(0,0)
Introduction to Digital Media: PR: ENC 1101 and MAC 1105C. Introduction to history, principles, and development associated with digital media and designing for digital media with emphasis on production and communication. Fall, Spring.

DIG 2030 CAH-SVAD (3(0,0)

DIG 2109 CAH-SVAD (3(0,0)

DIG 2500 CAH-SVAD (3(0,0)

DIG 3003 CAH-SVAD (3(0,0)
Adventures in Emerging Media: PR: ENC 1101. Experiences the rules and culture of emerging media. The course is presented online in a nonlinear ‘choose your own adventure’ format. Occasional.

DIG 3024 CAH-SVAD (3(0,0)
Digital Cultures & Narrative: PR: DIG 2030, DIG 2109, DIG 2500, and a minimum grade of 'B' (3.0) in DIG 2000. Understanding of digital cultures as narrative theories from an interdisciplinary perspective. Conceptual structure and design of visual and interactive storytelling. Fall, Spring.

DIG 3043 CAH-SVAD (3(0,0)
Evolution of Video Games: PR: ENC 1101. Evolution of video games since the first game in the early 1950s to contemporary games. Fall, Spring.

DIG 3118 CAH-SVAD (3(0,0)
Digital Tools and Technologies: Graphic Design: PR: Grade of "C" (2.0) or better in DIG 2000 or C.J. Composition, editing, and manipulation of digital imagery using Adobe Photoshop, including layering, typographic design and working with 3D images. Fall, Spring.

DIG 3134 CAH-SVAD (3(0,0)

DIG 3153 CAH-SVAD (3(0,0)
Writing for Digital Media: PR: Minimum grade of "B" (3.0) in DIG 2000. Methodologies, fundamentals, and history of written communications for the digital age. Application of methods and fundamentals in the following areas: language theory, document design, markup languages and the ultimate cultures. Fall, Spring.

DIG 3171 CAH-SVAD (3(0,0)
Tools for Digital Humanities: PR: ENC 1102 or C.J. Examination of digital tools and techniques, including web and games, used for projects and research in digital humanities. Occasional.

DIG 3253C CAH-SVAD (3(2,0)
Digital Media Audio: PR: DIG 3480. Audio production processes for multimedia and new media production, including examination and use of audio and MIDI sequencing software. Fall, Spring.
DIG 3355C CAH-SVAD 3(2,2) Artificial Environments and Effects: PR: DIG 2109 and C.I. CR: DIG 3951. Design and manipulation to convey a story, thought, or concept in a visual medium. Fall, Spring.

DIG 3362C CAH-SVAD 3(2,2) Artificial Characters: PR: DIG 2109 and C.I. CR: DIG 3951. Processes and techniques for design and manipulation of artificial characters to convey a story, thought, or concept in a visual medium. Fall, Spring.


DIG 3450 CAH-SVAD 3(0,0) Interactive Performance I: PR: Admission by audition only, Digital Media, Theatre majors, or C.I. Techniques of interactive acting, with emphasis on interpersonal awareness and audience facilitation. Fall, Spring.

DIG 3450H CAH-SVAD 3(0,0) Honors Interactive Performance I: PR: C.I. and consent of Honors. Techniques of interactive acting, with emphasis on interpersonal awareness and audience facilitation. Fall. Occasionally.

DIG 3480 CAH-SVAD 3(0,0) Computer as a Medium: PR: DIG 2500 and a minimum grade of "B" (3.0) in DIG 2000. Fundamentals of client-side scripting with an emphasis on web technologies. Design and development of interactive web sites using current scripting languages. Fall, Spring.

DIG 3525 CAH-SVAD 3(0,0) Digital Media Production I: PR: DIG 2030, DIG 2109, DIG 2500, and a minimum grade of "B" (3.0) in DIG 2000. Media project planning, organization and execution; group dynamics. Software tools for project planning, scheduling and management. Fall, Spring.


DIG 3554 CAH-SVAD 3(0,0) Digital Tools and Technologies: Web Design: PR: C.R. Grade of "C" (2.0) or better in DIG 2000 or C.I. Creative and functional website design and development using Adobe Dreamweaver, including use of CSS, HTML, and incorporation of media and mobile design. Fall, Spring.

DIG 3563 CAH-SVAD 3(0,0) Information Management and Entreprenurship: CR: DIG 3525. Managing digital assets from both technical and fiduciary aspects with a view towards creating, storing, retrieving assets, and authoring of databases and file types. Introduction of basic financial and entrepreneurial elements of starting and running a small business. Fall, Spring.

DIG 3716C CAH-SVAD 3(2,2) Internet Interaction: PR: DIG 3480. Front end planning and design of web pages. Design using markup languages and style sheets to produce visually pleasing and usable interactive interfaces. Fall, Spring.

DIG 3811 CAH-SVAD 3(0,0) User-Centered Design: PR: DIG 3525. Applying knowledge about cognition and behavior to design usable interfaces and systems. Fall, Spring.

DIG 3951 CAH-SVAD 0(0,0) Character Animation Portfolio Review: PR: C.I. CR: DIG 3134, DIG 3176C, DIG 3554, and DIG 3811. Students will practice designing and implementing professional-quality websites. May be taken in the degree program a maximum of 2 times. Fall, Spring.

DIG 4010C CAH-SVAD 3(2,2) Web Design Workshop: PR: DIG 3134C, DIG 3176C, DIG 3563, and DIG 3811. Students will practice designing and implementing professional-quality websites. May be taken in the degree program a maximum of 2 times. Fall, Spring.


DIG 4026C CAH-SVAD 3(1,4) New Imagery in Motion Workshop: PR: DIG 4325C, successful portfolio review, or C.I. Conceptual and technical aspects of scripting, image processing, 3D/2D data acquisition while practicing the use of generators, fillets, particles, masks, and audio into digital projects. Spring.

DIG 4323C CAH-SVAD 3(1,4) Modifying for Reality: Systems II: PR: DIG 4351C, C.I. or C.I. CR: DIG 3951. Techniques of artichurals to model, rig, and prepare artificial characters so that they may be animated effectively and express narrative for digital production. Fall.


DIG 4325C CAH-SVAD 3(1,4) Look Modeling Workshop: PR: DIG 4780C and successful portfolio review or C.I. Techniques, mechanics of designing, developing, and refining models and techniques of modeling and animation applied to realistic representations of characters and their environments; introduction to procedural models. Spring.

DIG 4354C CAH-SVAD 3(1,4) Advanced 3D Animation: PR: DIG 4323C, successful portfolio review, or C.I. Advanced tools, concepts, and techniques developed in the previous 3D animation courses. Students apply techniques to 3D character animation. Spring.

DIG 4359C CAH-SVAD 3(1,4) Artificial Environments and Effects Workshop: PR: DIG 3355C and successful portfolio review, or C.I. Techniques and mechanisms of artificial environments, with emphasis on compositing, image processing, visual style, visual continuity. Spring.

DIG 4369C CAH-SVAD 3(1,4) Artificial Characters Workshop: PR: DIG 3362C and successful portfolio review, or C.I. Techniques and mechanisms of artificial characters, with emphasis on attitude in action, personality of character expressions, and bringing characters to life. Spring.

DIG 4373C CAH-SVAD 3(1,4) 3D Textures: PR: DIG 4323C or C.I. Advanced application of lighting and surface attributes, improving on the tools, concepts, and techniques learned in previous 3D courses. Spring.

DIG 4394C CAH-SVAD 3(1,4) Motion Graphics: Advanced Compositing: PR: DIG 4359C, successful portfolio review, or C.I. Advanced techniques including 3D modeling, texture, lighting, particles, and compositing to create motion graphics. Manage and navigate objects, images and other media in visual narratives, as pertaining to 3-D Content. Spring.

DIG 4395 CAH-SVAD 3(0,0) Motion Capture for Performance: PR: MAC 1105C, and DIG 3480 or TPA 2220, or C.I. Develop creative skills, learn theory and technology of motion capture, systems and recorded dramatic performance, augmented & virtual reality, training, and educational applications. Spring.

DIG 4434C CAH-SVAD 3(1,4) Narrative Techniques in the Moving Image: PR: DIG 4451C, successful portfolio review, or C.I. Advanced techniques of narrative in Visual Language employed in story production focusing on advancing a narrative and evolving emotion. Spring.

DIG 4451C CAH-SVAD 3(1,4) Visual Storytelling and Visual Development Workshop: PR: DIG 3433C and successful portfolio review, or C.I. Conceptual and technical aspects of scripting, image processing, 3D/2D data acquisition while practicing the use of generators, fillets, particles, masks, and audio into digital projects. Spring.

DIG 4455 CAH-SVAD 3(0,0) Interactive Performance II: PR: DIG 3450C or C.I. Continuation of Interactive Performance I, with focus on the integration of new technologies, audience participation, technology, and story structure. Spring.

DIG 4486C CAH-SVAD 3(1,4) Visual Language of Moving Image I: PR: DIG 3433C, successful portfolio review, or C.I. Application of techniques taught to design, create, and refine visual production, story board, story reel, character design, and animation that expresses a narrative for digital production. Fall.

DIG 4503 CAH-SVAD 3(0,0) Rapid Application Web Development: PR: DIG 3134 and DIG 3176C. Asynchronous web development using current server-side and client-side scripting techniques and database technologies. Spring.

DIG 4526 CAH-SVAD 3(0,0) Digital Media Production II: PR: DIG 3952 and a minimum grade of "B" (3.0) or better in DIG 2000. Management and execution of large digital media projects, using structured methods and tools learned in Digital Media Production I. Fall, Spring.

DIG 4530C CAH-SVAD 3(2,2) Media for e-Commerce: PR: DIG 3134C and DIG 3716C. The applications of server-side internet programming languages and media theory to e-commerce, internet security, and online portals. Fall, Spring.

DIG 4624C CAH-SVAD 3(1,4) Digital Production in Artificial Environments: PR: DIG 4359C, successful portfolio review, or C.I. Application of techniques to continue building artificial environments and effects, addressing lighting, continuity, movement, theme and mood to help express a narrative for digital production. Fall.


DIG 4693C CAH-SVAD 3(2,2) Animation Workshop: PR: DIG 3134C or C.I. Advanced programming techniques for a variety of web-based applications using ActionScript, including dynamic and input text, variables, physics, artificial intelligence, collision detection, user interaction, and animation. Spring.

DIG 4704 CAH-SVAD 3(3,0) Interactive Entertainment: PR: DIG 3525 or C.I. Ways to apply diverse skills of film making to digital media, non-linear story telling, virtual reality, video games and non-traditional education and military simulation. Fall, Spring.

DIG 4713 CAH-SVAD 3(3,0) Game Design: PR: DIG 3024, DIG 3525 and declared Game Design Track. Principles and theories of video game design, including software, content, interaction, and game play design. Project based. Fall, Spring.

DIG 4715C CAH-SVAD 3(2,2) Game Production: PR: A minimum grade of "B" (3.0) in DIG 4713 and a satisfactory portfolio review. Principles and theories of video game production, including project planning, scripting, 3D modeling and texturing, level design, and audio. Project based. Fall, Spring.

DIG 4720C CAH-SVAD 3(2,2) Casual Game Production: PR: DIG 2500, a minimum grade of "B" (3.0) in DIG 4713, and a satisfactory portfolio review. Students will learn to design and implement casual video games using professional tools and iterative design techniques. Fall, Spring.
DIG 4725C CAH-SVAD 3(2,2) Game Design Workshop: PR: DIG 4715C, FL 3720G, a minimum grade of “B” (3.0) in DIG 4713, and a satisfactory portfolio review. Students will learn to design and implement video games using professional tools and iterative design techniques. May be used in the degree program a maximum of 4 times. Fall, Spring.


DIG 4855 CAH-SVAD 3(3,0) Converging Media Capstone: PR: CEB 3301 Cornerstone and 12 hours of restrictive electives within the VPA Communication, Media, and Technology Track. Team based converging media projects leading to a capstone project that emphasizes creative thinking, prototyping, development, marketing and assessment paralleling the business world. Even Fall, Even Spring.

DIG 5045C CAH-FIEA 3(1,3) Principles of Interactive Entertainment I: PR: Admission to Digital Media MS program or C.I. Interactive digital content creation technologies and development processes. Fall.

DIG 5046C CAH-FIEA 3(1,3) Principles of Interactive Entertainment II: PR: DIG 5045C or C.I. Advanced principles of interactive digital content creation technologies and development processes. Fall.

DIG 5137 CAH-SVAD 3(3,0) Information Architecture: PR: Film and digital media majors or C.I. Exploration of the process of formal design of interactive processes, examining the theories of usability and object oriented design. Fall.

DIG 5348CAH-FIEA 3(1,3) Digital Asset Creation: PR: Admission to FIEA MS in Interactive Entertainment program or C.I. Introduction to digital asset creation fundamentals, including figure drawing, digital painting, 3d modeling, animation, character setup, technical art and contemporary game engine topics. Fall.

DIG 5366C CAH-SVAD 3(1,2) Animation and Visual Effects Production II: PR: DIG 5366C Animation and Visual Effects Production I or C.I. Topics in animation and visual effects project creation and production pipeline management in a team environment. Spring.

DIG 5378C CAH-FIEA 3(1,2) Editing for Animation and Visual Effects: Theory and Production: PR: Emerging Media MFA - Animation and Visual Effects track student or C.I. Exploration of history and grammar of editing will be examined, adapted and applied to the specific needs of narrative animation and live-action visual effects. Spring.


DIG 5386C CAH-SVAD 3(1,2) Animation and Visual Effects Production I: PR: Emerging Media MFA - Animation and Visual Effects track student or C.I. Production of a short animated or visual effects concept to completion with the focus on working as an individual to meet deadlines. Fall.

DIG 5387C CAH-SVAD 3(1,2) Visual Development and Design for Animation and Visual Effects: PR: Emerging Media MFA - Animation and Visual Effects track student or C.I. Design concepts are applied to animation environments to create a "personality of place", visual continuity, and to create the visual universe of the story. Spring.
EAS 4105  ECS-MECH/AERO  3(3,0)  Flight Mechanics: PR: EAS 3101; CR: EML 4225. Analysis and design of aircraft performance, static and dynamic stability and automatic control systems. Fall.

EAS 4134  ECS-MECH/AERO  3(3,0)  Highbri...r systems, structural instability, flight control effectiveness, lift effectiveness, divergence, dynamic aerelasticity, flutter and vibration. Occasional.

EAS 5302  ECS-MECH/AERO  3(3,0)  Direct Energy Conversion: PR: EML 4501C; or EML 4501C. Application of the detailed process to aerospace vehicles. A system approach will be emphasized. Techniques for optimizing interface requirements will be covered. Occasional.

ECM 4504  ECE-ECO  4(3,3)  Embedded Computer Systems: PR: EEL 4851C, EEL 4853C; Computer Applications in Systems role, sensor and actuator interfacing, Design projects, including problem statements and specifications, design methodology, implementation, testing, and documentation. Occasional.

ECO 2013  BA-ECON  3(3,0)  Principles of Macroeconomics: An introduction to macroeconomics, including an overview of the market economy, national income, employment, and price level determination, stabilization policies, and international economics. Fall, Spring.

ECO 2023  BA-ECON  3(3,0)  Principles of Microeconomics: The determination of prices in a market economy; their role in allocating consumer and producer goods and in distributing incomes, including attempts to improve market efficiency through public policy. Fall, Spring.

ECO 2023H  BA-ECON  3(3,0)  Honors Principles of Economics: PR: Permission of Honors. Same as ECO 2013 with honors-level content. Fall, Spring.

ECO 3070  BA-ECON  1(1,0)  Tutoring/Teaching Techniques for Undergraduate Economics: PR: Satisfactory completion of same course the student is tutoring. Preparing undergraduate students to more effectively learn economics concepts through tutoring/teaching. Graded S/U. May be used in the degree program a maximum of 4 times. Fall, Spring.

ECO 3101  BA-ECON  3(3,0)  Intermediate Microeconomics: PR: ECO 212; ECO 2023 and ECO 3401. Theoretical study of the behavior of households, firms, and the markets in which they operate with issues and applications. Fall, Spring.


ECO 3205  BA-ECON  3(3,0)  Monetary and Banking: PR: ECO 2013. Nature of money, commercial banking system, and monetary theory, and their relationship to the level of economic activity and activities of the Federal Reserve and U.S. Treasury. Fall.

ECO 3401  BA-ECON  3(3,0)  Quantitative Business Tools I: PR: MAC 1105C or a "C" (2.0) or better. Introduction to mathematical and statistical analysis of economics and business problems. Fall, Spring.

ECO 3410  BA-ECON  3(3,0)  Mathematical Economics: PR: ECO 3101. Mathematical methods with particular focus on microeconomics foundations of individual decision-making. Spring.

ECO 3411  BA-ECON  3(3,0)  Quantitative Business Tools II: PR: ECO 3401 with a grade of "C" (2.0) or better. The use of statistical methods as scientific tools in the analysis of economics and business problems. Fall, Spring.

ECO 3703  BA-ECON  3(3,0)  International Microeconomics: PR: ECO 3101. Fundamental principles of Classical and Neoclassical international trade theories, as well as trade’s impact on global resource flows and the impact of trade on the developing world. Trade policy both in theory and practice is also examined. Fall.


ECO 4400  BA-ECON  3(3,0)  Game Theory and Economics: PR: ECO 3101. A study of the strategic decision-making of parties having opposed, mixed, or similar interests. Fall.

ECO 4412  BA-ECON  3(3,0)  Econometrics I: PR: ECO 2013. ECO 2023 and ECO 3411. Students will study the linear regression model, first developing the theory and then applying it to data Fall.

ECO 4422  BA-ECON  3(3,0)  Econometrics II: PR: Econometrics I Building on the linear regression model, students will study generalized linear models, first developing the theory and then applying it to data. Spring.

ECO 4443  BA-ECON  3(3,0)  Introduction to Business Analytics: PR: Mathematical Economics, Econometrics I and Econometrics II Students are introduced to important tools of business analytics; first, UNIX, SQLite, and Python; then analyzing data using R and implementing numerical methods using Python. Fall.

ECO 4504  BA-ECON  3(3,0)  Public Economics: PR: ECO 3101. A study of fiscal Institutions and decision-making, and how government budgetary policy (spending, taxing, borrowing, and debt management) affects the economy and its citizens. Spring.

ECO 4713  BA-ECON  3(3,0)  International Macroeconomics: PR: ECO 3101 or ECO 3203 or ECO 3223. International macroeconomics with review and analysis of current international macroeconomics, financial issues, policies and events. Spring.

ECO 4751  BA-ECON  3(3,0)  Law and Economics: PR: ECO 2013 and ECO 2023. Impact of law on economic behavior; how economic behavior changes with legal rules and penalties; and the economic logic underlying the law. Occasional.
Course Descriptions

ECP 4703 BA-ECON 1(1,0) Capstone in Economics: PR: ECO 3101, ECO 3305, ECO 3411, Senior Standing, Economics Major. Students use critical thinking and written communication to integrate and apply material learned in economics courses to economics problem and policies. Graded S/U. Fall, Spring.

ECP 4934 BA-ECON 3(3,0) Topics in Econometrics: PR: ECO 4412. Emphasis on international topics in linear and nonlinear econometric models. Spring.

ECO 4941 BA-ECON 3(3,0) Economics Internship: PR: Consent of department chair, ECO 3101, and ECO 3303. Supervised economics-related work experience in a pre-approved sponsoring organization. See department for information/application. Graded S/U. Fall, Spring.

ECO 5445 BA-ECON 3(3,0) Introduction to Business Analytics: PR: Admission to the Master's in Economics or C.I. Students are introduced to important tools of business analytics; first, UNIX, SQLite, and Python; then analyzing data using R and implementing numerical methods using Python. Fall.

ECP 3004 BA-ECON 3(3,0) Seminar on Current Economic Topics: PR: ECO 3101. Content may include, but is not limited to, the analysis of current economic issues and policy, and the study of current economic methods and theories. May be used in the degree program a maximum of 1 times. Occasional.

ECP 3006 BA-ECON 3(3,0) Economics of Sports: PR: ECO 2023. Microeconomics is used to evaluate and analyze the business aspects of sports including the structure and conduct of sports leagues, revenue sharing and other forms of cooperation, labor markets and compensation for professional athletes, public financing of sport facilities, and sports in the non-profit sector. Fall.

ECP 3203 BA-ECON 3(3,0) Labor Economics: PR: ECO 3101 or ECP 4703. The analysis of labor problems and issues in a dynamic contemporary economy through the interaction of the four major institutional sectors: households, firms, government, and unions. Fall, Spring.


ECP 4303 BA-ECON 3(3,0) Environmental and Natural Resource Economics: PR: ECO 3101. Provide fundamental insights into the interdependence between energy use, environmental quality, and the economy at both the microeconomic and macroeconomic level. Fall.

ECP 4403 BA-ECON 3(3,0) Industrial Organization: PR: ECO 3101. A study of the performance of industries representative of various types of market structure and practices, as well as the public policies affecting these industries. Fall.

ECP 4530 BA-ECON 3(3,0) Health Economics: PR: ECO 3101. Analysis of the market for health and the derived market for health care using intermediate micro-economic modeling. Fall.

ECP 4703 BA-ECON 3(3,0) Managerial Economics: PR: Admission to the Integrated Business Major. Applies economic theory, principles, and techniques to business decision making. Students improve critical thinking skills and learn analytical tools needed to address key business issues. Fall, Spring.


ECS 3062 ED-CFCS 3(3,0) Professional Roles of the Career & Technical Teacher: PR: ECT 3365 or C.I. Internship into career and technical education teaching and the transition from industry to education. Occasional.

ECS 3365 ED-CFCS 3(3,0) General Methods/Testing Evaluation in Career & Technical Education: General teaching methods, testing and evaluation. Techniques specific to Career & Technical Education and Industry Training. Fall.

ECS 3367 ED-CFCS 3(3,0) Evaluation of Career & Technical Education Instruction: PR: ECT 3365 or C.I. Assessing student cognitive, affective, and psychomotor performance in the technical environment. Spring.

ECS 3371 ED-CFCS 3(3,0) Course Construction in Industrial Education: PR: ECT 3365 or C.I. Planning and preparing instructional materials, organizing and managing the Industrial Education laboratory, and involvement in VICA. Occasional.

ECS 4004 ED-CFCS 3(3,0) Principles and Practices of Technical Education: PR: ECT 3365 or C.I. Integrating historical principles, career structure, and current trends in technical education. Fall.

ECS 4184 ED-CFCS 3(3,0) Curriculum Development Techniques for Industry Training: The practical application of fundamental knowledge, important skills, alternative analysis methods, and the critical elements of the trainers analysis tasks. Spring.

ECS 4384 ED-CFCS 3(3,0) Advancing Teaching Techniques for Career Education: PR: ECT 3365 or C.I. Developing techniques including cooperative learning, simulation, instructional modeling, and evaluation of instructional effectiveness. Fall.

ECS 4815 ED-CFCS 3(3,0) Safety in the Technical Education Classroom and Laboratory: PR: ECT 3365 or C.I. Federal regulations, safety practices, guidance, and support materials for technical trainers and teachers in school and industrial settings. Occasional.

ECW 3312 ED-CFCS 3(3,0) Course Construction in Health Occupations Education: PR: ECT 3365 or C.I. Planning and preparation of materials, managing the laboratory and involvement in appropriate Vocational Student Organizations. Clinical instruction related to vocational education and industry training. Occasional.

ECW 3564 ED-CFCS 3(3,0) Special Populations in Career & Technical Education: PR: ECT 3365 or C.I. Overview of strategies and resources in meeting the needs of special populations in career and technical education settings. Spring.

ECW 5207 ED-CFCS 2-4(2-4) Management of Vocational Programs: PR: Rank III Certificate or C.I. Study and achievement of selected competencies needed by vocational teachers, supervisors, and local administrators in the management of vocational education programs in the schools. Occasional.

ECW 5265 ED-CFCS 2-4(2-4) Cooperative Programs in Vocational Education: PR: Regular Certificate or C.I. Study of cooperative vocational programs and achievement of competencies needed to establish, manage, and coordinate co-op program activities in all vocational areas. Occasional.

ECW 5561 ED-CFCS 2-3(2-3) Student Guidance in the Vocational Program: PR: Basic Teacher Certificate or C.I. Achievement of skills used by teachers as they gather student data, confer with students, and help students plan for employment or further education. Occasional.
EDG 2801 ED-TL&L 3(3,0) Global Perspectives on Education: National systems of education from a global perspective and exposure to the global and international challenges facing educators in the new millennium. Fall.

EDF 3120 ED-TL&L 3(3,0) Observing Child Growth and Development: PR: Admission to the program. Provides a comprehensive introduction to the principles and basic theories of child growth and development from pre-natal development through age eight. Fall,Odd Spring.

EDF 3601 ED-TL&L 3(3,0) Professional Ethics in Education: Pedagogical knowledge, awareness of educational process and the analytical skills necessary for responsible public involvement in educational policy making. Fall, Spring.

EDF 4466 ED-E&HS 3(3,0) Classroom Assessment & Evaluation Techniques: PR: Completion of Internship I or C.I. Classroom measurement skills in designing traditional and alternative assessments, using results for student evaluation and instructor performance, and interpretation of standardized test results. Fall, Spring.


EDF 4467H ED-TL&L 3(3,0) Honors Learning Theory and Assessment: PR: C/I. Application of learning theory and assessment principles to classroom teaching situations using a case study design, teacher work samples, and a theoretical conceptual debate. Fifteen hour in-school experience required. Even Fall.

EDF 4603 ED-TL&L 3(3,0) Analysis and Application of Ethical, Legal, and Safety Issues in Schools: PR: EDF 2005, EDF 2085, EME 2040 or C/I. Critical analysis of contemporary educational issues, including ethical, safety, legal, cultural, and linguistic considerations which directly impact schooling in a democracy. Fall, Spring.

EDF 4603H ED-TL&L 3(3,0) Honors Analysis and Application of Ethical, Legal, and Safety Issues in Schools: PR: Consent of Honors. Critical analysis of contemporary educational issues, including ethical, safety, legal, cultural, and linguistic considerations which directly impact schooling in a democracy with Honors content. Fall.

EDF 5607 ED-TL&L 3(3,0) Language, Culture and Pedagogy: Impact and Implications: PR: C/I. Explores in-depth issues surrounding learning needs of students from linguistically and culturally diverse populations. Research on language, culture and pedagogy will be highlighted. Occasional.

EDG 2311 ED-TL&L 3(3,0) Teaching Strategies for Substitute Teachers: Planning, adapting and implementing effective instructional practices and assessing student performance in K-12 settings with diverse populations. Fall, Spring.

EDG 4410 ED-TL&L 3(3,0) Teaching Strategies and Classroom Management: PR: EDF 2005, EDF 2085, EME 2040, or C/I. Instructional, organizational and classroom management strategies to create effective learning environments. Fifteen hour in-school experience required. Fall, Spring.

EDG 4941 ED-TL&L 1-8(0,1-8) Directed Field Experience: PR: Approval of Professional Laboratory. Field experience in an appropriate educational setting under the direction of a supervising teacher and/or university supervisor. Occasional.

EDG 4948 ED-TL&L 3(3,0) Service Learning: PR: PSY 2012 or C/I. Involvement with not-for-profit agencies and/or schools to gain a new perspective on community engagement. May be repeated for credit. Fall, Spring.

EDG 4954 ED-TL&L 3(3,0) International Education Field Experiences: PR: Junior standing or C/I. A guided field experience for students participating in a study abroad program. Students gain insights into international and local issues through educational and cultural experiences. Fall, Spring.

EDG 5356 ED-TL&L 3(3,0) Instructional Coaching: PR: Graduate standing or C/I. This course will prepare educators to become instructional coaches, developing skills and methods to impact student achievement by influencing teachers’ instructional practices. Occasional.

EDG 5745 ED-TL&L 3(3,0) Teaching the Non-English Student: PR: C/I. Bilingual and non-linguistic instruction in curriculum areas in English as a second language. Occasional.

EDG 5941 ED-TL&L 2-9(0,11) Clinical Practice: PR: Admission to II or IV. Clinical Internship in an appropriate educational setting under the direction of a university supervisor or peer teacher. Occasional.

EDP 2270 ED-TL&L 3(3,0) Adult Development & Learning: An examination of theories and research on adult learning and development with emphasis on practical written, instruction, and technology use in educational and workplace settings. Fall, Spring.

EDS 5356 ED-TL&L 3(2,1) Mentoring and Clinical Supervision of Pre-professional Educators: PR: C/I. The practical application of coaching and mentoring practices that satisfy the standards of clinical supervision and assures attainment of the Florida Educator Accomplished Practices. Fall, Spring.

ECC 2732 ED-CFCS 3(3,0) Health, Safety, and Nutrition for Young Children: Health, safety and legal issues in early childhood (6-8) including protection from injury and infection; promotion of healthy development, good nutrition, and appropriate health and fitness habits. Spring.

ECC 3008 ED-CFCS 3(3,0) Early Childhood Children’s Literature: PR: Admission into Early Childhood Development and Education Program -Track 2. A study of literature written for children ages birth through kindergarten, including an introduction to genres, authors and illustrators of children’s books. Spring.

ECC 3214 ED-CFCS 3(3,0) Child Development: PR: Admission to the Early Childhood Development Program -Track 2. Provides pre-service early childhood professionals with an overview of theories and research related to early childhood development (Birth-Age 8). Fall, Spring.

ECC 3613 ED-CFCS 3(3,0) Observation and Assessment of Young Children: PR: Admission to the program. Appropriate methods for diagnosing, assessing, and evaluating young children, including children with diverse cultural and ethnic backgrounds. Appropriate interventions, remediations, and enrichment. Occasional.

ECC 3700 ED-CFCS 3(3,0) Social and Emotional Development of Young Children: Provides an in-depth understanding of the social and emotional development of the young child. Examines the implications for curriculum development. Occasional.

ECC 4207 ED-CFCS 3(3,0) Assessment and Evaluation of Young Children: PR: Admission to the Early Childhood Program and ECC 3700. Early childhood education and services for young children and families. Includes early childhood historical, philosophical, and sociological perspectives, learning theories and field-based experiences. Fall.

ECC 4211 ED-CFCS 3(3,0) Science and Math Learning for Young Children: PR: Admission into Early Childhood Development and Education Program (Track 3). ECC 3303, and ECC 4528. Methodologies for teaching and assessing young children in mathematics and science and skills through an integrated developmentally appropriate program. Fall.

ECC 4235C ED-CFCS 3(2,1) Early Childhood Education Seminar: Bridging Theory to Practice: PR: TSL 4240, ECC 4268, EXA 4300 and completion of semester II in the junior year. Corequisites: MAE 4300, RED 4311, SCE 4304. Seminar course which combines coursework, research, and practical Fall, Spring.

ECC 4260 ED-CFCS 3(3,0) Early Childhood Program Evaluation: PR: Admission to Early Childhood Development and Education Program (Track 3). ECC 4303, and ECC 4528. Formal and informal evaluation theories, methods and tools for implementing comprehensive evaluations of early childhood programs and policies and how they impact the programs’ stakeholders. Fall.

ECC 4268 ED-CFCS 3(3,0) Curriculum Activities in Early Childhood: PR: Admission to Early Childhood Education Program. An integrated approach to curriculum planning and scheduling including materials, strategies and environments for young children which emphasize active learning. Fall, Spring.

ECC 4303 ED-CFCS 3(3,0) Planning Creative Activities in Early Childhood Education: PR: Admission into Early Childhood Development and Education Program or C/I. Instructional methods for teaching skills to young children in PK-3rd grade. Hands-on creative play activities involve dance, music, theatre, visual arts, science, math, and literature. Occasional.

ECC 4314 ED-CFCS 3(3,0) Effective Practices for Guiding Young Children’s Behavior: PR: Admission into Early Childhood Development and Education Program (Track 3). ECC 4303, and ECC 4528. Techniques to guide behavior of young children emphasizing classroom management, routines, and pro-social skills. Spring.

ECC 4402 ED-CFCS 3(3,0) Cultural and Family Systems: Explores the institution of family in its cultural context as a living dynamic system. Occasional.

ECC 4414 ED-CFCS 3(3,0) Child-Parent-Child Relations: PR: ECC 3700; ECC 4661; or C/I. Review of research on child-rearing and parent-child relationships using case studies to explore influences of personality, developmental stages, family structure, ethnic and cultural factors on parenting. Fall, Spring.

ECC 4524 ED-CFCS 3(3,0) Organization and Management in Early Childhood: Provides students with managerial and supervisory skills required to administer a developmentally appropriate early childhood program. Occasional.

ECC 4528 ED-CFCS 3(3,0) Infant/Toddler Care and Education: Provides the knowledge and skills that will enable the student to become a competent worker with very young children and their families. Occasional.


ECC 4661 ED-CFCS 3(3,0) Early Childhood Education Theory and Practice: PR: Admission to Early Childhood Program. Study of early childhood education and services for young children and families. Includes early childhood historical, philosophical, and sociological perspectives, learning theories and field-based experiences. Fall, Spring.
EEL 4294  (3.0)
Computer Organization: PR: EGN 3211 and EEE 3342C both with grades of "C" (2.0) or better. Computer arithmetic, instruction set architecture, performance, data path, control unit, memory hierarchy, I/O interface. Fall, Spring.

EEL 3926L  (1.0)
Junior Design: CR: EEE 3307C and EEL 4742C Preparatory talk is developed for VAP Senior Design. Engineering design requirements specifications, test equipment utilization, microcontroller development tool usage, schematic capture and PCB design tools. Fall, Spring.

EEL 4140C  (3.3)
Analog Filter Design: PR: EEL 3123C with a grade of "C" (2.0) or better. Passive and active analog filter design. Fall. M & S fee $15.00

EEL 4205  (3.0)
Electrical Machinery: PR: EEL 3004C with a grade of "C" (2.0) or better. Fundamentals of DC and AC electric machines. Fall.

EEL 4216  (3.0)
Fundamentals of Electric Power Systems: PR: EEL 3004C with a grade of "C" (2.0) or better. Three-phase power representation and analysis, transformers, per unit system, symmetrical components, faults, and transmission lines. Fall.

EEL 4204  (3.0)
Introduction to Smart Grid: PR: (EEE 3307C and EEL 3657) or EEL 216 or C.I. Fundamentals of electric power systems, distributed generation and smart grid components, voltage control and VAR compensation, demand response, leader-follower optimization, resiliency. Fall, Spring.

EEL 4362  (3.0)
Post-CMOS Devices and Circuits: PR: EEL 3342C with a grade of "C" (2.0) or better and EEE 3307C. Post-CMOS device designs for next-generation energy efficient memory and logic designs. Fall.

EEL 4436C  (4.0)
Microwave Engineering: PR: EEL 3470 Transmission line theory, Smith charts, S-parameters, simple impedance matching circuits, wave guides, resonators, basic microwave measurements. May be repeated for credit. Fall. M & S fee $35.00

EEL 4440  (3.0)
Optical Engineering: PR: EEL 3470 or C.I. Lens systems, aberrations, sources, radiometry, detectors, physical optics, optical devices, applications to engineering design problems. Fall.

EEL 4515C  (4.0)

EEL 4518  (3.0)
Satellite Communications: PR: EEL 3552C. The principles of satellite communications, including communications satellites, Earth stations, line analysis, FDM and TDMA. May be repeated for credit. Fall.

EEL 4612C  (4.0)

EEL 4635C  (4.0)
Computer Control Systems: PR: EEL 3557. Discrete control systems, z-transform, and single loop computer control systems. Digital simulation in the analysis and design of processes with embedded computers. No graduate credit for both EEL 5630 and this course.

EEL 4660  (3.0)
Robotic Systems: PR: EEL 4600C or EEL 4742C or COP 3550C. Team based development of a robotic system incorporating vision sensors such as sensing, computer vision, machine learning, localization, mapping, manipulation and locomotion. Spring.

EEL 4742C  (3.2)
Embedded Systems: PR: EEL 3801C with a grade of "C" (2.0) or better. Microcontroller systems, assembly language programming, data representation, memory and device interfacing, timing analysis, parallel and serial communication, timers, interrupts, signal interfacing considerations, and applications. Fall, Spring. M & S fee $15.00

EEL 4750  (3.0)
Digital Signal Processing Fundamentals: PR: EEL 3801C with a grade of "C" (2.0) or better. Study of discrete-time signals and systems, Z-transform, DFT introduction to digital filter design. Fall, Spring.

EEL 4768  (3.0)
Computer Architecture: PR: EEL 3801C or CIA 3103C with a grade of "C" (2.0) or better. Computer systems performance and evaluation, processor datapath and control, microprogrammed instruction sets, arithmetic and arithmetic pipelines, cache and virtual memory, and RISC vs. CISC. Fall, Spring.

EEL 4781  (3.0)

EEL 4803  (3.0)
Hardware Description Languages in Digital Systems Design: PR: EEL 3543C with a grade of "C" (2.0) or better. Hardware description languages, simulation and synthesis of RTL circuits and systems, design examples and projects. Fall, Spring.

EEL 4798  (3.0)
Massive Storage and Big Data: PR: EEL 3801C or CIA 3103C. Fundamentals in big data architecture and its enabling file storage systems Infrastructure such as MapReduce and storage, with a focus on system architecture, file storage, programming models, application development and performance evaluation. Spring.

EEL 4817H  (3.0)
Honors Current Topics in Machine Learning II: PR: Consent of Honors and EEL 4818H. Research topics in Machine Learning. Students will be assigned a research project and a faculty mentor who will supervise this project. Spring.

EEL 4818H  (3.0)
Honors Current Topics in Machine Learning I: PR: Consent of Honors and EEL 3801B with a grade of "C" (2.0) or better or COP 3224C with a grade of "C" (2.0) or better or STA 3032 or C.I. Machine Learning and Applications. ART Neural Networks, Genetic Algorithms, Decision Trees, Evolutionary Hardware, Evolutionary Neural Networks, and Reinforcement Learning. Fall.

EEL 4832  (3.0)
Engineering Applications of Computer Methods: PR: EEL 3123C and EGN 3211 both with a grade of "C" (2.0) or better. Engineering applications of numerical methods, including solution of differential equations, simulation, optimization, and multidimensional root-finding, integration and series approximations. Fall, Spring.

EEL 4851C  (4.0)
Engineering Data Structures: PR: EEL 3801C with a grade of "C" (2.0) or better. Design of data structures and algorithms, with emphasis on performance analysis, memory management, stacks, queues, linked lists, trees, graphs, searches, and sorts. Introduction to object-oriented structures. Fall.
EEL 5291 ECS-ECE Distributed Control and Optimization for Small Grids: PR: EEL 3657 and EEL 4216 or C.I. Electric power systems, transmission and distribution networks, voltage stability and VAR control, dispatch of distributed generation, optimization, frequency control, electricity markets and incentive controls. Even Fall.

EEL 5435 ECS-ECE Satellites and Remote Sensing: PR: EEL 3470 or EEL 3432. Fundamentals of satellite remote sensing, orbits and geometry, radiative transfer theory, microwave and infrared remote sensing techniques, ocean, ice and atmosphere geophysical measurements. Occasional.

EEL 5437C ECS-ECE Microwave Engineering: PR: EEL 3470 or C.I. Transmission line theory, Smith charts, S-parameters, simple impedance matching circuits, wave guides, resonators, basic microwave measurements. Fall. M.S. fee $40.00

EEL 5439C ECS-ECE RF and Microwave Communications: PR: EEL 4436C or equivalent. RF and microwave active circuits, microstrip amplifier, oscillator, and mixer design and fabrication. Radio design, noise, familiarity with network and spectrum analyzers. Spring. M.S. fee $40.00


EEL 5592 ECS-ECE Fundamentals of Wireless Communications: PR: EEL 4515C and EEL 3021 Introduction to Randomness Large and small scale radio propagation effects, performance of digital modulation over wireless channels, capacity analysis of wireless channels, signal processing techniques to mitigate fading effects and improve performance of wireless systems (diversity techniques, reactive modulation, multiple antenna and MIMO systems). Even Spring.

EEL 5625 ECS-MECH/AERO Applied Control Systems: PR: C.I. Designed to develop basic understanding of advanced control methods for nonlinear systems described by ordinary and partial differential equations and to expose recent results and ongoing research issues in the area of MEMS. Occasional.


EEL 5669 ECS-ECE Introduction to Robotics and Autonomous Vehicles: PR: EEL 5173 or C.I. Forward and inverse kinematics, velocity kinematics, dynamics, constrained motions, path and trajectory planning, position and trajectory control, single and multivariable control, introduction to force/impedance control, introduction to consensus-based control. Fall.

EEL 5690 ECS-ECE Introduction to Medical Robotics and Tele-Operation: PR: EEL 3657 or Medical students in their second year or later. Medical robots for minimally invasive surgery, kinematics, constrained workspace and dexterity, haptic interaction and network based control, basics of laparoscopic surgery. Occasional.


EEL 5706 ECS-ECE Resilient Computer System Design: PR: EEL 4768 or CDA 5106 or EEL 5708, or C.I. Advanced concepts in hardware/software fault tolerance: fault models, coding in computer systems, module and system level fault detection mechanisms, such as TMR, rollback, and recovery. Occasional.

EEL 5722C ECS-ECE Field-Programmable Gate Array (FPGA) Design: PR: ECE 3432C with a “C” (2.0) or better grade. FPGA architectures, design flow, technology mapping, placement, routing, reconfigurable computing applications, and evolvable hardware. Even Fall.


EEL 5780 ECS-ECE Wireless Networks: PR: EEL 4781 or C.I. The wireless networking topics include: cellular networks, multiple access protocols, channel assignment and resource allocation, mobility and location management, handoffs, routing, authentication, call admission control and QoS provisioning for layer issues, wireless data networking (WAP, GSM, GPRS, CDMA, WCDMA). Even Spring.

EEL 5796 ECS-ECE Big Data Computer Architecture and Systems: PR: EEL 4768 or CFGS 3763 or C.I. Computer hardware architecture and operating systems design, implementation and administrative techniques for big data computing platforms which run applications to analyze datasets of massive size and dimensionality. Even Fall. Odd Spring.

EEL 5820 ECS-ECE Image Processing: PR: MAP 2302, EEL 4750 or C.I. Two-dimensional signal processing techniques; pictorial image representation; spatial filtering, image enhancement and encoding; segmentation and feature extraction; introduction to image understanding techniques. Odd Spring.

EEL 5825 ECS-ECE Pattern Recognition: PR: EEL 4750 or C.I. Preliminaries on pattern recognition, Bayesian Decision Theory, linear discriminant functions, Neural Network approaches, decision tree classifiers, unsupervised learning and clustering, non-parametric techniques, and other topics reflecting the state-of-the-art. Occasional.


EEL 5874 ECS-ECE Expert Systems and Knowledge Engineering: PR: EEL 4652C or C.I. Introduction to expert systems in engineering. Expert systems tools and interviewing techniques. This course is hands-on and project oriented. Spring.

EEL 5881 ECS-ECE Software Engineering I: PR: COP 4331C or C.I. Design, implementation, and testing of computer software for Engineering applications. Fall. Spring.

EEL 5936 ECS-ECE Current Topics in EEECS: PR: Open to all EEECS graduate students. Lectures presented by EEECS and national lecturers will provide our students a broad view of the state of the art EE and CE fields. Graded S/U. Occasional.

EEL 5937 ECS-ECE Advanced Bioelectronics Systems: PR: EEE 4303C or C.I. Advanced bioelectronics systems and techniques through recent biophysical and biomedical research will be discussed. Occasional.

EEL 5937 ECS-ECE Distributed Control and Optimization for Smart Grid: PR: EEL 3657 and EEL 4216 or C.I. Electric power systems, transmission and distribution networks, voltage stability and VAR control, dispatch of distributed generation, optimization, frequency control, electricity markets and incentive controls. Occasional.

EEL 5937 ECS-ECE Communications and Networking for Smart Grids: PR: EEL 4515C. Introduction to smart grid communication infrastructure, communication technologies in smart grid, communication networking in smart grid, communication for vehicle-to-grid systems, secure communication and networking. Occasional.

EES 4111C ECS-ECE Chemical Process Control: PR: ENV 3001 with a grade of “C” (2.0) or better. Engineering design, measurements and analysis of biological systems in environmental engineering for water management, bio-energy products, wastewater treatment, and others. Spring. M.S. fee $70.00

EES 4202C ECS-ECE Chemical Process Control: PR: CHM 2046 and ENV 3001 both with a grade of “C” (2.0) or better. Engineering design, measurements, and analysis of chemical systems in environmental engineering to control treatment processes such as softening, coagulation, disinfection, scrubbing, neutralization, and others. Fall. M.S. fee $60.00

EES 5318 ECS-ECE Industrial Ecology: PR: ENV 3001, ENV 4341. Discussion of similarities between ecological systems and industrial systems with the emphasis on material cycles, energy flow, pollution prevention, organizational structures, and environmental management. Occasional.

EEX 2090 ED-CFCS Exceptional Populations in School and Society: Characteristics of exceptionalities in school and society to increase student awareness and comfort levels with individuals with exceptionalities. Fall, Even Spring.

EEX 2758 ED-CFCS Enhancing Family Involvement in Education: Development of partnerships with families of students with disabilities and their communities to address the educational needs of all students. Fall, Spring.

EEX 3221 ED-CFCS Assessment of Exceptional Students: Formal and informal assessment techniques for screening, placement, program planning, program evaluation, and monitoring of progress of exceptional students. Fall, Spring.

EEX 3241 ED-CFCS Methods for Academic Skills for Exceptional Students: Pr: Admission to the CED or Admission to the ESE Minor. Teaching strategies, instructional materials, and monitoring techniques for children and adolescents with special needs. Must be taken before Internship I. Fall, Spring.


EEX 3450 ED-CFCS Young Children With Special Needs: Provides an overview of the unique field of early childhood special education, its mission, and approaches to helping young children and their families. Spring.


preparation of methods of interacting with community agencies, supporting and collaborating with families, including resultants of force systems, free-body diagrams, equilibrium of rigid bodies, and analyses of structures. Fall, Spring.

ECS 3310: Engineering Analysis-Statics: PR: MAC 2311C, PHY 2048C both with a grade of "C" (2.0) or better; CR: MAC 2312. Advanced treatment of material and additional topics, including project work. With Honors consent. Fall, Spring.

ECS 3321: Engineering Mechanics: PR: EGN 3310 with a grade of "C" (2.0) or better in both; CR: MAP 3202. Kinematics and kinetostics of particles and rigid bodies; mass and acceleration, work and energy, impulse and momentum, introduction to kinematics of mechanisms; introduction to 3D rigid body dynamics; central force. Fall, Spring.

ECS 3321H: Honors Engineering Analysis-Statics: PR: Permission of Honors and EGN 3310, MAC 2311C, PHY 2048C both with grades of "C" (2.0) or better; CR: MAC 2312. Advanced treatment of material and additional topics, including project work. With Honors consent. Fall, Spring.

ECS 3343: Engineering Thermodynamics: PR: "C" (2.0) or better in both MAC 2313 and EGN 3310; CR: MAP 3203. Work, heat, and energy transformations. Relation of properties, Laws, concepts, and modes of analysis common to all applications of thermodynamics in engineering. Fall, Spring.


ECS 3365: Structure and Properties of Materials: PR: (CHS 1440 or CHM 2045C) and MAC 2312 with grades of "C" (2.0) or better in both. Atomic structure and bonding, crystal structure and imperfections, solidification, phase transformations, phase diagrams, heat treatment, mechanical & electronic properties, materials characterization techniques. Fall, Spring.

ECS 3365H: Honors Structure and Properties of Materials: PR: MAC 2312, and (CHS 1440 or CHM 2045) with grades of "C" (2.0) or better in both; and consent of Honors. Atomic bonding; lattices; phonons; crystal structure; dislocation; defects; diffusion; phase equilibria and diagrams; transformations kinetics; mechanical, thermal, electrical, optical, and magnetic properties. With Honors consent. Spring.


ECS 3420: Engineering Analysis: PR: EGN 3211, and MAC 2312 with grades of "C" (2.0) or better. Engineering applications of numerical methods including curve fitting, matrix operations, root finding, interpolating, integration and plotting. Occasional.

ECS 3613: Industrial Engineering Analysis: PR: MAC 2312, and grades of "C" (2.0) or better. Economic evaluation of manufacturing alternatives and design. Time value of money and economic impact of taxes, risk, depreciation. Fall, Spring.

ECS 4060C: Introduction to Robotics: PR: CSE 3223 or ECS 3211; and EEL 3570E or EEE 4742 or ECS 3503C or ECS 3211 or EML 3217. Theory and application of robotics topics including: architecture, path planning, sensing and manipulation. Fall.

ECS 4641C: Entrepreneurship: PR: Senior standing, ENT 4183, or C.I. All aspects of a successful entrepreneurship enterprise. Content includes lectures, case studies, and seminars. Active student participation. Course material is augmented through seminars given by engineers, business people, and specialists, based on their own experiences. Occasional.

ECS 4931H: Honors Engineering Seminar: PR: Permission of Honors and Senior standing and C.I. Introduces a select group of students in engineering or other fields of science to the methodology commonly employed in research. Students will carry out independent research which will prepare them for graduate study. Occasional.

EED 1006C: Introduction to the Engineering Profession: PR: New students status or C.I. Overview of academic and professional requirements in various engineering disciplines. Fall.

EIG 1036C: Foundations of Leadership: PR: LEAD Scholars Program, Seminar for LEAD Scholars in the College of Engineering & Computer Science providing a foundation of leadership experience in an appropriate leadership setting with special needs. Fall, Spring.

EIN 3030: Leadership in Engineering I: PR: Junior standing in a CECS major. Leadership roles for engineers are presented by prominent professionals in industry and government. Graded S/U. Fall.
EIN 2002 Strategic Planning

ECS-ECS 3(3,0) Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions. Occasional.

ECS 4950 Engineering Leadership Capstone: PR: Enrolled in Engineering Leadership Minor or Certificate; CR: approved design course in Engineering or Computer Science. Students will reflect upon and define their professional approach. Students will develop their professional portfolio, concept of operations, and individual strategic plan. Fall, Spring.

ECS 4983 Engineering Innovation and Leadership: PR: Senior standing. A broad range of topics including corporate organizational structures, individual and team leadership, and techniques to enhance innovation and creativity. Spring.

ECS-ECS 3(3,0) Energy and Society: Investigation of available energy forms; energy resources versus requirements in an increasingly complex technological society; possible solutions and future predictions. Occasional.

ECS 4517 Engineering Systems Engineering: PR: STA 3032 with a grade of "C" (2.0) or better. Fundamental principles of systems engineering and their application to the development of industrial complex engineered systems. Fall, Spring.

ECS 4891C Industrial Engineering Senior Design Project: PR: EGS 4891 and EGS 4890 (Facilities Planning and Work Design) both with grades of "C" (2.0) or better and department consent. Capstone design course; application of industrial engineering principles to improve the quality and productivity of service industries such as restaurants, banks, hotels, health care, etc. Fall.

ECS 4890C Industrial Engineering Senior Design Project: PR: EGS 4891 and EGS 4890 (Facilities Planning and Work Design) both with grades of "C" (2.0) or better. Introduction to the field of Industrial Engineering and important skills necessary for success. Course includes presentations by local IE professionals. Fall.

ECS 3314 Work Analysis and Design: PR: STA 3032 with a grade of "C" (2.0) or better or C.I. Introduction to lean six sigma and analytic techniques for work systems in any organization. Various data collection and analysis methods utilized. Fall.

ECS-ECS 3(3,0) Principles of Cost Engineering: PR: EGN 3123. This course is to provide engineers from all disciplines the background for the cost estimation of engineering systems throughout the product life cycle. Fall.

EIN 4191C Engineering Leadership Seminar I: PR: Junior or senior standing with C.I. Progressive engineering leadership development (intrapersonal to interpersonal to organizational to community) via a combination of experiential and practical experiences in engineering-specific corporate and community settings. Fall.

EIN 4192C Engineering Leadership Seminar II: PR: EIN 4191C. Continuation of EIN 4191C. Spring.

ECS-ECS 3(3,0) Safety and Health Administration: Analysis of accidents in the industrial operating environment; identification of fault trees, OSHA requirements; Consideration of accident costs and organizational aspects of accident prevention. Occasional.

ECS 4243C Human Engineering: PR: STA 3032 with a grade of "C" (2.0) or better. Human/Machine Systems: design and conduct of human engineering studies. Spring.

ECS 4333 Production and Distribution Systems: PR: ESI 4312 with a grade of "C" (2.0) or better. Decision policies in manufacturing and logistics systems including forecasting, production planning, operations scheduling, deterministic and stochastic inventory control and project scheduling. Spring.

ECS 4346 Facilities Planning and Work Design: PR: STA 3032 with a grade of "C" (2.0) or better. Introduction to fundamental concepts in facility planning, material handling systems and work analysis/design including work space/flow analysis, layout, warehousing operations and work measurement. Fall.

ECS 4364 Facilities Planning and Work Design: PR: EIN 3314 with a grade of "C" (2.0) or better; or PR: CR: EIN 3351. Planning and design of production systems including interrelationships between process layouts, material handling, warehousing and site selection. Spring.

ECS 4391 Manufacturing Engineering: PR: Grade of "C" (2.0) or better in any of the following course options CHM 2045C or CHS 1440 or (CHM 2046 and CHM 2041); and Junior Standing. Introduction to manufacturing engineering, with emphasis on current and emerging technologies in metalworking and electronics. Fall, Spring.

ECS 4545 Industrial Engineering Applications in The Service Industries: PR: ESI 4312 with a grade of "C" (2.0) or better. Introduction to the field of Industrial Engineering and important skills necessary for success. Course includes presentations by local IE professionals. Fall.

ECS 5108 The Environment of Technical Organizations: PR: Graduate status or C.I. ECS 4024 recommended. Presentation and investigation into the principles required to transform technologists into managers focusing on engineers, scientists, and other professionals providing services in technically-oriented organizations. Fall.

ECS 5117 Management Information Systems I: PR: C.I. The design and implementation of computer-based Management Information Systems. Consideration is given to the organizational, managerial, and economic aspects of MIS. Spring.

ECS 5140 Project Engineering: PR: Graduate standing or C.I. Role of engineer in project management with emphasis on project life cycle, quantitative and qualitative methods of cost, schedule, and performance control. Fall, Spring.

ECS 5248C Ergonomics: PR: C.I. Applications of anthropometry, functional anatomy, mechanics, and physiology of musculoskeletal system concepts in the engineering design of industrial tools, equipment, and workstations. Fall.

ECS 5251 Usability Engineering: PR: STA 3032 or equivalent. Usability paradigms/principles; cognitive walk-throughs; heuristic; review-based, model-based, empirical and story-board evaluation; techniques; query techniques; laboratory techniques; and field study approaches. Spring.

ECS 5255C Interactive Simulation: PR: Graduate standing or C.I. Introduction to significant topics relative to the development and use of simulators for knowledge transfer in the technical environment. Fall.

ECS 5317 Training System Design: PR: Seniors, post bac or graduate standing or C.I. How human performance deficiencies should be addressed from a systems design point of view. Manpower, personnel, and training considerations will be examined. Occasional.

ECS-ECS 3(3,0) Cost Engineering: Cost estimation and control of engineering systems throughout the product life cycle. Occasional.


EMA 3012C Manufacturing Technology in Machines and Materials: PR: EGN 3365. EGM 3601. Materials characterization (optical and scanning electron microscopy, x-ray diffraction), heat treatment, mechanical testing (hardness, tensile, impact, etc.), Fall, Spring. M&S fee $45.00.

EMA 3124 Design and Selection of Materials: PR: EGM 3601, and EGM 3865 or EMA 3706. Relationship between processing, structure and properties of various engineering materials and their selection in engineering design. Fall.


EMA 3706 EMECH/AERO Structure and Properties of Aerospace Materials: PR: (CHS 1440 or CHM 2045C) and MAC 3312 with grades of "C" (2.0) or better in both. Atomic structure, bonding, crystal structures, solidification, phase transformations, heat treatment, mechanical behavior, specific aerospace materials, materials design Fall, Spring.

EMA 4102 Thermodynamics and Kinetics of Materials: PR: EGN 3443, EGN 3505 or EMA 3706, and a "C" (2.0) or better in all of the following: CHS 1440 or CHM 2045C, MAC 2311C, MAC 2312, MAC 2313, MAP 2302 and PHY 2048. Application of first, second and third laws of thermodynamics to materials, phase diagrams, statistical thermodynamics, kinetic processes in materials, diffusion, nucleation and growth, and phase transformations. Fall.


EMA 4503 ECS-MSE 3(3,0) Materials Characterization Techniques: PR: EMA 3012C, and EGN 3365 or EMA 3706. Theory and practice of common, used techniques for characterization of crystal structure, microstructure and chemistry. Occasional.

EMA 4506 ECS-MSE 3(3,0) Emerging Materials: PR: EGN 3365, or EMA 3706. Structure, properties and processing of modern emerging materials. Occasional.

EMA 5060 ECS-MSE 3(3,0) Polymer Science and Engineering: PR: EGN 3365. Structure and properties of polymers, preparation and processing of polymers, mechanical properties, use in manufacturing and high tech applications. Occasional.


EMA 5108 ECS-MSE 3(3,0) Surface Science: PR: PHY 2040C and C.I. Methods of chemical and physical analysis of surfaces, with emphasis on ultraviolet vacuum spectroscoics utilizing electron, ion and photon probes. Occasional.

EMA 5140 ECS-MSE 3(3,0) Introduction to Ceramic Materials: PR: EGN 3365. Uses, structure, physical and chemical properties, and processing of ceramic materials. Discussions will include recent developments for high technology applications. Occasional.


EMA 5415 ECS-MSE 3(3,0) Electronic Principles of Materials Properties: PR EGN 3365 or EMA 3706 or C.I. The course covers the fundamental concepts of bond structure and bonding of materials, electrical and thermal conduction in metals and semiconductors. Occasional.

EMA 5504 ECS-MSE 3(2,2) Modern Characterization of Materials: PR: EMA 5104 or C.I. Techniques and operation of instrumentation (light, scanning, transmission, and auger microscopy) for the characterization of structure, defects, composition, and surfaces. Occasional.

EMA 5505 ECS-MSE 3(2,2) Scanning Electron Microscopy: PR: EMA 5104 or C.I. A review of electron optics, beam/specimen interactions, image formation, X-ray analysis, specimen preparation, microelectronic applications and crystallography in the SEM. Occasional.


EMA 5585 ECS-MSE 3(3,0) Materials Science of Thin Films: PR: Graduate standing or C.I. Interaction of thin film processing techniques with the structure and properties of the materials deposited. Odd Fall.

EML 3034C ECS-MECH/AERO 3(1,1) Modeling Methods in Mechanical and Aerospace Engineering: PR: C.I. (2.0) or better in all of the following prerequisites: MAC 2311C, MAC 2312, MAC 2313, MAP 2302 and PHYS 2048C. CR: EGN 3321 and EAS 3933 or EML 3933. Computer aided modeling of mechanisms and aerospace systems. Solution methods. Curve fitting. Numerical calculus and solution of differential equations with applications to mechanical and aerospace engineering. Fall, Spring.

EML 3101 ECS-MECH/AERO 3(3,0) Thermodynamics of Mechanical Systems: PR: EGN 3321 and a "C" (2.0) or better in all of the following: MAC 2311C, MAC 2312, MAC 2313, MAP 2302 and PHYS 2048. Applied thermodynamics, availability analysis, thermodynamics of reactive and non-reactive mixtures, thermodynamic relations of properties. Thermodynamic design analysis of complete mechanical systems. Spring.

EML 3217 ECS-MECH/AERO 3(3,0) Engineering Mechanics - Dynamics: PR: MAC 2313 with a grade of "C" (2.0) or better, EGN 3310; CR: MAP 2302. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy, impulse and momentum, introduction to kinematics of mechanisms; introduction to 3D rigid body dynamics; central force. Fall, Spring.

EML 3262 ECS-MECH/AERO 3(3,0) Kinematics of Mechanisms: PR: EGN 3321 and a "C" (2.0) or better in all of the following: MAC 2311C, MAC 2312, MAC 2313, MAP 2302 and EGN 3343. Graphical, mathematical, and computer-aided kinematics, analysis, and synthesis of basic mechanisms. Fall.

EML 3303C ECS-MECH/AERO 3(2,3) Mechanical Engineering Measurements: PR: C.I. (2.0) or better in EGN 3343. Theory, calibration and use of instrumentation. Measurement data analysis, report writing. Laboratory topics related to mechanical engineering. Fall, Spring. M&S fee $15.00

EML 3500 ECS-MECH/AERO 3(3,0) Design and Analysis of Machine Components: PR: C.I. (2.0) or better in EGN 3801. Application of the principles of mechanics of materials to the design of mechanical components. Fall, Spring.

EML 3701 ECS-MECH/AERO 3(3,0) Fluid Mechanics I: PR: C.I. (2.0) or better in all of the following: MAC 2311C, MAC 2312, MAC 2313, MAP 2302. Fall. PR: PHYS 2040C, EGN 3321 and EGN 3343. Principles of continuum fluid mechanics. Integral and differential forms of governing equations, fluid statics, dimensional analysis, measurements, internal flows. Fall, Spring.

EML 3933 ECS-MECH/AERO 0.50 Mechanical Career and Academic Faculty Advisory: PR: EGN 3321 and M&S fee $29.00. Students and their faculty advisor for career/academic advising. Graded S/U. Fall, Spring.

EML 4024C ECS-MECH/AERO 3(2,2) Engineering Design Practice: PR: EGN 3801 and EML 3032C (Introduction to Computer Aided Engineering) with grades of "C" (2.0) or better in both. A project oriented computer aided engineering design practice including design, simulation, analysis, and manufacturing. Fall, Spring.

EML 4142 ECS-MECH/AERO 3(3,0) Heat Transfer: PR: C.I. (2.0) or better in both EML 3701 and EML 3034C. Conduction, radiation, and convection heat transfer. Basic energy balances emphasized. Steady state and transient problems, analysis and design of simple heat exchangers. Fall, Spring.

EML 4143 ECS-MECH/AERO 3(3,0) Heat Transfer I: PR: EML 4142. Advanced topics in heat transfer, multi-dimensional conduction, transient conduction, convection heat transfer, participating medium, boiling and condensation. Fall.
EML 4225 ECS-MECH/AERO 3(3,0)
Introduction to Vibrations and Controls: PR: EML 1202 or EML 3217, or their equivalents. An introduction to the design of mechanisms.

EML 4260 ECS-MECH/AERO 3(3,0)
Dynamics of Machinery: PR: EML 3262 or EML 3217, or their equivalents. Fundamentals of mechanical power systems design with the objective of optimizing energy efficiency, humidity control, ventilation, and indoor air quality. Dehumidification performance of the various HVAC system types and their interactions with the building. Spring.

EML 4703 ECS-MECH/AERO 3(3,0)

EML 4804C ECS-MECH/AERO 3(3,2)
Digital Control in Mechatronics: PR: EML 3332, and (EML 4220 and EML 4312C) or (EML 4225 and EML 4313). Discrete microprocessor control of mechatronics dynamic systems using state-space representation, digital controllers, design for mechatronics applications. Spring. M&S fee $15.00.

EML 4931 ECS-MECH/AERO 0(0.0)

EML 5026C ECS-MECH/AERO 3(2,2)
Computational Engineering Analysis: PR: EML 4040C. Computer based hands-on experience on computational engineering analysis including Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), and Multi-body Dynamics (MDB) Occasional.

EML 5060 ECS-MECH/AERO 3(3.0)

EML 5066 ECS-MECH/AERO 3(3.0)

EML 5090 ECS-MECH/AERO 0(0.0)
Mechanical and Aerospace Seminar: PR: Graduate standing or C.I. The course is intended to help MAE graduate students practice public speaking, learn skills in scientific communication, expand their width of knowledge, and promote collaborations. May be repeated. Fall, Spring.

EML 5105 ECS-MECH/AERO 3(3.0)
Gas Kinetics and Statistical Thermodynamics: PR: EAS 4134 or EML 4703. Molecular and statistical viewpoint of gases and thermodynamics; Boltzmann collision integral, partition functions, non-equilibrium flows. Applications in thermo-fluid systems. Occasional.

EML 5152 ECS-MECH/AERO 3(3.0)

EML 5220C ECS-MECH/AERO 3(3.0)

EML 5237 ECS-MECH/AERO 3(3.0)

EML 5271 ECS-MECH/AERO 3(3.0)

EML 5290 ECS-MECH/AERO 3(3.0)

EML 5291 ECS-MECH/AERO 3(3.0)
MEMS Materials: PR: EML 3930, EML 4211, or C.I. Introduction of materials that are frequently used for MEMS applications such as silicon, metal, ceramics and polymers. The course will focus on fundamental principles involved in structures and properties of the materials, and their applications in MEMS. Even Spring.

EML 5311 ECS-MECH/AERO 3(3.0)
System Control: PR: EML 4312C, CR: EML 5060. Modem control theory for linear and nonlinear systems; controllability and observability; linear state feedback schemes and state estimators, compensator design. Occasional.

EML 5402 ECS-MECH/AERO 3(3.0)
Turbomachinery: PR: EML 3101, EML 4703 or EAS 4134. Application of the principles of fluid mechanics, thermodynamics, and aerodynamics to the design and analysis of steam and gas turbines, compressors, and pumps. Occasional.

EML 5403 ECS-MECH/AERO 3(3.0)
Science and Technology of Fuel Cells: PR: EGN 3365, EMA 4102 or C.I. Fundamental knowledge along with hands-on experience with design, manufacturing and operation of fuel cells. Occasional.

EML 5430C ECS-MECH/AERO 3(2,3)
Design for Manufacturing in Turbomachinery: Gas/Steam/Wind Turbines & Generators: PR: EGN 3365 or EMA 3706. Overall assembly of rotating and stationary components in power generation powertrains; probabilistic design, materials, coatings, manufacturing steps, defects for gas/steam/wind turbines and generators. Fall.

EML 5431C ECS-MECH/AERO 3(2,3)
Design for Structural & Dynamic Integrity and Reliability in Turbomachinery: PR: EGN 3361, EML 4220 or EML 4225, EGN 3365 or EMA 3706. Mechanical & dynamic integrity issues such as creep, fatigue, fracture, rotordynamics, vibration, flutter, and combustion system effects on turbines and generators; reliability; cost-time-performance trade-off in design. Spring.

EML 5456 ECS-MECH/AERO 3(3.0)
Turbines for Sustainable Power: PR: EGM 3601, (EGN 3365 or EMA 3706), (EGM 3701 or EAS 3101), CR: EML 4142. Multidisciplinary aspects of turbine design for sustainable power generation including aerodynamics to combustion and emissions to reliability; covers multiple applications of conventional and green technology. Fall.

EML 5532C ECS-MECH/AERO 3(2,3)
Computer-Aided Design for Manufacture: PR: EML 3025. Builds on introductory material covered in EML 3022C. Topics include computer modeling for the synthesis, simulation, design and manufacture of mechanical, thermal, and aerospace systems. Occasional.

EML 5545 ECS-MECH/AERO 3(3.0)
Smart and Adaptive Structures: PR: (EAS 4200 or EML 3500) and EML 4225 and (EGN 3365 or EMA 3706) or C.I. Modeling and design of structures with integrated active materials: piezoelectric ceramics and polymers, shape memory alloys and polymers, magneto-/electro-rheological fluids, magneto-/ electro-active materials. Multi-stable structures. Even Spring.
Grade of "C" (2.0) or better in ENC 1102 or C.I. Writing readings and on student experiences. The "NC" grading of 60+ on TSWE of SAT or C.I. and permission of effective communication and critical thinking. Emphasizing turbulence.

EML 5972 ECS-MECH/AERO 3(3,0) Advanced Composites Manufacturing: PR: EGN 3365 or EMA 3706. Selection of materials for PMCs, CMCs, C/G and MCMs; manufacturing processes processing science; processing-structure-property relationship; manufacturing defects; life cycle analysis (LCA). Occasional.

EML 5937 ECS-MECH/AERO 3(3,0) Smart and Adaptive Structures: PR: (EAS 4202 or EML 3500) and EML 4225 and (EGN 3365 or EMA 3706). C/I. Modeling and design of structures with integrated active materials: piezoelectric ceramics and polymers, shape memory alloys and polymer, magneto- and/or electro-rheological fluids, magneto- and/or electro-strictives. Multi-stable structures. Occasional.

ENC 1101 CAH-WRITE Expository Writing: 3(3,0) Composition I: Expository writing with emphasis on effective communication and critical thinking. Emphasizing the writing process writing topics are based on selected readings and on student experiences. The "NC" grading policy applies to this course. Fall/Spring.

ENC 1101H CAH-WRITE 3(3,0) Honors Freshman Composition I: PR: Score of 60+ on TSWE of SAT or C.I. and permission of Honors. Expository writing with emphasis on effective communication and critical thinking. Emphasizing the writing process writing topics are based on selected readings and on student experiences. The "NC" grading policy applies to this course. Honors-level content. Fall/Spring.

ENC 1102 CAH-WRITE 3(3,0) Composition II: PR: ENC 1101 with a grade of C- or better. Focus on extensive research in analytical and argumentative writing based on a variety of readings from the humanities. Emphasis on developing critical thinking and development of coherent arguments. The "NC" grading policy applies to this course. Fall/Spring.

ENC 1102H CAH-WRITE 3(3,0) Honors Freshman Composition II: PR: ENC 1101H with a grade of "C-" or better and C.I. or permission of Honors. Same as ENC 1102, with honors-level content. Note on Freshman English Program: ENC 1101 and 1102 must be taken before enrolling in any English course numbered above 1102. The "NC" grading policy applies to this course. Fall/Spring.

ENC 1130 CAH-WRITE 3(3,0) Improving College-Level Writing: Entering college-level writing course designed to prepare students to read and write effectively at the college level. Fall.

ENC 2127 CAH-WRITE 3(3,0) Grammar and Composition: A systematic study of grammar and mechanics to improve writing for clarity and accuracy in writing. Occasional.

ENC 3241H CAH-ENG 3(3,0) Honors Writing for the Technical Professional: PR: Grade of (C) (2.0) or better in ENC 1102 or C.I. Writing effective correspondence, instructions, proposals, and informal and formal reports. Fall, Spring.

ENC 3241H CAH-ENG 3(3,0) Honors Writing for the Technical Professional: PR: Grade of (C) (2.0) or better required in ENC 1102. In-depth study and application of a specific issue related to technical writing. Occasional.

ENC 3372 CAH-WRITE Topics in Civic Rhetoric and Writing: PR: Grade of "C" (2.0) or better required in ENC 1102. In-depth study of rhetorical and technical issues in civic contexts. Occasional.

ENC 3373 CAH-WRITE Cultural Rhetorics: PR: Grade of "C" (2.0) or better required in ENC 1102. Study of the diverse cultural production of and the cultural forces impacting the rhetoric of individuals and communities. Occasional.

ENC 3375 CAH-WRITE Rhetoric in Popular Culture: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Exploration of how persuasion works in a specific set of popular culture discourses, such as sports, music, and gaming. Occasional.

ENC 3417 CAH-WRITE 3(3,0) Literacy and Technology: PR: Grade of "C" (2.0) or better required in ENC 1102. Study of technology's impact on writing and literacy, focus on new media. Spring.

ENC 3433 CAH-WRITE 3(3,0) Multimedia Writing and Composition: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Study and practice of multimedia writing (involving sound, visual, and linguistic forms) with an emphasis on the process of text production and remixing for different rhetorical contexts and audiences. Occasional.

ENC 3453 CAH-WRITE Writing About Health and Medicine: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Writing practices and genres of the health professions, with emphasis on writing about health and medicine for lay audiences. Occasional.

ENC 3454 CAH-WRITE 3(3,0) Topics in Professional and Digital Writing: PR: Grade of "C" (2.0) or better required in ENC 1102. In-depth study and application of a specific issue related to professional and/or digital writing. Occasional.

ENC 3455 CAH-WRITE Writing about Science and Technology: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Writing about scientific and technological research and development for non-scientific audiences (including novices and policymakers). Occasional.

ENC 3455H CAH-WRITE 3(3,0) Honors Writing about Science and Technology: PR: Consent of Honors. Writing about scientific and technological research and development for non-scientific audiences: including laypeople and policymakers. With Honors content. Occasional.

ENC 3456H CAH-WRITE 3(3,0) Honors Writing about Health and Medicine: PR: Consent of Honors. Writing practices and genres of the health professions, with emphasis on writing about health and medicine for lay audiences. With Honors content. Occasional.

ENC 3473 CAH-WRITE VAR(VAR,0) Writing in Disciplinary Cultures: PR: Grade of "C" (2.0) or better required in ENC 1102. Project-based study of writing (including genres, conventions, and arguments) in disciplines across the university. May be repeated for credit. Occasional.

ENC 3502 CAH-WRITE 3(3,0) Researching Writing and Literacy: PR: Grade of "C" (2.0) or better required in ENC 1102. Overview of important knowledge domains and lines of inquiry in writing and literacy research, with emphasis on research methodologies. Occasional.

ENC 3503 CAH-WRITE 3(3,0) Topics in Writing & Literacy Studies: PR: Grade of "C" (2.0) or better required in ENC 1102. An in-depth study of a particular issue related to language theory and/or the teaching of writing. Occasional.
ENC 3521 CAH-WRITE (3,0)
Writing Across Difference: PR: Grade of "C" (2.0) or better required in ENC 1102. Examines cultural influences on language and literacy practices, with emphasis on applications for writing teachers. Occasional.

ENC 3905 CAH-ENG (3,0)
Directed experience in Writing: PR: Grade of C (2.0) or better required in ENC 1102 and C.I. Individualized topics of study and/or research in writing with personalized faculty direction. May be repeated for credit. Occasional.

ENC 4212 CAH-WRITE (3,0)
Professional Editing: PR: Grade of "C" (2.0) or better required in ENC 1102. Students will perform different types and levels of editing on a range of print and online texts from business and non-profit contexts. Even Fall.

ENC 4215 CAH-ENG (3,0)
Technical Publication and Project Management: PR: Grade of C (2.0) or better required in ENC 3211 or ENC 3241 or C.I. New publishing technology, stressing composition and printing; word processing, automated text processing, methods of reproduction. Introduction of graphics, style, format, layout, and boardwork. Spring.

ENC 4218 CAH-ENG (3,0)
The Visual in Technical Documentation: PR: Grade of C (2.0) or better required in ENC 4293. Relevant theories of the visual and their application to technical communication, particularly for a variety of technical writing genres. Strategies for understanding and improving writing styles, with practice strategies for applying it to technical communication. Occasional.

ENC 4219 CAH-ENG (3,0)
Technical Communication and Plain Language: PR: Grade of "C" (2.0) or better required in ENC 3241 or C.I. International issues in the field of technical communication including internationalizing documents, user interface design, international collaboration, and rhetorical and logistical challenges. Occasional.

ENC 4265 CAH-ENG (3,0)
Writing for the Computer Industry: PR: Grade of C (2.0) or better required in ENC 1102 or C.I. Creating different kinds of software manuals or online help systems for the computer industry. Occasional.

ENC 4275 CAH-WRITE (3,0)
Theory and Practice of Tutoring Writing: PR: Grade of "C" (2.0) or better required in ENC 1102 and C.I. Theory and practice of assessing and responding to writing from the standpoint of a tutor, as opposed to evaluator. Fall.

ENC 4280 CAH-ENG (3,0)
Technical Writing Style: PR: Grade of C (2.0) or better required in ENC 3211 or ENC 3241 or C.I. Strategies for understanding and improving writing styles, particularly for a variety of technical writing genres. Spring.

ENC 4290 CAH-ENG (3,0)
Usability Testing for Technical Communication: PR: Grade of "C" (2.0) or better required in ENC 3241 or C.I. Usability theory and techniques for evaluating manuals, online documentation, and other technical communication genres. Occasional.

ENC 4293 CAH-ENG (3,0)
Documentation and the Collaborative Process: PR: Grade of C (2.0) or better required in ENC 3211 or ENC 3241. Development of a book-length project from idea to final published product. Examples may include style manuals, policies and procedures, and training manuals. Fall, Spring.

ENC 4294 CAH-ENG (3,0)
Documentation and Client-Based Collaboration: PR: Grade of C (2.0) or better required in ENC 4293. Practical application of editing theory to ongoing projects from the student's particular field. Should be taken concurrently with ENC 4215. Fall, Spring.

ENC 4298 CAH-ENG (3,0)
Technical Communication for the Virtual Workplace: PR: Grade of C (2.0) or better required in ENC 1102 or C.I. Collaborative technologies used in the modern workplace and the challenges associated with virtual collaboration. Students will participate in a virtual team project. Occasional.

ENC 4312 CAH-ENG (3,0)
Theory & Practice of Persuasive Writing: PR: Grade of C (2.0) or better required in ENC 1102. A study of the theory and practice of persuasion, including logical, emotional and ethical appeals. Occasional.

ENC 4313 CAH-ENG (3,0)
Research Writing: PR: Grade of C (2.0) or better in ENC 1102, junior standing, and C.I. Writing correspondence, instructions, proposals, and informal and formal reports in various disciplines. Occasional.

ENC 4353 CAH-WRITE (3,0)
Writing for Social Change: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Study of how activist writing and other symbolic action can be used to mobilize social or policy change around contemporary controversial issues. Occasional.

ENC 4354 CAH-WRITE (3,0)
Writing with Communities and Nonprofits: PR: Grade of C (2.0) or better required in ENC 1102. Study and practice of methods for writing in partnership with nonprofits and the communities they serve, with an emphasis on analysis and community engagement. Occasional.

ENC 4354H CAH-WRITE (3,0)
Honors Writing with Communities and Nonprofits: PR: Grade of "C" (2.0) or better required in ENC 1102, and consent of Honors. Students will use a variety of compositional materials to produce texts. Occasional.

ENC 4355 CAH-WRITE (3,0)
Writing in the Collaborative Environment: PR: Grade of "C" (2.0) or better required in ENC 1102. Explores the role of identity in writing, particularly negotiating gender, race, class, sexual identity and other difference issues. Occasional.

ENC 4360 CAH-ENG (3,0)
Nature Writing: PR: English major or minor and grade of "C" (2.0) or better required in CRW 3013 and CRW 3503, or C.I. Students will write essays that explore different approaches to writing about the natural world, and will discuss issues raised by such writing. Occasional.

ENC 4374 CAH-WRITE (3,0)
Gendered Rhetorics: PR: Grade of "C" (2.0) or better required in ENC 1102. Historical and theoretical study of gendered rhetorical practices, with emphasis on women rhetors. Occasional.

ENC 4378 CAH-WRITE (3,0)
Writing in Global and Transnational Contexts: PR: Grade of C (2.0) or better in ENC 1102 or C.I. Examination of the ways language and rhetoric travel across cultures and countries, with practice strategies for transnational communication with local and global audiences. Occasional.

ENC 4379 CAH-WRITE (3,0)
Writing and Rhetoric in Capstone: PR: Senior standing; ENC 3331, ENC 3505, and ENC 3836; PR or CR: ENC 4944, ENC 4373, or ENC 4275. Students will choose a topic for their capstone project. Students reflect on disciplinary identity, possible career trajectories, and transferrable strategies for writing in their lives. Spring.

ENC 4414 CAH-ENG (3,0)
Writing and Hypertext: PR: Grade of C (2.0) or better required in ENC 3211 or ENC 3241. Theories of electronic literacy and information to develop a more critical sensibility regarding hypertext. Occasional.

ENC 4415 CAH-ENG (3,0)
Digital Rhetorics and The Modern Diabetic: PR: Grade of "C" (2.0) or better required in ENC 1102. Explores the development of digital rhetorics appearing in online environments through close reading and analysis of formative rhetorical texts, fiction, and internet materials. Fall, Spring.

ENC 4416 CAH-WRITE (3,0)
Writing in Digital Environments: PR: Grade of "C" (2.0) or better required in ENC 1102. Study and practice of new media/internet writing and publishing, covering a range of online and multimedia genres. Occasional.

ENC 4416H CAH-WRITE (3,0)
Honors Writing in Digital Environments: PR: Consent of Honors. Critical and rhetorical engagement with digital writing and networked systems, including a range of online media and genres. With Honors content. Occasional.

ENC 4434 CAH-WRITE (3,0)
Visual and Material Rhetorics: PR: "C" (2.0) or better in ENC 1102 or C.I. Study of visual and material textual elements within different historical and contemporary rhetorical practices and performances. Students will use a variety of compositional materials to produce texts. Occasional.

ENC 4504 CAH-WRITE (3,0)
Contemporary Composition Theory: PR: Grade of "C" (2.0) or better required in ENC 1102. Considers major theoretical paradigms and more emergent theoretical explorations in modern and contemporary composition studies. Occasional.

ENC 4523 CAH-WRITE (3,0)
Writing and Identity: PR: Grade of "C" (2.0) or better required in ENC 1102. Explores the role of identity in writing, particularly negotiating gender, race, class, sexual identity and other difference issues. Occasional.

ENC 4544 CAH-WRITE (3,0)
Writing Internship: PR: Junior standing and ENC 3331 and ENG 3836 and declared Writing and Rhetoric Major. Training in practice and professional and/or public writing experience through approved internship with business or organization; involves reporting and reflecting on experience Fall.

ENC 4950 CAH-WRITE (0,0)
Writing ePortfolio: PR: "C" or better in ENC 1102. Student must have completed at least 33 hours toward the B.A. in Writing & Rhetoric, 9 hours toward the Minor in Writing & Rhetoric, or at least 6 hours toward the Certificate in Public and Professional Writing. In their graduation term, Writing & Rhetoric majors, minors, or Public & Professional Writing Certificate students revise and submit their writing e-portfolio for departmental approval. Occasional.

ENC 5225 CAH-ENG (3,0)
Theory and Practice of Document Usability: PR: Grade of C (2.0) or better standing or senior standing or C.I. Presents theory and practice of how document usability is assessed and improved. Occasional.

ENC 5237 CAH-WRITE (3,0)
Writing for the Business Professional: PR: Graduate status or senior standing or C.I. A study of the major document designs for professionals in business, focusing on audience, purpose, style, arrangements, and content. Fall, Spring.

ENC 5276 CAH-WRITE (3,0)
Theory and Practice of Tutoring Writing: PR: Admission to the M.A. in Rhetoric and Composition program, graduate standing or C.I. The theory and practice of assessing and responding to writing as a collaborator (as opposed to evaluator). Fall.

ENC 5337 CAH-ENG (3,0)
Rhetorical Theory: PR: Graduate standing or C.I. An overview of theories of visual and historical and cultural rhetorical theory and rhetorical instruction. Fall.

ENC 5705 CAH-WRITE (3,0)
Theory and Practice in Composition: PR: Graduate status or senior standing or C.I. Intensive study of theories of composition, with practical experience in the writing laboratory and in composition classes. Spring.

ENC 5938 CAH-WRITE (3,0)
Current Topics in Professional Writing: PR: Graduate status or C.I. Students will learn how to produce texts for specialized fields of discourse, including the medical and legal profession, as well as for general publication. Occasional.
ENG 3010 CAH-ENG 3(3,0) Practical Criticism: PR: Grade of C (2.0) or better required in ENC 1102. Student evaluation of selected fiction, nonfiction, and drama through practical exercises in literary criticism. Occasional.

ENG 3014 CAH-ENG 3(3,0) Theories and Techniques of Literature Study: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Techniques of analysis, theories of interpretation, and drama of critical approaches to selected works. Fall, Spring.

ENG 3073 CAH-ENG 3(3,0) Cultural Studies Literature: PR: Grade of C (2.0) or better required in ENC 1102. The theoretical and cultural developments over time that call for broadening the applications of literary analysis to produce "cultural studies." Occasional.

ENG 3612 CAH-ENG 3(3,0) Trends in Literary, Cultural, and Textual Studies: PR: Grade of "C" (2.0) or better in ENC 1102. Literary analysis of textual production within contemporary social trends and new technologies. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

ENG 3817 CAH-ENG 3(3,0) Digital Archive: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Examines "debates" in the digital humanities and prepares students to work with the creation, management, and preservation of digital archives content. Occasional.

ENG 3821 CAH-ENG 3(3,0) What's Next to the English Majors: PR: Grade of C (2.0) or better required in ENC 1102 and English major or minor, or C.I. Professional development strategies and career options for English majors after graduation. Occasional.

ENG 3833 CAH-WRITE 3(3,0) Marketing Your Writing: PR: "C" (2.0) or better in ENC 3351. Exploration of writing markets and publishing opportunities therein, the submission process, and author marketing and negotiation strategies. Spring.

ENG 3836 CAH-WRITE 3(3,0) Professional Lives and Literary Practices: PR: "C" (2.0) or better in ENC 1102. Study of technology-assisted professional writing and literary practices around knowledge management work in organizations and communities. Fall, Spring.

ENG 4114 CAH-ENG 3(3,0) Literature and Film: PR: Grade of C (2.0) or better required in ENG 3014, or C.I. American popular culture texts in world context, using concepts and theories from global cultural studies to analyze transmission, translation, and appropriation. Occasional.

ENG 4614 CAH-ENG 3(3,0) Discourse of Global Cultural Studies: PR: Grade of "C" (2.0) or better required in ENG 3014, or C.I. American popular culture texts in world context, using concepts and theories from global cultural studies to analyze transmission, translation, and appropriation. Occasional.

ENG 5009 CAH-ENG 3(3,0) Methods of Bibliography and Research: PR: Graduate status or senior standing or C.I. Bibliographical, library and systematic approaches to research at the graduate level in language and literature. Fall.


ENT 5946 BA-MAN 3(3,0) Small Business Consulting: PR: Graduate standing. This is a highly experiential course where students are assigned to teams that complete consulting projects for local small businesses. Fall.

ENV 3001 ECS-CECE 3(3,0) Environmental Engineering: PR: A grade of "C" (2.0) or better in MAC 2312 and in CHM 2045C or CHM 1440 or CHM 2041. Introduction to the concepts and terminology of environmental engineering. Stresses material and energy balances. Covers air, water and land pollution. Fall, Spring.
ENV 4120 ECS-CECE 3(3,0) Air Pollution and Hazardous Waste Control: PR: EES 3901 and ENV 3001 all with a grade of “C” (2.0) or better. Air pollution and hazardous waste engineering. Air resources management, engineering design, and operation of air pollution control systems. Storage, collection, processing, and disposal of hazardous wastes. Fall.

ENV 4122C ECS-CECE 3(2,2) Air Pollution Control Design: PR: ENV 4120 with grade of “C” (2.0) or better and department consent. Project course in design of air pollution control equipment and systems. Spring.

ENV 4300C ECS-CECE 3(2,2) Solid Waste Facility Design: PR: ENV 4341 with grade of “C” (2.0) or better and department consent. Project course on design of a municipal solid waste landfill. Occasional.

ENV 4341 ECS-CECE 3(3,0) Sustainable Resource Management: PR: ENV 3001 with a grade of “C” (2.0) or better. Principles of industrial ecology, life cycle analysis, regulation of solid wastes, and sustainable engineering design. Solid waste management facilities, hot-water-energy-water nexus, carbon and water footprints. Fall.

ENV 4433C ECS-CECE 3(2,2) Environmental Engineering Wastewater Design: PR: EES 4111C, ENV 4531 both with grades of “C” (2.0) or better. Project course in advanced municipal and industrial wastewater treatment design with emphasis on teamwork to complete the design process. Occasional.

ENV 4531 ECS-CECE 3(3,0) Environmental Engineering Unit Operations & Processes: PR: ENV 4501, CWR 3201 both with a minimum grade of “C” (2.0) or better. Water and wastewater treatment design considerations with effluent and sludge handling, treatment, and disposal. Fall, Spring.

ENV 4561 ECS-CECE 3(3,0) Advanced Environmental Engineering Operations & Processes: PR: ENV 4531 with a grade of “C” (2.0) or better. Advanced water and wastewater treatment including biological nutrient removal and desalination. Spring.

ENV 4562C ECS-CECE 3(2,2) Environmental Engineering Water Treatment Design: PR: EES 4202C and ENV 4531 both with grades of “C” (2.0) or better and department consent. Application of systems design criteria in the specification and design of a full scale potable water treatment plant. Spring. M&S fee $43.00

ENV 5410 ECS-CECE 3(3,0) Water Treatment: PR: EES 4202C or ENV 5517 or C.I. Potable water regulations, standards, chemical reactors, oxidation, disinfection, disinfection by-products, ultraviolet irradiation. Internal corrosion and microbial control in municipal and industrial water distribution systems. Odd Spring.


ENV 5517 ECS-CECE 3(3,0) Engineering Chemical and Biological Process: PR: ETI 4501 (or equivalent) or C.I. Coverage of equilibrium/aquatic chemistry, softening and coagulation, and disinfection of water. Microbiology and biochemistry as applied to activated sludge system design. Fall.

ENV 5636 ECS-CECE 3(3,0) Environmental and Water Resources Systems Analysis: PR: ENV 3001 or C.I. Discussion of environmental and water resources systems with the emphasis on their effectiveness, pollution prevention, and sustainability to aid in environmental engineering decision-making. Occasional.

ENY 4004C COS-BIOL 4(2,6) General Entomology: PR: A “C” (2.0) or better in both ESI 2010C and ESI 211C, or C.I. Behavior of insects: identification, taxonomy, physiology, behavior, and ecology. Occasional. M&S fee $15.00

ENY 5006C COS-BIOL 4(2,6) Entomology: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Morphology, physiology, ontology, behavior, ecology and population biology of insects. Odd Fall. M&S fee $40.00

EPD 5359 ED-CFCS 3(2,2) Physical and Sociological Implications of Handicapping Conditions: Overview of physical and sociological factors which may contribute to delayed learning or physical impairments in the exceptional populations. Physical interventions and first-aid practices are examined. Occasional.


ESR 4033C ED-TL&L 3(2,2) Critical Issues and Trends in Secondary Education: PR: ESI 3440, ARE 4941, FLE 4941, LAE 4941, MAE 4941, SCE 4941, or SSE 4941. Examination of critical and contemporary issues and trends in secondary education classrooms. Laboratory experiences will connect to the issues and trends specific to particular content areas. Fall, Spring.

ESR 4942 ED-TL&L 1(1.0) Internship II Seminar: PR: Internship II in the specific discipline; CR: Internship II in the specific discipline. Culminating seminar in current classroom management and assessment issues, as they relate to teaching in the secondary grades. Fall, Spring.


ESE 5214 ED-TL&L 3(3,0) Secondary School Curriculum Improvement I: PR: Regular Certificate or C.I. Secondary School self-studies for certification or accreditation reports, or staff development. Occasional.

ESE 5344 ED-TL&L 3(3,0) Managing the Secondary Classroom: PR: Graduate Standing or C.I. Strategies, methods, materials, and technologies for managing the secondary classroom. Creating positive classroom environments, maintaining/ increasing appropriate behaviors, and teaching behavior appropriate to all students. Fall.

ESE 4221 ECS-EMS 3(3,0) Empirical Methods for Industrial Engineering: PR: STA 3032 with a grade of “C” (2.0) or better. Application of empirical methods for industrial engineering problem solving. Fall.

ESE 4234 ECS-EMS 3(3,0) Quality Engineering: PR: STA 3032 with a grade of “C” (2.0) or better. Basic concepts and techniques of quality control; applications of statistics in industrial research; design of quality assurance systems; reliability engineering. Fall.

ESE 4312 ECS-EMS 3(3,0) Deterministic Methods for Operations Research: PR: STA 3032 and MAS 3105 with grades of “C” (2.0) or better in both. An introduction to basic principles and deterministic techniques of operations research. Topics include linear programming, integer programming, network flow problems, and non-linear programming. Fall.


ETI 4186 ECS-ECS 3(3,0) Applied Reliability: PR: ETI 3116. Practical application of reliability concepts and analysis applicable to the design, production and logistics phases of systems and system components. Odd Spring.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVR 1001</td>
<td>COS-BIOL</td>
<td>3(3,0)</td>
<td>Introduction to Environmental Science: Environmental science and environmental systems in the context of real places, real people, real problems and real data. Fall.</td>
</tr>
<tr>
<td>EVR 1001H</td>
<td>COS-BIOL</td>
<td>3(3,0)</td>
<td>Honors Introduction to Environmental Science: Environmental science and environmental systems in the context of real places, real people, real problems, and real data. Fall.</td>
</tr>
<tr>
<td>EXP 3640</td>
<td>COS-PHYCH</td>
<td>3(3,0)</td>
<td>Psychology of Language: PR: PSY 2012. Psychological principles involved in the communicative process, with application to individuals and groups. Occasional.</td>
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<tr>
<td>EXP 5208</td>
<td>COS-PHYCH</td>
<td>3(3,0)</td>
<td>Sensation and Perception: PR: Graduate status or senior standing or C.I. A study involving human information processing with regard to physical and psychological variables in sensory and perceptual phenomena. Odd Spring.</td>
</tr>
<tr>
<td>EXP 5254</td>
<td>COS-PHYCH</td>
<td>3(3,0)</td>
<td>Human Factors and Aging: PR: Graduate standing, post bac, or senior standing with C.I. An overview of issues related to enhanced quality of life of elderly through the implementation of basic human factors principles in environmental and task design. Even Fall.</td>
</tr>
</tbody>
</table>
FIL 3379C CAH-SVAD 3(3,6)
Honors Advanced Documentary Workshop: PR: ENC 1102H and Consent of Honors or C.I. Public history research and documentary production. Student-produced multimedia projects centered on local partnerships that explore the public history of Central Florida. With Honors content. Occasional.

FIL 3379C CAH-SVAD 3(3,6)
Advanced Documentary Production: PR: Film BA or Film BFA Major and FIL 3383C or C.I. Advanced readings and analysis of documentary history, theory and ethics; production and practice of contemporary nonfiction entertainment. Occasional.

FIL 3427C CAH-SVAD 3(2,4)
History and Practice of Contemporary Nonfiction: PR: C.I. or FIL 2107 and Film BFA or World Cinema major. Introduction to production utilizing film equipment. Basic technical and aesthetic aspects of production. Fall.

FIL 3455C CAH-SVAD 6(2,4)
Film Landscapes: Story, Image, and Production Design: PR: FIL 3423 or FIL 3427C, and FIL 3030. The use of landscape in film and its importance to the art of production design. Occasional.

FIL 3462C CAH-SVAD 3(3,1)
Cinematic Expression: PR: FIL 3803C. Cinematography using video format; study of fundamentals of moving image communication, film structure and storytelling. Spring.

FIL 3483 CAH-SVAD 3(3,0)
Characterization and Scene Study as it applies to directing Fall.

FIL 3492C CAH-SVAD 3(3,1)
New World Cinema: Study of the different traditions and forms of acting in film. Occasional.

FIL 3534 CAH-SVAD 3(3,0)
Sound Design for Film I: PR: FIL 3427C and Film BFA or Film BA major. Technical and aesthetic aspects of production and post-production sound recording, editing, and mixing for film. Fall.

FIL 3720C CAH-SVAD 3(2,4)
Animation Systems: PR: DIG 3951 and FIL 3035C. Approaches to the shot, framing, and point of view. FIL 3035C. Approaches to the shot, framing, and point of view. Occasional.

FIL 3734C CAH-SVAD 3(3,1)
Intermediate Animation: PR: Experimental Animation and Character Animation majors only, C.I. Focus on 3D computer modeling and animation systems. Hands-on exercise on the type of high-end animation systems used in the film industry. May be repeated for credit. Fall, Spring.

FIL 3803C CAH-SVAD 3(3,1)
Film Theory and Criticism I: PR: FIL 2107 and Film BFA, World Cinema, or Cinema Studies major. Major film theories to the Second World War Period. Fall.

FIL 3804C CAH-SVAD 3(3,1)
Film Theory and Criticism II: PR: FIL 2107 and Film BFA or Cinema Studies major. Major film theories from Second World War period to present. Spring.

FIL 3812C CAH-SVAD 3(3,1)
Film Theories and Practices: PR: FIL 3030. Concentration on the film theories of film-makers in relation to their own work and to the cinema generally. Spring.

FIL 3822 CAH-LANG 3(3,0)
German Film: PR: C.I. Exploration of the formal context of German film during different time periods in relation to other aspects of culture and to sociopolitical structures at the time. Occasional.

FIL 3824 CAH-SVAD 3(3,0)
Italian Neo-Realist Cinema: PR: FIL 3036 or FIL 3037, or C.I. Post-World War II period of the Italian cinema, with emphasis on the work of Antonioni, Visconti, Pasolini, Fellini, and Rossellini. Occasional.

FIL 3826 CAH-SVAD 3(3,0)
American Cinema: PR: Film BFA, World Cinema, or Cinema Studies major, or Cinema Studies minor. Lectures, films and forums designed to provide awareness of styles, images, and modes in cinema that influence or reflect our culture. Spring.

FIL 3831 CAH-SVAD 3(3,0)

FIL 3841 CAH-SVAD 3(3,0)
French New Wave Cinema: PR: FIL 3036 or FIL 3037, or C.I. Post-World War II period of the French cinema, emphasizing the work of Resnior, Bresson, Godard, Rohmer, Resnais, and Rivette. Occasional.

FIL 3842 CAH-SVAD 3(3,0)
International Cinema: PR: or CR: FIL 3036 or FIL 3037, and Film BFA or Film BA major. Critical exploration of the political, social, cultural and artistic context of international film production, with emphasis on co-production and/or international connections in production and reception. Occasional.

FIL 3845 CAH-SVAD 3(3,0)
World Cinema Traditions: PR: or CR: FIL 3036 or FIL 3037 and Film BFA, World Cinema, or Cinema Studies major. The relationship among film, history, and culture in selected Asian, African, Latin American, and Middle Eastern countries. Fall, Spring.

FIL 3847 CAH-SVAD 3(3,0)
Latin American Cinema: PR: or CR: FIL 3036 or FIL 3037 and Film BFA, World Cinema, or Cinema Studies major. Latin American films and film movements, historical and contemporary issues, social, and aesthetic concerns. Spring.

FIL 3850 CAH-SVAD 3(3,1)
Cinema Directors: PR: FIL 3803C and Film BFA, World Cinema, or Cinema Studies major, or C.I. Intensive study of the work of selected film-makers using multiple modes of criticism and author analysis to examine films. Occasional.

FIL 3852 CAH-SVAD 3(3,0)
Cinema Criticism Writing: PR: FIL 3036 or FIL 3037 and ENC 1102, FIL 3803C. Modes of cinema criticism. Occasional.

FIL 3850C CAH-SVAD 3(3,1)
The Shot, Framing, Point of View: PR: FIL 3035C. Approaches to the shot, framing, and point of view. Occasional.

FIL 3861C CAH-SVAD 3(3,1)
Film and Photography: PR: FIL 3076C. Historical and Cultural relationships between photography and film. Occasional.

FIL 3862C CAH-SVAD 3(3,1)
Narrative Structures in Film: PR: LIT 2110 and LIT 2120. Different structures of narrative in film and the ways in which narrative structures have been theorized and understood. Fall.

FIL 3865C CAH-SVAD 3(3,1)

FIL 3870C CAH-SVAD 3(3,0)
The American Film Artist: PR: FIL 2030. Analysis of a major American filmmaker’s style, vision and works; how these evolved and their impact on film and the culture. May be repeated for credit. Fall.
FIL 4303 CAH-SVAD 3(3,1)
Film Fiction and the Document: PR: LIT 2110, FIL 3035C and FIL 3427C. A study of post-production strategies from initial concept through production. May be repeated for credit. Fall.

FIL 4434 CAH-SVAD 3(2,4)
Capstone I: PR: FIL 3132 and Film BFA or World Cinema major. Intensive tutorial guidance, instruction and evaluation of final film projects from initial concept through production. May be repeated for credit. Fall.

FIL 4436 CAH-SVAD 3(3,0)
Film Theory/Film Production: PR: Junior standing and Fil 1008 or C.I. Non-narrative filmmaking demonstrating the dynamic interplay between producing, viewing, reading and writing about images. Odd Spring.

FIL 4451 CAH-SVAD 3(3,0)
Design for Film: PR: FIL 3427C, or C.I. Analysis of visual structure of film. Specific problems in art direction. Fall.

FIL 4453C CAH-SVAD 4(3,2)
Special Problems in Film Design: PR: FIL 2423 or FIL 3427C and FIL 2030. A series of exercises in craft, techniques, and design for film production, including animation. Occasional.

FIL 4472C CAH-SVAD 3(2,4)
Cinematography II: PR: Film major, FIL 3427C and FIL 2461. Advanced principles and practices of cinematography. Spring.

FIL 4486 CAH-SVAD 3(3,1)
Directing for Film II: PR: Film BFA major and FIL 2480. Principles and practice in directing narrative and/or documentary motion picture. Fall.

FIL 4487 CAH-SVAD 3(3,0)
Directing for Film III: PR: FIL 4466C. Advanced processes and techniques of directing film. Spring.

FIL 4535C CAH-SVAD 3(3,1)
Sound Design for Film II: PR: FIL 3534. An understanding of how production mixers bring the director's vision to the screen. Spring.

FIL 4536 CAH-SVAD 3(2,4)
Sound Design for Film III: PR: Film BFA or Digital Media Major and FIL 4535C. Advanced aspects of sound mixing and sound editing using advanced protocols and digital format. Occasional.

FIL 4566C CAH-SVAD 3(3,2)
Editing II: PR: FIL 2552. Theory, techniques and practices in picture editing. Fall. M&S fee $5.00

FIL 4573C CAH-SVAD 3(1,3)
Capstone II: PR: FIL 4434C. Intensive tutorial guidance, instruction and evaluation of final film projects in post production. May be repeated for credit. Spring.

FIL 4602 CAH-SVAD 3(3,0)
Film Business: PR: FIL 2423 or FIL 3427C and Junior standing and Film BFA, World Cinema, or Cinema Studies major. This is a seminar course taught by a professional in the film industry which deals with issues relating to the organization and production of motion pictures. Spring.

FIL 4615C CAH-SVAD 3(3,2)
Film Marketing and Exhibition: PR: Film BA or Film BFA major. The process of film festival marketing is examined and practiced in conjunction with local film festivals. Spring.

FIL 4647 CAH-SVAD 3(3,0)
Film Production Management: PR: ENC 1102 and Junior Standing, or C.I. Production, budgeting, script breakdown, construction of production boards, scheduling, location scouting, and crew procurement. Spring.

FIL 4661 CAH-SVAD 3(3,0)
The Film Producer: PR: FIL 2423 of FIL 3427C and Junior Standing and FIL BFA, World Cinema, or Cinema Studies major. The role of the producer is examined in the context of theatrical film. Spring.

FIL 4735C CAH-SVAD 3(2,4)
Experimental Animation: PR: "C" (2.0) or better in FIL 3035C. A study of the new possibilities offered for film and thinking about film by digitalization. Occasional.

FIL 4740C CAH-SVAD 3(3,1)
Film and Digital Genres: PR: FIL 3035C. A study of the new possibilities offered for film and thinking about film by digitalization. Occasional.

FIL 4750C CAH-SVAD 3(2,4)
Experimental Animation Workshop: PR: "C" (2.0) or better in FIL 3720C and a satisfactory portfolio review or C.I. Individual and group creation of original narrative and non-narrative animation with sound through classic, current, innovative, and hybrid analog and digital methodology. May be repeated for credit. Occasional.

FIL 4830 CAH-SVAD 3(3,0)
Motion Picture Genre: PR: FIL 2030. Analysis and evaluation of films, including their major genres, directors, styles, and periods. Occasional.

FIL 4830H CAH-SVAD 3(3,0)
Honors Motion Picture Genre: PR: Consent of Honors. Analysis and evaluation of films, including their major genres, directors, styles, and periods. With Honors consent. Occasional.

FIL 4863C CAH-SVAD 3(1,1)
Montage: PR: FIL 3075C and FIL 3076C. A study of montage primarily but not exclusively in film. Emphasizing the way montage constructs continuities and discontinuities. The course is theoretical with practical exercises. Fall.

FIL 4933 CAH-SVAD 3(3,1)
Current Problems in Film and Culture: PR: FIL 3035C. Concentration on the most recent work in film studies concerned with film in its relation to cultural issues. Occasional.

FIL 4935C CAH-SVAD 3(3,1)
Current Problems in Film Theory: PR: FIL 3035C. Concentration on the most recent work in film studies concerned with film theory. Occasional.

FIL 4939C CAH-SVAD 3(3,1)
Current Problems in Film History: PR: FIL 3035C. Concentration on the most recent work in film studies concerned with film history. Occasional.

FIL 5406 CAH-SVAD 3(3,0)
Theories of Film Production: PR: Film MFA student or C.I. Comparative analysis of motion picture production methodologies, including the studio industrial model, from a historical/critical perspective. Spring.

FIL 5414 CAH-SVAD 3(3,0)
Film Vision, Scope & Financing: PR: Acceptance to the MFA Film & Digital Media program. Exploration of the creative and business challenges filmmakers encounter when working on a screenplay, including financing, making, and distributing a digital, microbudget motion picture. Spring.

FIL 5419 CAH-SVAD 3(3,0)
Developing the Film Scriptplay: PR: Admission to MFA Film & Digital Media-Entre Dig Cin track, or C.I. Development of an existing, original screenplay to fit the demands, limits, and possibilities of the microbudget, digital film paradigm. Spring.

FIL 5800 CAH-SVAD 3(3,0)
Research Methods in Film and Digital Media: PR: Admission to Film and Digital Media graduate program or C.I. Research methodology for the study and production of film and new media. Spring.

FIL 5853 CAH-SVAD 3(3,0)
Independent Cinematic Forms: PR: Admission to MFA Film & Digital Media-Entre Dig Cin track, or C.I. Evolution of low budget independent cinematic forms through the works of modern and classical filmmakers within and beyond the studio system. Fall.

FIL 5864 CAH-SVAD 3(3,0)
Ways of Seeing: The Expressive Potential of Film: PR: Admission to MFA Film and Digital Media or C.I. A study of multidisciplinary theories that relate to the practice of filmmaking. Fall.

FIL 5924 CAH-SVAD 1(1.0)
Graduate Seminar: PR: Admission to MFA Film & Digital Media/Entrepreneurial Digital Cinema track, or C.I. Strategies for a successful graduate experience, including forum for modes of inquiry, film technique, production and distribution issues; and thesis defense preparation. May be used in the degree program a maximum of 6 times. Fall.

FIN 2100 BA-FIN 3(3,0)
Personal Finance and Investments: PR: Open to all students (majors, minors, and non-majors). An overview of personal and family financial planning. Topics include housing, investments, insurance, retirement planning, estate planning, financial services, consumer credit, and tax planning. Fall, Spring.

FIN 3303 BA-FIN 3(3,0)
Financial Markets: PR: FIN 3403 with a "C" (2.0) or better, open to majors or minors which require this course. The role of short and long term financial markets and financial institutions in capital formation and allocation. Theories and mathematics of interest rates. Fall, Spring.

FIN 3403 BA-FIN 3(3,0)
Business Finance: PR: ACG 2021 and ECO 2023 with a grade of "C" (2.0) or better. Open to non-majors or minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Understanding and interpreting financial statement data for business decisions and valuations. Fall, Spring.

FIN 3403H BA-FIN 3(3,0)
Honors Business Finance: PR: ACG 2021 and ECO 2023 with a grade of "B" (3.0) or better and consent of Honors. Open to Honors students and other students participating in the honors program. With the balance sheet as a reference point, this course provides an introduction and overview of the acquisition, financing, and management of business assets. Fall, Spring.

FIN 3414 BA-FIN 3(3,0)
Intermediate Corporate Finance: PR: FIN 3403 with a "B" (3.0) or better. Open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. In-depth study of the principles of corporate finance, investment, financing, and capital decisions are examined. Fall, Spring.

FIN 3461 BA-FIN 3(3,0)
Financial Statement Analysis: PR: FIN 3403 with a "B" (3.0) or better. Open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Understanding and interpreting financial statement data for business decisions and valuations. Fall, Spring.

FIN 4243 BA-FIN 3(3,0)
Debt and Money Markets: PR: FIN 3403 with a "B" (3.0) or better. Open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Course examines debt, money market investments, market structure, trading and valuation. Risk management introduced. Roles of banking systems, and financial institutions in fixed income markets. Fall, Spring.

FIN 4313 BA-FIN 3(3,0)
Management of Financial Institutions: PR: FIN 3403 and FIN 4030, each with a grade of "B" (3.0) or better; open to majors or minors which require this course. Analysis of management of financial institutions, including asset liability, and capital management and regulatory influence on competition is considered. Occasional.

FIN 4324 BA-FIN 3(3,0)
Commercial Bank Management: PR: FIN 4243 with a "C" (2.0) or better. Open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Analysis of the interactions of commercial banking policies and an analysis of current approaches to managing specific bank products. Fall, Spring.
FIN 4424 BA-FIN 3(3,0) Advanced Topics in Financial Management: PR: FIN 3414, FIN 4243 and FIN 4504 each with a “C” (2.0) or better; open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Advanced study of current issues in finance. Topics include capital budgeting, financial structure, and capital decisions. Case studies used extensively. Fall, Spring.

FIN 4453 BA-FIN 3(3,0) Financial Models: PR: FIN 4243 and FIN 4504, each with a “C” (2.0) or better; open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Mathematical models applied specifically to financial problems, including those models suitable for representation and solutions on computers. Fall, Spring.

FIN 4504 BA-FIN 3(3,0) Equity and Capital Markets: PR: FIN 3403 with a “B” (3.0) or better; open to majors or minors which require this course. Course examines equity investments, including market structure, trading, analysis, and valuation. Theories of efficient markets and rational investors are examined. Futures and options are introduced. Fall, Spring.

FIN 4514 BA-FIN 3(3,0) Portfolio Analysis and Management: PR: FIN 4504 with a “C” (2.0) or better; open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Portfolio and capital market theory in the determination of risk and return relationships. Risk analysis, portfolio analysis, and evaluation techniques. Fall, Spring.

FIN 4533 BA-FIN 3(3,0) Financial Derivatives: PR: FIN 4504 or FIN 4243, each with a “C” (2.0) or better; open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Options, futures, forwards, and other derivative contracts. Investments traded in these markets are examined. Pricing and hedging are considered. Fall, Spring.

FIN 4560H BA-FIN 3(3,0) Honors Applied Portfolio Management 1: PR: Consent of Honors or CI. Finance major, completion of FIN 3403, FIN 4243 and FIN 4504, each with a “B” (3.0) or better. Class size limited, enrollment must be approved by department. Student Managed Portfolio program with honors content. Provides rigorous analyses of equity portfolio management topics, including risk return, valuation, forecasting, portfolio construction, and performance appraisal. Occasional.

FIN 4561H BA-FIN 3(3,0) Honors Applied Portfolio Management 2: PR: Consent of Honors or CI. Finance major, completion of FIN 3403, FIN 4243, FIN 4504 and FIN 4560H with a “B” (3.0) or better. Class size limited, enrollment must be approved by department. Student Managed Portfolio program with honors content. Rigorous coverage of advanced portfolio management topics, including uses of derivatives, tax issues, and style investing. Occasional.

FIN 4604 BA-FIN 3(3,0) International Financial Management: PR: FIN 3403 with a “B” (3.0) or better; open to finance majors and minors, or with instructor consent which will be based on meeting qualifications for finance majors and minors. Analysis of the foreign financial methods and investment, currency futures market, capital budgeting, cash management, and Eurocurrency market and international bond markets. Fall, Spring.

FIN 4941 BA-FIN 3(3,0) Finance Internship: PR: Finance major with at least 6 hours of completed coursework in finance. 3.0 Finance major GPA, minimum overall GPA of 2.75 and consent of internship coordinator. Supervised finance work experience in a pre-approved sponsoring organization. See department for information and application. Graded S/U. Fall, Spring.
FRW 3101 CAH-LANG 3(3,0)
Survey of French Literature I: PR: FRE 2201 or equivalent. A study in the major literary movements and works of the 19th and 20th centuries. Spring.

FRW 3370 CAH-LANG 3(3,0)
Short Stories of 18th, 19th and 20th Centuries: PR: FRE 2201 or equivalent. Selected readings designed to increase reading speed and develop analytical skills. Authors include: Voltaire, Maupassant, Flaubert, Camus, and others. Occasional.

FRW 3740 CAH-LANG 3(3,0)

FRW 3752 CAH-LANG 3(3,0)
French Caribbean Literature: PR: FRE 2201 or equivalent. Literature of the French speaking Caribbean from colonial times to the present, in French. Occasional.

FRW 3760 CAH-LANG 3(3,0)

FRW 3770 CAH-LANG 3(3,0)
Françafrique I: Contemporary: PR: FRE 2201. The literature of the Francophone world. Students will read, analyze and discuss literary works written in French. Even Spring.

FRW 3810 CAH-LANG 3(3,0)
French Literary Texts and Analysis: PR: FRE 2201. A study of the major works of French literature from the Middle Ages to the present. Course is conducted in French. Fall.

FRW 4281 CAH-LANG 3(3,0)
20th Century French Novels: PR: FRW 3100 or FRW 3101 or equivalent. Contemporary French Novel. Will focus on post-war authors, both traditional and avant-garde, such as Bazin, Beckett, Butor, Camus, Mauriac, Malraux and Saramou. Occasional.

FRW 4310 CAH-LANG 3(3,0)

FRW 4324 CAH-LANG 3(3,0)
20th Century French Drama: PR: FRW 3100 or FRW 3101 or equivalent, or C.I. Concentration on traditional and avant-garde theater after WWII, such as the works of Beckett, Camus, Claudel, Carioude, Ionesco, and Sartre; different literary approaches will also be used. Occasional.

FRW 4380 CAH-LANG 3(3,0)

FRW 4440 CAH-LANG 3(3,0)

FRW 4522 CAH-LANG 3(3,0)

FRW 4525 CAH-LANG 3(3,0)

FRW 4820 CAH-LANG 3(3,0)

FSS 2221C RCHM-FOOD&LODG 4(3,3)
Techniques of Food Preparation: PR: HFT 1000. Basic principles and practice of food and beverage preparation, service, and menu development. Fall.Spring, M&S fee $70.00

FSS 2284C RCHM-FOOD&LODG 4(3,3)
Food Preparation for Catered Events: PR: HFT 1000. Basic principles and practice of food preparation and menu development for catered events. Methods and procedures for on and off premise catered events. Fall.Spring. M&S fee $70.00

FSS 3008 RCHM-FOOD&LODG 3(3,0)
Culture and Cuisine: PR: HFT 1000 and FSS 2221C. The major historical and geographical developments that have affected the creation of the cuisines of the world. Occasional. M&S fee $35.00

FSS 3124 RCHM-FOOD&LODG 3(3,0)
Food Supply Chain Management: PR: HFT 1000, FSS 2221C, S 3263 and Junior standing. Planning and management activities involved in sourcing, procurement, logistics, sustainability, commodities markets, and social responsibility as related to food products and services. Fall.Spring. M&S fee $45.00

FSS 3232C RCHM-FOOD&LODG 3(1,3)
Foodservice Operations Management: PR: HFT 1000, FSS 2221C. An integrated approach that combines theory and application in providing students the opportunity to practice their skills in menu planning, food preparation, and customer service. Laboratory class, Occasional. M&S fee $70.00

FSS 4135 RCHM-FOOD&LODG 3(3,0)
Corporate Contract and Managed Services Organizations: PR: HFT 3263 and Junior standing. The unique characteristics of managed services including contracting, commodity purchasing, pricing, and revenue management. Occasional.

FSS 4286C RCHM-FOOD&LODG 3(1,3)
Catering Management: PR: HFT 1000, FSS 2221C, S 3263, and Junior standing. The creation and execution of successful on-premise catered events. Emphasis on hands on menu planning and design, food preparation, and various service styles. Occasional. M&S fee $70.00

GEA 3403 CAH-LAS 3(3,0)
Human Geography of Latin America: PR: ENC 1102 or C.I. Populations, hemispheric interdependence, and international business. Same as CAH-LAS 318.

GEA 3404 CAH-LAS 3(3,0)
Migration Trends in Latin America: PR: ENC 1102 or C.I. Migration trends in Latin America and the impact that migration has had on the Americas. Spring.

GEA 3455 CAH-LAS 3(3,0)
Geography of Brazil: PR: ENC 1101 or C.I. Geophysical, cultural, economic, and social characteristics and processes of Brazil. Fall.

GEA 4405 CAH-LAS 3(3,0)
Geography of Latin America: PR: ENC 1102 or C.I. Geography of Latin America and the Caribbean, including geophysical, cultural, economic, and social characteristics and processes. Occasional.

GEA 4405H CAH-LAS 3(3,0)
Honors Geography of Latin America: PR: ENC 1102H or equivalent. Consent and credit on Honors Geography of Latin America and the Caribbean, including geophysical, cultural, economic, and social characteristics and processes. With honors consent. Spring.

GEB 2350 BA-MAR 3(3,0)
Foundations of Business: Introduction to the U.S. business system and the role it plays in a global economy. Fall.

GEB 3003 BA-MAN 1(1,0)
Career Research & Planning: PR: Admission to the College of Business. Designed to provide a basic understanding of the importance of career professionalism in today's competitive business environment. The course focuses on self-awareness and career research and planning. Fall.Spring.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Department</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEB 4522</td>
<td>BA-BA Data Driven Decision Making</td>
<td>3(3,0)</td>
<td>Business</td>
<td>View</td>
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<tr>
<td>GEB 4524</td>
<td>Business Law for Business Administration</td>
<td>3(3,0)</td>
<td>Business</td>
<td>View</td>
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<tr>
<td>GEB 4934</td>
<td>Business Administration and Entrepreneurship</td>
<td>0(0,1)</td>
<td>Business</td>
<td>View</td>
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<tr>
<td>GEB 5516</td>
<td>Technological Entrepreneurship</td>
<td>3(3,0)</td>
<td>Business</td>
<td>View</td>
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<tr>
<td>GEB 5941</td>
<td>Professional Business Practicum</td>
<td>3(3,0)</td>
<td>Business</td>
<td>View</td>
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<tr>
<td>GEO 1200</td>
<td>COS-POLS Physical Geography</td>
<td>3(3,0)</td>
<td>Geography</td>
<td>View</td>
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<tr>
<td>GEO 2370</td>
<td>COS-POLS Resources Geography</td>
<td>3(3,0)</td>
<td>Geography</td>
<td>View</td>
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<tr>
<td>GEO 3471</td>
<td>COS-POLS World Political Geography</td>
<td>3(3,0)</td>
<td>Geography</td>
<td>View</td>
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<tr>
<td>GEO 3473</td>
<td>COS-POLS Honors World Political Geography</td>
<td>3(3,0)</td>
<td>Geography</td>
<td>View</td>
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<tr>
<td>GER 1120C</td>
<td>CAH-LANG Honors Elementary German Language and Civilization I</td>
<td>4(4,1)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 1120C</td>
<td>CAH-LANG Honors Elementary German Language and Civilization II</td>
<td>4(4,1)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 2200</td>
<td>CAH-LANG Intermediate German Language and Civilization I</td>
<td>3(1,1)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 2201</td>
<td>CAH-LANG Intermediate German Language and Civilization II</td>
<td>3(1,1)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 3102</td>
<td>CAH-LANG Germany - Past to Present</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 3420</td>
<td>CAH-LANG Intermediate German Language Composition</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 3760</td>
<td>CAH-LANG Advanced German Oral Communication</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 4510</td>
<td>CAH-LANG Life and Culture in Nazi Germany</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<td>GER 4520</td>
<td>CAH-LANG Modern Germany</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 4950</td>
<td>CAH-LANG Modern Germany</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 5007</td>
<td>CAH-LANG Women and Healthy Aging</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GER 5600</td>
<td>ED-CFCS Physiology of Aging</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<td>GER 6059</td>
<td>HPA-SOWK Honors Elementary German Language and Civilization I</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
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<td>GER 6068</td>
<td>HPA-SOWK Honors Elementary German Language and Civilization II</td>
<td>3(3,0)</td>
<td>Modern Language and Culture</td>
<td>View</td>
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<tr>
<td>GIS 3043C</td>
<td>UGST-INTERDISC GIS for Environmental Studies</td>
<td>3(2,2)</td>
<td>Geoscience and Environmental Science</td>
<td>View</td>
</tr>
<tr>
<td>GIS 4301C</td>
<td>UGST-INTERDISC Advanced GIS Applications in Environmental Studies</td>
<td>4(2,2)</td>
<td>Geoscience and Environmental Science</td>
<td>View</td>
</tr>
</tbody>
</table>

- **UCF Courses and Descriptions**: This section provides a detailed list of courses offered at the University of Central Florida, including course codes, titles, credits, departments, notes, and other relevant information. The courses cover a wide range of disciplines, from business and management to modern language and culture, and environmental science. Each course is represented in a tabular format for easy reference and viewing.
GRA 4197C CAH-SVAD 3(2,4) Special Problems in Graphic Design. PR: GRA 4196C. Course in Graphic Design emphasizing the development of a professional portfolio. May be used in the degree program a maximum of 2 times. Spring. M&S fee $45.00

GRA 4802C CAH-SVAD 3(2,4) Advanced Computer Graphic Design. PR: GRA 4197C and GRA 3802C. Graphic design techniques and methods related to motion graphics. Odd Fall, Spring. M&S fee $15.00

HBR 1120 CAH-JUD 3(3,0) Modern Israeli Hebrew I: PR: none. Teaches basic language skills, listening, speaking, reading and writing with an emphasis on the practical knowledge of Hebrew as used in modern Israel. Fall.

HBR 1121 CAH-JUD 3(3,0) Modern Israeli Hebrew II: PR: HBR 1120 or equivalent. A continuation of the basic language skills, listening, speaking, reading and writing with an emphasis on the practical knowledge of Hebrew as used in modern Israel. Spring.

HBR 2200 CAH-JUD 3(3,0) Intermediate Modern Israeli Hebrew I: PR: HBR 1121 or equivalent. Designed to continue the study of Modern Hebrew. Focuses on the increase proficiency in conversation, reading and writing skills, and further exposes students to the modern Israeli culture. Fall.

HBR 2201 CAH-JUD 3(3,0) Intermediate Modern Israeli Hebrew II: PR: HBR 2200. Further development of modern Hebrew language, emphasis on reading, writing, and using as used in modern Israel. Spring.


HBR 3410 CAH-JUD 3(3,0) Conversational Israeli Hebrew: PR: HBR 1120, HBR 1121 or equivalent, C.I. Study and practice of modern Israeli Hebrew. Spring.

HFT 1000 RCHM-TEA 3(3,0) Introduction to the Hospitality and Tourism Industry: An orientation to the hotel, restaurant, and travel industry, and its history, structure, and operating procedures. Fall, Spring.

HFT 2071 RCHM-TEA 3(3,0) Hospitality Human Resources Management: Application of strategic principles of human resources to the hospitality tourism setting. Fall, Spring.

HFT 2220 RCHM-TEA 3(3,0) Lodging Operations: PR: HFT 1000. Basic principles of operating a lodging facility including accounting, housekeeping, engineering, front desk, and guest services. Fall, Spring.


HFT 2500 RCHM-TEA 3(3,0) Digital Marketing in Entertainment: PR: HFT 2071. Investigate the role of digital and mobile marketing and the most successful techniques associated with these marketing approaches in the entertainment industry. Fall, Spring.
HFT 3785 RCHM-TEA 3(3,0)
Management of Gaming Enterprises: PR: Junior level standing, an in-depth study of gaming-based organizations including cruise ships, Indian reservation casinos, and others. The history and development of gaming organizations, the economics, social, and cultural impact of gaming and managerial challenges and opportunities in the industry. Occasional.

HFT 3798 RCHM-TEA 3(3,0)
Fairs and Festivals: PR: HFT 2750. Evolution of modern day fairs and festivals. Fall, Spring.

HFT 3811 RCHM-FOOD&LODG 3(3,0)
Beverage Sales, Marketing, and Distribution: PR: HFT 1000 and HFT 2500. The complex world of beverage sales, marketing and distribution, including brand management, legal issues, and the roles of producers, importers, wholesalers, retailers, and hospitality outlets. Spring.

HFT 3813 RCHM-FOOD&LODG 3(3,0)
Marketing Analysis in the Food Ind: PR: HFT 2500 and C.I. A study of marketing concepts and analytic tools to develop strategies for “real-life” marketing challenges in the food industry. Occasional.

HFT 3868 RCHM-FOOD&LODG 3(3,0)
History and Culture of Wine: PR: Minimum age of 21 or C.I. The role that wine has played in the history, culture, and religion of diverse civilizations. Occasional. M&S fee $70.00

HFT 3933 RCHM-RCHM 1(1,0)
Distinguished Lectures in Hospitality Management: PR: HFT 1000, Junior standing. First hand introduction to hospitality leaders, their perspectives on the segments they represent, and the breadth of those segments. Graded S/U. Fall, Spring.

HFT 3949 RCHM-RCHM 0-5(0/1.5)
Cooperative Education: Provides paid, pre-professional work experience related to the students’ major while they continue to attend school. Requires achievement of major-related learning objectives. Graded S/U. Fall, Spring.

HFT 4065 RCHM-FOOD&LODG 3(3,0)
Fine Spirits Management: PR: HFT 1000 and all levels of Hospitality. This course is designed to familiarize the student with the production, aroma/taste, profiles, branding, advertising, sales, distribution, laws, regulations, and responsible practices of distilled spirits. Occasional. M&S fee $45.00

HFT 4208C RCHM-FOOD&LODG 3(3,1)
Hospitality Operations: PR: Junior Standing or C.I. An integration of lodging and food service operations providing students with a comprehensive knowledge of these related content areas; food service lab component. Occasional.

HFT 4253 RCHM-FOOD&LODG 3(3,0)
Advanced Lodging Operations: PR: HFT 2254, HFT 2500, HFT 3431, HFT 3603 and Junior Standing. Advanced case study course based on interaction with hotels, timeshares, shared ownership properties, and other sleeping accommodations. Exposes course participants to real life operational situations. Spring.

HFT 4255 RCHM-FOOD&LODG 3(3,0)
Advanced Hotel Development: PR: HFT 4464, HFT 4473, or C.I. Hotel investment practices, risk management and other investment decision factors. Occasional.

HFT 4266 RCHM-FOOD&LODG 3(3,0)
Hospitality Brand Management: PR: HFT 3263 or HFT 2254, and HFT 2500 and Junior standing or C.I. Exploration of the principles of brand management for restaurants and foodservice, hotels, timeshares and shared ownership properties. Fall, Spring.

HFT 4268 RCHM-FOOD&LODG 3(3,0)

HFT 4274 RCHM-FOOD&LODG 3(3,0)
Resort Management: PR: HFT 1000, HFT 2254, or C.I. Comprehensive analysis of applied theories, principles and techniques in the development of total resorts, and shared ownership/timeshare properties. Spring.

HFT 4275 RCHM-FOOD&LODG 3(3,0)

HFT 4277 RCHM-TEA 3(3,0)
Club Management: PR: HFT 1000 and junior standing or C.I. A study of the history, development, operation, management of club facilities, emphasis will be placed on operational aspects. Occasional.

HFT 4281 RCHM-FOOD&LODG 3(3,0)

HFT 4286 RCHM-HSP SERV 3(3,0)
Hospitality Communications: PR: HFT 1000; HFT 2250; HFT 3500 and Junior standing. Communication exchanges in the hospitality industry for effective presentations, conflict resolution, and report writing. Emphasis on inter departmental dependence by managers in hospitality enterprises in the areas of reading, writing, speaking, and listening. Fall, Spring.

HFT 4295 RCHM-HSP SERV 3(3,0)
Leadership and Strategic Management in Hospitality Industry: PR: Senior standing; PR: C.I. A study of the leadership and strategic decision making in various hospitality and tourism organizations; lectures, class discussions, and group case analysis presentations. Fall, Spring.

HFT 4343 RCHM-HSP SERV 3(3,0)
Hospitality Facilities Management: PR: HFT 1000, HFT 2254, or C.I. Organizational behavior, C.I. Principles of facility planning, layout, design, and physical plant characteristics for hotels, timeshares and shared ownership properties, restaurant and foodservice and other hospitality related venues. Fall, Spring.

HFT 4358 RCHM-TEA 3(3,0)

HFT 4375 RCHM-TEA 3(3,0)
Advanced Trade Show Management: PR: HFT 4754 or C.I. Trade show installation, floor management and dismantling/shipping. Pre-event logistics and on-site management of critical success factors. Occasional.

HFT 4377 RCHM-TEA 3(3,0)
Entertainment Production Management: PR: HFT 3376 (deleted). Course examines the knowledge and skills necessary to design, execute and operate an entertainment business model, including visual storytelling, entertainment content, production plan, and budget. Fall, Spring.

HFT 4378 RCHM-TEA 3(3,0)
Entertainment Portfolio Management: PR: All core Entertainment Management courses. This course challenges the student to demonstrate expert knowledge across the curricula while building a real-life actionable entertainment business plan. Fall, Spring.

HFT 4394 RCHM-TEA 3(3,0)
Event Operations: PR: Senior standing Planning and implementing a live event. Fall, Spring. M&S fee $64.00

HFT 4398 RCHM-TEA 3(3,0)
Entertainment Entrepreneurship: PR: HFT 3376, HFT 3375, and ECO 2013 or ECO 2023. This course focuses on the risk, management, and development of a new entertainment business, specifically the financial aspects, strategic analysis, and market risk. Odd Fall.

HFT 4413 RCHM-HSP SERV 3(3,0)
Technology Applications for Hospitality Management: PR: HFT 3444 Hospitality Information Systems. Provides students with fundamental information system concepts and techniques for effective applications to strategic thinking in hospitality organizations. Odd Spring.

HFT 4432 RCHM-HSP SERV 3(3,0)
Hospitality Industry Auditing: PR: HFT 3431. Hospitality Industry Managerial Accounting. Provides basic fundamentals of eliminating fraud and saving money through proper internal controls in the hospitality industry. Fall.

HFT 4457 RCHM-HSP SERV 3(3,0)
Optimizing Profits in Food Ops: PR: HFT 3253, HFT 3431, and Junior standing. Provides students realistic and contextually rich situations for understanding the cost elements and profit contributors in food operations. Occasional.

HFT 4464 RCHM-HSP SERV 3(3,0)
Hospitality Industry Finance: PR: HFT 2401, HFT 2254, HFT 2500, and HFT 3263. Revenue management practices, across multiple industry sectors, in hospitality and tourism organizations which include capacity management, demand and revenue forecasting, discounting, over selling, displacement, rate management. Fall, Spring.

HFT 4469 RCHM-TEA 3(3,0)
Financial Performance in Entertainment: PR: HFT 3463. Working knowledge of finance concepts and theories applicable to the hospitality industry including evaluating management contracts, franchising, and leasing. Fall, Spring.

HFT 4473 RCHM-FOOD&LODG 3(3,0)
Hospitality and Tourism Development: PR: HFT 2254 or HFT 3263, HFT 2500, HFT 2401, and Junior standing. Review of conceptual development, planning, development, and construction of hotel, resort, recreation, restaurant, theme park, and conference/convention center projects for both domestic and global destinations. Spring.

HFT 4522 RCHM-FOOD&LODG 3(3,0)
Resort Sales Tactics and Strategies: PR: HFT 1000, HFT 2254, or C.I. Sales tactics and business-to-business strategies employed in the sales and marketing of resort hotels, timeshares, and shared ownership properties. Fall.

HFT 4561 RCHM-TEA 3(3,0)
Destination Marketing & Management: PR: HFT 3700. Covers principles, issues, strategies and processes in destination marketing and management including planning, developing, distributing and evaluating destination products, by managing relations with diverse stakeholders. Fall, Spring.

HFT 4614 RCHM-TEA 3(3,0)
Risk Management in Theme Parks and Attractions: PR: HFT 4755 and HFT 3603; or C.I. Examines principles and issues related to the nature and mitigation of risks at theme parks and attractions. Covers all theme park operating departments. Occasional.

HFT 4623 RCHM-TEA 3(3,0)
Entertainment Law and Ethics: PR: HFT 3376, HFT 3375, and HFT 3795. The course focuses on the main legal and ethical issues affecting the entertainment industry. Fall, Spring.
HFT 4752 RCHM-TEA 3(3,0)

HFT 4754 RCHM-TEA 3(3,0)
Exhibit and Trade Show Operations: PR: HFT 2750 or C.I. Provides an in-depth study of exhibit and trade show operations. Focuses on both supply and demand pertaining to exhibits and trade shows. Fall, Spring.

HFT 4755 RCHM-TEA 3(3,0)
Theme Park and Attraction Industry: PR: HFT 4755 and junior standing or C.I. An in-depth study of the theme park and attraction industry, focusing on resources, ride operations, merchandising, food services, and architectural design Fall, Spring.

HFT 4757 RCHM-TEA 3(3,0)
Event Management: PR: All courses in the Event Management core, or C.I. The development, design, and evaluation of events that meet stakeholder needs and expectations. Incorporates a case study approach. Requires event volunteer hours approved by instructor. Fall, Spring.

HFT 4758 RCHM-TEA 3(3,0)
Operational Issues in the Theme Park and Attraction Industry: PR: HFT 4755. Organizational structure and operational culture of theme parks and attractions Fall.

HFT 4759 RCHM-TEA 3(3,0)
Product Development in Theme Parks and Attractions: PR: HFT 4755 and junior standing or C.I. The strategic management process associated with product development in the theme parks and attraction industry. Occasional.

HFT 4762 RCHM-TEA 3(3,0)

HFT 4795 RCHM-TEA 3(3,0)
Entertainment Arts and Events: PR: HFT 2750 and HFT 4755 of C.I. A historical perspective of theme park, event, and attractions specifically. Course objectives are to provide a unique insight into the world of entertainment: show development, event production, creative process, casting, costume, styling, and evaluation. Odd Fall.

HFT 4796 RCHM-TEA 3(3,0)
International Events: PR:HFT 2750. Considerations when planning events that are held outside of the United States or that attract a large number of participants from outside the United States. Fall, Spring.

HFT 4802 RCHM-TEA 3(3,0)
Catering Services Management: PR: HFT 2750, HFT 3523, HFT 3670, and FSS 2284C, or C.I. The catering manager's role in the catering sales process. Emphasis on market segments, customer relationships, menu planning, financial impact, internal communication/documentation and event oversight. Fall, Spring. M&S fee $45.00

HFT 4861 RCHM-FOOD&LOGD 3(3,0)
Beverage Management: PR: HFT 1000 and junior standing. The origin production, storing, marketing, and control of beverages in the hospitality industry. Fall, Spring.

HFT 4864 RCHM-FOOD&LOGD 3(3,0)
Seminar in Marketing and Fine Wine Buying: PR: HFT 1000, minimum age of 21 by first day of class. The production and service of malt beverages. Fall, Spring. M&S fee $45.00

HFT 4865 RCHM-FOOD&LOGD 3(3,0)
Advanced Wine Management: PR: Minimum age of 21. Fall, Spring, or HFT 4866C, or C.I. Advanced study of viticulture, enology and wine regions of the world. Occasional. M&S fee $70.00

HFT 4866C RCHM-FOOD&LOGD 3(1,5)
Exploring Wines of the World: PR: HFT 1000, minimum age of 21 by first day of class, or C.I. Using senses to evaluate wines, methodology of tasting and evaluating wines, growing, processing, and production of grape varieties used in making wine. Fall, Spring. M&S fee $70.00

HFT 4894 RCHM-FOOD&LOGD 3(3,0)
International Gastronomy: PR: FSS 2221C, HFT 1000, and C.I. A world view of culture and cuisine that includes an international travel component. May be used in the degree program a maximum of 2 times. Occasional.

HFT 4949 RCHM-RCRM 5(0-1,5)
Cooperative Education: Provides paid, pre-professional work experience related to the students' major while they continue to attend school. Requires achievement of major-related learning objectives. Graded S/U. Fall, Spring.

HIM 3006 HPA-PMI 3(3,0)
Foundations of Health Information Management (HIM): PR: ENC 1102. Foundation of profession; release of information; record analysis; numbering and filing systems; standards for long-term care; ambulatory care; and mental health records. Fall, Spring.

HIM 3116C HPA-PMI 4(3,2)
Health Record Organization and Management: PR: HIM 3006 and acceptance into the upper-division limited access HIM program; or C.I. Nomenclature, documentation and indices; search and vital statistics; data analysis and presentation; indexing; computer abstracting; accrediting and approving agencies; medical staff organization. Spring.

HIM 3806C HPA-PMI 3(1,4)
Professional Practice Experience I: PR: Admission to HIM program. CR: HIM 3006, HSC 3537 and HIM 3116C. Virtual hospital tour; master patient index; numbering and filing systems; assembly and analysis; incomplete record control, record storage, retention and retrieval; and release of information. Fall, Spring.

HIM 4226C HPA-PMI 5(3,4)
Coding Procedures I: PR: HSC 3537 or C.I. Principles and mechanics of coding systems for inpatient health information retrieval; ICD-9-CM; DRGs; encoders. Fall, Spring.

HIM 4256C HPA-PMI 3(2,2)
Coding Procedures II: PR: HSC 3537 or C.I. Principles and mechanics of coding systems for outpatient health information retrieval; CPT/HCPCS; APCs; encoders. Fall.

HIM 4344C HPA-PMI 4(3,2)
Health Information Department Management: PR: HIM 3116C; HSA 4180 or MAN 3025; or C.I. Professional administration; managing: forms analysis; work distribution and simplification; equipment selection; ergonomics and space planning. Fall.

HIM 4508C HPA-PMI 3(2,2)
Quality Management: PR: HSC 3537 or C.I. Principles and mechanics of quality improvement; utilization review; case management and risk management. Fall, Spring.

HIM 4624 HPA-PMI 3(0,0)
Health Data Management: PR: Acceptance into HIM program or C.I. Health care statistics, data principles and specific to health informatics and information management will be explored in depth. Spring.

HIM 4656C HPA-PMI 3(2,2)
Health Information Management Systems: PR: or CR: HIM 3006. Vitalization of computerized information systems; management and patient care in the health care industry; systems analysis, system design and project management concepts. Fall, Spring.

HIM 4676 HPA-PMI 3(3,0)
Professional Development and Issues in Health Information Management: PR: HIM 3444C, HIM 4508C. Analysis of management functions in health care setting; the HIM professional as an educator; problem-solving techniques; professional ethics; alternative careers. Spring.

HIM 4726 HPA-PMI 3(3,0)
ICD Procedure Coding: PR: ZOO 3733C (human anatomy) and HSC 3537 (medical terminology) This course introduces students to the International Classification of Diseases Procedural Coding System, the structure of codes, and how to build codes using coding guidelines. Fall.

HIM 4816C HPA-PMI 3(1,4)
Reserved Date Practice Experience II: PR: HIM 3806C and CR: HIM 4226C, HIM 4256C, HIM 4344C, and HIM 4508C. Transcription; coding; quality improvement; risk management; human resources, statistics; accrediting and licensing; revenue management cycle; medical staff organization. Fall, Spring.

HIM 4838 HPA-PMI 5(0,15)
Management Affiliation: PR: or CR: HIM 4676 and HIM 4818C. Assignment to a selected health care facility serving in an administrative capacity under the direction of a Registered Health Information Administrator; lab exercises; comprehensive exam. Fall, Spring.

HIM 4998 HPA-PMI 0(0,0)
Internship Orientation: PR: HIM 3116 and senior standing. An orientation course designed to ensure students fully prepare for and identify and secure an ideal HIM internship. Fall, Spring.

HIM 5118C HPA-PMI 4(3,1)
Health Care Informatics and Information Technology: PR: Admission to M.S. in Health Care Informatics or C.I. An overview of the current state of health care informatics including existing and future technologies. Areas of emphasis include EHR, HIE, Standards, and clinical decision making. Fall.

HIS 3081 CAH-HIST 3(3,0)
History Museums & Digital Spaces: PR: AMH 2010 and AMH 2020 or C.I. Introduces students to the principles, theories and methods related to curating historical objects, content and photos in a modern media environment. Even Spring.

HIS 3462 CAH-HIST 3(3,0)
UCF Courses and Descriptions

HSA 5509  HPA-HMI  3(3,0)
Health Care Risk Management I: PR: Admission to M.S. in Healthcare Administration or C.I. Examination background, history and philosophy of health care risk management. The Health Care Risk Management course is comprised of a total of 12 modules addressing key areas of the field. Health Care Risk Management I covers Modules 1-6 and Health Care Risk Management II covers Modules 7-12. Students must complete both courses in sequential order in order to apply for Risk Management licensure. Fall, Spring.

HSA 5937  HPA-HMI  3(3,0)
Health Care Risk Management II: PR: HSA 5509 The Health Care Risk Management course is comprised of a total of 12 modules addressing key areas of the field. Health Care Risk Management I covers Modules 1-6 and Health Care Risk Management II covers Modules 7-12. Students must complete both courses in sequential order in order to apply for Risk Management licensure. Occasional.

HSC 1931C  HPA-HPA  2(1,1)

HSC 2000  HPA-HP  3(3,0)
Introduction to Careers in Health Professions: PR: Freshman and Sophomores only. A survey of careers in health professions with regard to duties, responsibilities, education and training, ethics, and relationships with other health professionals. Graded S/U. Fall.

HSC 2524  HPA-HP  3(3,0)
Introduction to Human Disease: PR: BSC 2010C or with a grade of "C" (2.0) or better. Restricted to COHPA majors or C.I. Basic concepts and mechanisms related to the understanding of human disease. Fall, Spring.

HSC 2921  HPA-HPA  2(2,0)
LEAD Colloquium: PR: Accepted to the LEAD Scholars Program and have completed at least two of the following with a B (3.0) or better: HSC 1931C, EGS 1036C, IDS 1040C, GEB 1091C or EDG 1005C. Experiential learning in an appropriate setting with the LEAD Scholars Program. May be repeated for credit. Occasional.

HSC 3102  HPA-HP  3(3,0)
Foundations of Health Behavior: PR: STA 2023 with a grade of "C" (2.0) or better and junior standing. Basic concepts of pharmacology including terminology, regulations and use of drugs in human disorders. Fall, Spring.

HSC 3110  HPA-HP  3(3,0)
Medical Self Assessment: PR: Sophomore Standing. Development of clinical skills and understanding of one’s health to encourage active participation of individuals in their own health care. Fall, Spring.

HSC 3147  HPA-HP  3(3,0)
Introduction to Pharmacology: PR: BSC 2010C with a grade of "C" (2.0) or better and sophomore standing. Basic concepts of pharmacology including terminology, regulations and use of drugs in human disorders. Fall, Spring.

HSC 3211  HPA-HP  3(3,0)
Preventive Health Care: PR: PCB 3703C with a grade of "C" (2.0) or better. Preventive healthcare in the U.S., including current recommendations and guidelines to prevent disease and application of preventive interventions to specific chronic diseases. Fall, Spring.

HSC 3432  HPA-HP  3(3,0)
Occupational Safety for the Health Care Professional: PR: ZOO 3733C and PCB 3703C each with a grade of "C" (2.0) or better. Issues surrounding the health care environment and the risks associated with working there. Fall, Spring.

HSC 3537  HPA-HP  3(3,0)
Medical Terminology: A study of the language of: medicine, and allied health specialties, including work construction, definitions, and application of terms. Fall, Spring.

HSC 3559  HPA-COM S&ADIS  3(3,0)
Disabilities in American Society: PR: Junior or senior status. Personal, social, and environmental impediments faced by health care consumers, chronically ill, administrators and health care facilities. Fall, Spring.

HSC 3593  HPA-HP  3(3,0)
HIV Disease: A Human Concern: Analysis of the spectrum of HIV disease and the issues surrounding this public health crisis. Fall, Spring.

HSC 4008  HPA-HP  3(3,0)
Professional Development in Health Professions: PR: ENC 1102 and Junior Standing. Career development planning, professional leadership approaches to problem solving, regulatory and professional requirements. Fall, Spring.

HSC 4158  HPA-HP  3(3,0)
Medical Pharmacology I: PR: BSC 2010C and CHM 2045C each with a grade of "C" (2.0) or better. General pharmacological principles such as regulations, prescriptions, routes of administration, drug mechanisms of action, indications/contraindications, and the side effects. Fall.

HSC 4159  HPA-HP  3(3,0)
Medical Pharmacology II: PR: HSC 4158 with a grade of "C" (2.0) or better. Mechanism of drug action used in treatment of the nervous, cardiovascular, endocrine, and immune systems. Spring.

HSC 4201  HPA-HP  3(3,0)
Community Health: PR: ENC 1102 and Junior Standing, or C.I. Historical, sociocultural and economic factors in community health; current community health problems; interphase of governmental, voluntary and private agencies. Fall, Spring.

HSC 4500  HPA-HP  3(3,0)
Epidemiology: PR: HSA 3111 and (STA 2014C or STA 2023), or C.I. A study of the distribution and determination of diseases and injuries in human population. Fall, Spring.

HSC 4501  HPA-HP  3(3,0)
Epidemiology of Chronic Diseases: PR: ZOO 3733C, PCB 3703C, and (STA 2014C or STA 2023). Epidemiology of chronic diseases including risk factors, etiologic, mortality and morbidity as they relate to clinical practice, research, and intervention. Occasional.

HSC 4553  HPA-HP  3(3,0)
Concepts in Pharmacological Diagnosis: PR: (HSC 4555 or HSC 4558) with a C (2.0) grade or better, and Senior standing. Basic principles of diagnosis with a focus on methodology and relevance to pathophysiology. Occasional.

HSC 4555  HPA-HP  3(3,0)
Pathophysiology I: PR: ZOO 3733C and PCB 3703C each with a grade of "C" (2.0) or better. Abnormalities in physiologic functioning of the human body, with focus on the etiology, pathogenesis and clinical manifestations of the immune, cardiovascular, respiratory, and renal systems. Fall, Spring.

HSC 4558  HPA-HP  3(3,0)
Pathophysiology II: PR: PCB 3703C and ZOO 3733C each with a grade of "C" (2.0) or better. Abnormalities in physiologic functioning of the human body, with focus on the etiology, pathogenesis and clinical manifestations of the digestive, hepatobiliary, nervous, and endocrine systems. Fall, Spring.

HSC 4564  HPA-HP  3(3,0)
Health Care Needs of the Elderly: PR: HSA 3111 or C.I. Overview of the physical and emotional needs of the elderly, including the institutional health care available. Fall, Spring.

HSC 4572  HPA-HP  3(3,0)
Clinical Nutrition: PR: HUN 2201 with a grade of "C" (2.0) or better. Basic principles of both normal and medical nutrition therapy associated with health and chronic diseases of public health importance. Fall, Spring.

HSC 4652  HPA-HP  3(3,0)
Health Law and Ethics: PR: ENC 1102 and Junior Standing, or C.I. Overview of the legal and ethical principles and codes faced by health care consumers, practitioners, administrators and health care facilities. Fall, Spring.

HSC 4730  HPA-HP  3(3,0)
Applied Health Research Methodology: PR: STA 2023 with a grade of "C" (2.0) or better and junior standing. Clinical research issues including: clinical research questions, protocol, patient safety, IRB, ethics and patient rights. Occasional.

HSC 4930  HPA-HP  3(3,0)
Health Sciences Seminar: PR: Senior standing and Health Sciences major Care and graduate school preparation, and application for clinical and translational research in healthcare. Fall, Spring.

HSC 4943  HPA-HP  3(0.0-12)
Health Sciences Internship: PR: Junior standing, 3.5 UCF GPA, HSC 4555 or HSC 4558, and approval of the Program Director. Provides students with an opportunity to apply their academic knowledge in various professional healthcare environments. Internship sites include clinical shadowing, research, and other community outreach opportunities. Occasional.

HUM 2020  CAH-PHL  3(3,0)
Encountering the Humanities: The range of ideas, research methods and approaches to scholarship, critical reflection, and creative work in the humanities. Spring.

HUM 2020H  CAH-PHL  3(3,0)
Honors Encountering the Humanities: PR: Consent of Honors. The range of ideas, research methods and approaches to scholarship, critical reflection, and creative work in the humanities with honors content. Fall, Spring.

HUM 2210  CAH-PHL  3(3,0)
Humanistic Tradition I: An interdisciplinary, multicultural study of the arts and sciences contributed by diverse human traditions to world civilization. Focus is on ancient civilizations and the cultural heritage stemming from them. Primary sources (in translation) are emphasized. Fall, Spring.

HUM 2210H  CAH-PHL  3(3,0)
Honors Humanistic Tradition I: PR: Permission of Honors. An interdisciplinary, multicultural study of the arts and sciences contributed by diverse human traditions to world civilization. Focus is on ancient civilizations and the cultural heritage stemming from them. Primary sources (in translation) are emphasized. Honors content. Fall.

HUM 2230  CAH-PHL  3(3,0)
Humanistic Tradition II: An interdisciplinary, multicultural study of the arts and sciences contributed by diverse human traditions to world civilization. Focus is on modern civilizations and their contributions to the Global Village. Primary sources (in translation) are emphasized. Fall, Spring.

HUM 2230H  CAH-PHL  3(3,0)
Honors Humanistic Tradition II: PR: Permission of Honors. An interdisciplinary, multicultural study of the arts and sciences contributed by diverse human traditions to world civilization. Focus is on modern civilizations and their contributions to the Global Village. Primary sources (in translation) are emphasized. Honors content. Spring.

HUM 2352  CAH-PHL  3(3,0)
Contemporary Humanities: PR: Any HUM course or C.I. Multicultural study of Philosophy and the arts of the 20th century. Occasional.

HUM 2355  CAH-PHL  3(3,0)
Modern Humanities: PR: Any HUM course or C.I. Multicultural study of Philosophy and the arts of the modern period. Occasional.
UCF Courses and Descriptions

HUM 3307 CAH-PHIL
3(3,0)
Memory and Testimony: PR: HUM 2210 and HUM 2230 and Junior standing. Interdisciplinary exploration of personal and public memory, focusing on the significance of memory and testimony for our sense of self, family, community, culture, and nation. Odd Spring.

HUM 3320 CAH-PHIL
3(3,0)
Contemporary Multicultural Studies: PR: Any HUM course or C.I. Historical and contemporary theories of sex and gender relevant in interdisciplinary Humanities. Occasional.

HUM 3401 CAH-PHIL
3(3,0)
Asian Humanities: PR: Any HUM course or C.I. An interdisciplinary survey of the cultures of India, China, and Japan, concentrating on their traditional art, literature, religion, philosophy, and music. Occasional.

HUM 3419H CAH-PHIL
3(3,0)
Honors Islamic Thought and Culture: PR: HUM 2230, or REL 2300, and Consent of Honors. The development of Islamic thought and culture, concentrating on religious, philosophical, and scientific science and dealing with special focus on perception of Islam in Western literature and scholarship. With Honors consent. Occasional.

HUM 3423 CAH-PHIL
3(3,0)
African Humanities: PR: Any HUM course or C.I. Concentration on art, culture, and philosophy in selected African countries. Occasional.

HUM 3431 CAH-PHIL
3(3,0)
Ancient Humanities: PR: Any HUM course or C.I. Development of Ancient Greek thought and culture with emphasis on philosophy, religion, literature and art. Occasional.

HUM 3435 CAH-PHIL
3(3,0)
Medieval Humanities: PR: Any HUM course or C.I. Development of Medieval thought and culture with emphasis on Philosophy, Religion, Literature and Art. Occasional.

HUM 3460 CAH-PHIL
3(3,0)
Latin American Humanities: PR: HUM 2210 or HUM 2230. Ideas in cultures of Latin America and Caribbean basin as expressed in arts, architecture, music, philosophy, religion, literature and film. Occasional.

HUM 3800 CAH-PHIL
3(3,0)
Research Methods in Humanities: PR: Humanities Major with any prior HUM course or C.I. A basic introduction to the humanities, including methodologies, writing techniques, essay structuring, formatting, and methods for citing references and constructing bibliographies. Occasional.

HUM 3805 CAH-PHIL
3(3,0)
Critical Theory in the Humanities: PR: Any HUM course, or C.I. Theories of interpreting technologies, texts, and practices, with emphasis on film, visual/performing arts, music, religion, and philosophy. Occasional.

HUM 3806 CAH-PHIL
3(3,0)

HUM 3830 CAH-PHIL
3(3,0)
Introduction to Digital Humanities: PR: Any HUM course or C.I. Investigation of the application of digital tools to humanities questions, and to questions about contemporary life. Fall.

HUM 4301 CAH-PHIL
3(3,0)
The Classical Ideal: PR: Any 3000-level HUM course or C.I. The search for order and form in the arts of various times and cultures. Concerns reason, structure, objectivity, harmony. Open to all Juniors and Seniors. Spring.

HUM 4326 CAH-PHIL
3(3,0)
Theories of Sex and Gender in Humanities: PR: Any HUM course or C.I. Concentration on sex and gender studies in interdisciplinary Humanities. Occasional.

HUM 4459 CAH-PHIL
3(3,0)
American Cultural Studies in Humanities: PR: Any 3000-level HUM course, or C.I. Theories of culture including race, class, gender, migration, ability, and national identity in North America. Occasional.

HUM 4823 CAH-PHIL
3(3,0)

HUM 4826 CAH-PHIL
3(3,0)
Postcolonial Theory: PR: Any 3000-level HUM course or C.I. Interdisciplinary overview of postcolonial philosophy, literature, film, and art and cultural theory. Even Fall.

HUM 4931 CAH-PHIL
3(3,0)
Key Figures in the Humanities & Cultural Studies: PR: Any 3000-level HUM course or C.I. Study of a central Humanities/Cultural Studies figure’s work, influences, reception, and effect. May be repeated for credit only when course content is different. Occasional.

HUM 4933 CAH-PHIL
3(3,0)
Senior Research Seminar: PR: Any 3000-level HUM course or C.I. Capstone course on research, developing effective oral and written communication skills. Spring.

HUM 4934 CAH-PHIL
3(3,0)
Key Concepts in Humanities & Cultural Studies: PR: Any 3000-level HUM course or C.I. Study of the development, meaning, and implications of a central concept in the Humanities and Cultural Studies. May be repeated for credit only when course content is different. Occasional.

HUM 5396 CAH-PHIL
3(3,0)
Place and Space: PR: Graduate standing or C.I. Study of theoretical and applied issues of place and space. Occasional.

HUM 2201 HPA-HP
3(3,0)
Fundamentals of Human Nutrition: PR: Sophomore standing Functions, roles, guidelines and requirements for nutrients. Includes digestion, absorption, nutrient interactions, effects of deficiencies or toxicities, food sources and weight management. Emphasis is on prevention of disease. Fall/Spring.

HUM 3011 CON-NURS
3(3,0)
Human Nutrition: PR: or CR: ZOO 3733C and CHM 1032 or C.I. Essentials of nutrition related to the life cycle, including the physiological, psychosocial, and cultural aspects of nutrition and the inter-relationship with disease are emphasized. Fall/Spring.

HUM 3013 RCHM-FOOD&LOGD
3(3,0)

HUM 5247 HPA-HP
3(3,0)
Principles of Human Nutrition: PR: Admission to Health Sciences M.S. Clinical and Lifestyle Sciences track or C.I. Course promotes in-depth understanding of the role of macronutrients in human nutrition and health research, and how graduates to integrate knowledge into other aspects of their work. Occasional.

IDC 5602 GRDST-INTERDIS
3(3,0)
Cybersecurity: A Multidisciplinary Approach: PR: Graduate standing or C.I. Interdisciplinary M&S fundamentals as applied to cybersecurity including operating system installation and administration for hardware, network architectures, configurations, behavioral aspects, organizational continuity planning, security management. Fall.

IDH 1920H BHC-HON
2(2,1)

IDH 1921H BHC-HON
2(2,0)
Honors Symposium II: PR: IDH 1920H. Readings, lectures and discussions covering aspects of scholarship, artistic, and other creative efforts. Graded S/U. Spring.

IDH 3101H BHC-HON
3(3,0)
Honors Cultural Traditions of India: PR: Consent of Honors. Integrative background of Indian culture, philosophy and art. Instruction on music, yoga, dance and Indian fine arts. Fall/Spring.

IDH 3600H CAH-PHIL
3(3,0)
Honors Case Studies in Ethics: PR: Permission of Honors or C.I. A case-study approach to contemporary ethical issues. Students will apply critical thinking skills and ethical theories to solve complex problems and will participate in team debates. With Honors consent. Fall.

IDH 3930H BHC-HON
3(3,0)
Honors Trauma in a Global Context: PR: ENC 1102 and Consent of Honors. The course addresses the psychological effects of different forms of trauma within a dynamic global context. Occasional.

IDH 3930H BHC-HON
3(3,0)
Superheroes In American Popular Culture: PR: Consent of Honors An historical, sociopolitical, cultural, aesthetic and thematic examination of the superhero. This course will explore popular, obscure superheroes as they appear in several art forms. Occasional.

IDH 4030H BHC-HON
1(3,0)
Honors Worlds To The World: PR: Permission of Honors and IDH 1921H, enrolled in Accelerated Pre- med Program; or C.I. Students will cultivate an active sense of the liberal arts and sciences as they prepare for prestigious scholarships and graduate school. Graded S/U. May be repeated for credit. Occasional.

IDS 3150 UGST-INTERDIS
3(3,0)
Fundamentals of Environmental Studies: PR: Junior standing, complete equivalent of UCF Science and Math GEP. An overview of the approaches taken by different disciplines to address regional, national, and global environmental issues. Spring.

IDS 3333 UGST-INTERDIS
3(3,0)
World Comparative Studies: PR: ENC 1102 or C.I. Comparative study of cultures, economies, languages, and social systems using approaches and data from multiple disciplines. Occasional.

IDS 3933 UGST-INTERDIS
3(3,0)
Cornerstone Experience: PR: ENC 1102, Junior standing, Interdisciplinary Studies major, or C.I. Interdisciplinary study essentials, including basic concepts and methodological tools, to synthesize material from disparate fields and apply them to academic plans and career goals. Fall/Spring.

IDS 4204C ECS-ECS
3(2,2)
Advanced Topics on Energy and Sustainability: PR: Acceptance into the Energy and Sustainability Minor, Senior standing and Completion of GEP or C.I. Contemporary topics in energy and sustainability. Seminars and lectures from industry, academia, government, and UCF speakers. Students are required to work on individual or team assignments, research projects, and present their work in the format of mini seminars. Occasional.

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IDS 4893  UGST-INTERDIS  3(3,0)
Capstone Environmental Studies: PR: Environmental Studies Major in graduating semester, Junior standing or C.I. Student exposition of coursework demonstrating the understanding of interdisciplinary approaches and successful synthesis of interdisciplinary studies, applied to the course of study and academic/career goals. Fall, Spring.

IDS 5127  COM-BSSS  3(3,0)
Foundation of Bio-Imaging Science: PR: Graduate Fundamentals theory, design, practice of modern bio-imaging techniques used for basic biomedical research applications. Occasional.

IDS 5142  GRDST-INTERDIS  3(3,0)
Modeling and Simulation for Instructional Design: PR: Graduate standing or C.I. Interdisciplinary aspects of MIS applications for instructional design. Emphasis on domains such as aviation, space, military, healthcare, education, hospitality, entertainment, and cybersecurity. Occasional.

IDS 5937  GRDST-INTERDIS  3(3,0)
Modeling and Simulation for Instructional Design: PR: Graduate standing or C.I. Interdisciplinary aspects of MIS applications for instructional design. Emphasis on domains such as aviation, space, military, healthcare, education, hospitality, entertainment, and cybersecurity. Occasional.

INP 3004  COS-PSYCH  3(3,0)
Industrial/Organizational Psychology: PR: PSY 2012. Psychological theories and principles applicable to problems in industrial organizations. Fall, Spring.

INP 3004H  COS-PSYCH  3(3,0)

INP 3141C  COS-PSYCH  1-3(0,3-9)
Advanced Applied Psychology: PR: PSY 2012 and C.I. Course will explore application of psychological knowledge to clinical, experimental, industrial, or educational settings. Supervised laboratory experience is required. Graded S/U. May be repeated for credit. Fall, Spring.

INP 3951  COS-PSYCH  3(3,0)
Industrial/Organizational Field Work: PR: C.I. An opportunity for advanced undergraduate psychology majors to become involved in the application of I/O psychology to local organizations. Occasional.

INR 2002  COS-POLS  3(3,0)
International Relations-Theory and Practice: PR: ENG 1102 or C.I. Analysis of the theoretical principles and factors affecting interstate relations and their application to contemporary global developments. Fall, Spring.

INR 3016  COS-POLS  3(3,0)
Global Political Issues: PR: POS 2041 or C.I. Current international, regional and local topics from political development and income gap to gender issues and environmental challenges. Occasional.

INR 3250  COS-POLS  3(3,0)

INR 3253  COS-POLS  3(3,0)
International Politics of Africa: PR: ENC 1102 or POS 2041 or C.I. The broad structures and processes of international politics and foreign policy in Africa, with particular attention on U.S.- African relations. Occasional.

INR 4008  COS-POLS  3(3,0)
Global Perspectives: PR: ENC 1102 or C.I. The historical and contemporary contests of globalization. Fall, Spring.

INR 4011  COS-POLS  3(3,0)
Politics of Globalization: PR: ENC 1102 or POS 2041 or C.I. Major political causes and consequences of globalization. Occasional.

INR 4030  COS-POLS  3(3,0)
Diplomacy: PR: ENC 1102 or POS 2041 or C.I. Concepts, theories, and methods of contemporary diplomacy; diplomatic processes in the international arena. Spring.

INR 4030H  COS-POLS  3(3,0)

INR 4035  COS-POLS  3(3,0)
International Political Economy: PR: ENC 1102 or POS 2041 or C.I. The international politics of regional and global economic interdependence, with emphasis upon North-South relations, the New International Economic Order, OPEC, and multinational corporations. Odd Spring.

INR 4054  COS-POLS  3(3,0)
Global Politics of Energy: PR: ENC 1102 or POS 2041 or C.I. International politics/national dimensions of global energy politics within developed and underdeveloped countries. Occasional.

INR 4060  COS-POLS  3(3,0)
Causes of War: PR: ENC 1102 or POS 2041 or C.I. The primary theoretical and empirical research explaining militarized interstate conflict. Fall.

INR 4063  COS-POLS  3(3,0)
The Cold War: PR: ENC 1102 or POS 2041 or C.I. Political of US-Soviet relations emphasizing the Cold War including the global impact of the Cold War, and prospects for post-Cold War international politics. Occasional.

INR 4074  COS-POLS  3(3,0)
Immigration Policy: PR: ENC 1102 or POS 2041 or C.I. Analysis of the complex subject of immigration, including U.S. and foreign immigration policy, illegal immigration, alien smuggling, and statelessness and their political/security impact. Occasional.

INR 4075  COS-POLS  3(3,0)
Human Rights Policy: PR: ENC 1102 or POS 2041 or C.I. The protection of human rights, political and international implications of human rights policies, relationship to global peace, racism, gender inequality, economic development and democratization. Spring.

INR 4076  COS-POLS  3(3,0)
Global Drug Policy: PR: ENC 1102 or POS 2041 or C.I. International drug control issues, policy formulation and enforcement, impact of government and political economic systems on drug policy. Selected Latin American and Third World cases. Odd Spring.

INR 4084  COS-POLS  3(3,0)
Politics of International Terrorism: PR: ENC 1102 or POS 2041 or C.I. Nature and politics of terrorism with primary focus on its implications for international relations. Occasional.

INR 4085  COS-POLS  3(3,0)
Women, Gender, and Globalization: PR: ENC 1102 or POS 2041 or C.I. Feminist and gender perspectives in international relations, Globalization, and International Political Economy. Occasional.

INR 4102  COS-POLS  3(3,0)
American Foreign Policy: PR: ENC 1102 or POS 2041 or C.I. Development of American foreign policy, with emphasis on the role of the United States in the contemporary world. Odd Fall.

INR 4104  COS-POLS  3(3,0)
Topics and Cases in American Foreign Policy: PR: ENC 1102 or POS 2041 or C.I. General or intensive analysis of problems or aspects of U.S. foreign policy. Issues may include September 11th, homeland security, counter-terrorism, policymaking and decision-making and intelligence. Odd Spring.

INR 4114  COS-POLS  3(3,0)
American Security Policy: PR: ENC 1102 or POS 2041 or C.I. Study of the evolution of American security policy since World War II, including consideration of the social and political costs involved and means of control. Occasional.

INR 4115  COS-POLS  3(3,0)
Strategic Weapons and Arms Control: PR: ENC 1102 or POS 2041 or C.I. Control of strategic weapons and their impact on international political and policy aspects, including nuclear proliferation. Occasional.

INR 4224  COS-POLS  3(3,0)
Contemporary International Politics of Asia: PR: ENC 1102 or POS 2041 or C.I. Examinations of the foreign policies of major and secondary powers in Asia, with specific attention to China and Japan. Occasional.

INR 4225  COS-POLS  3(3,0)
The Vietnam War: PR: POS 2041 or INR 2002, or C.I. Background of events leading to America’s involvement in Indochina, the course of the Vietnam War, and the lessons which that war imparts. Occasional.

INR 4243  COS-POLS  3(3,0)
International Politics of Latin America: PR: ENC 1102 or POS 2041 or C.I. Study of contemporary U.S.-Latin American relations, inter-American politics and organization, and the role of Latin America in the world. Occasional.

INR 4274  COS-POLS  3(3,0)
International Politics of the Middle East: PR: Either INR 2002, CPO 3103 or POS 2041. Examine foreign relations among Middle Eastern states and related actors, including, but not limited to, the great powers of the world. Occasional.

INR 4304  COS-POLS  3(3,0)
Issues in International Public Policy: PR: ENC 1102 or POS 2041 or C.I. Endogenous and exogenous variables, including policy analysis and decision-making, which influence select international policy issues. Occasional.

INR 4335  COS-POLS  3(3,0)
Coercion in International Politics: PR: ENC 1102 or POS 2041 or C.I. Examination of the role of coercive techniques among states in a nuclear age. Drawing from nuclear strategy and deterrence to wars of national liberation and coups. Even Fall.

INR 4350  COS-POLS  3(3,0)
Global Environmental Politics: PR: ENC 1102 or POS 2041 or C.I. The unique environmental struggles and political issues that occur on the international and global level. Odd Fall.

INR 4351  COS-POLS  3(3,0)
International Environmental Law: PR: ENC 1102 or POS 2041 or C.I. Examination of global efforts to establish a treaty regime for environmental protection of earth’s biosphere when challenged by national sovereignty and economic and cultural diversity. Occasional.
JOU 3320 COS-COMM 3(3,0)
News Producing: PR: Journalism major and a minimum grade of “C” (2.0) in JOU 2100C. Fundamentals of television news producing in a studio-like environment including information and discussion on journalistic ethics, management skills and working with on-air talent. Occasional.

JOU 3510 COS-COMM 3(3,0)
Magazine Publishing: PR: Journalism major or Magazine Journalism minor, and a minimum grade of “C” (2.0) in JOU 2100C. The magazine industry, emphasizing business operations and current topics. Fall.

JOU 3912 COS-COMM 3(3,0)
Collaborative Experimental Research Practicum: PR: EPL 3008, SPC 1603 or COM 1000, and C.I. Students will work as research assistants in a team, under faculty supervision, and learn first-hand the processes of conducting communication/social scientific research. May be used in the degree program a maximum of 2 times. Occasional.

JOU 3951 COS-COMM 3(3,0)
Knightly Latino: Spanish Language News: PR: JOU 2100C and RTY 3321, or C.I. Focuses on the production of a weekly Spanish campus webcast. Daily newsgathering and production decisions are conducted by students under the advisement of the instructor. Fall, Spring.

JOU 4181 COS-COMM 3(3,0)
Public Affairs Reporting: PR: Journalism major and a minimum grade of “C” (2.0) in JOU 2100C and a minimum grade of “C” (2.0) in JOU 3184C or JOU 3101. Reporting on city, county and state government. Occasional.

JOU 423C COS-COMM 3(2,1)
Page Design: PR: Journalism major and JOU 3201. Designing news pages, including stories, headlines, and other content. Fall, Spring.

JOU 4300 COS-COMM 3(3,0)
Feature Writing: PR: Journalism major or Magazine Journalism minor. A study of the techniques and procedures of feature writing, including the preparation of several manuscripts. Occasional.

JOU 4308 COS-COMM 3(3,0)
Freelance Writing: PR: Journalism major or Magazine Journalism minor. A study of the techniques and procedures of freelance writing, including the preparation of several manuscripts. Occasional.

JOU 4340C COS-COMM 3(1,3)
Online Journalism: PR: Journalism major and a minimum grade of “C” (2.0) in JOU 2100C. The development, impact and problems of using the Internet as a journalistic tool. Write and design news for the Web. Occasional.

JOU 4342C COS-COMM 3(2,1)
Multimedia Journalism: PR: Journalism major and a minimum grade of “C” (2.0) in JOU 2100C. Combining print and electronic technologies to transmit information to the public. Fall, Spring.

JOU 4447 COS-COMM 3(3,0)
Magazine Editing and Production: PR: Journalism major or Magazine Journalism minor, and a minimum grade of “C” (2.0) in JOU 2100C. Magazine production, including writing and editing skills, and editorial requirements. Spring.

JOU 4700 COS-COMM 3(3,0)
Journalism Ethics: PR: MMC 3200. Ethical problems in journalism, including problems in newsroom. Fall, Spring.

JOU 4850 COS-COMM 4(4,0)
Senior Capstone in Journalism: PR: JOU 3101, and (JOU 4330 or JOU 4342), or C.I. Advanced techniques in multimedia news gathering and reporting for a daily newspaper as part of a capstone experience in journalism. Fall, Spring.
Occasional.

LIN 3002 CAH-LAS
Topics in Latin American Studies: PR: SPN 1120 or equivalent, or C.I. Contemporary topics in Latin American history, political movements, and contemporary Caribbean culture, its influence on institutions, social practices.

LAS 3010 CAH-LAS

LAS 3320 CAH-LAS
Brazilian Culture: PR: ENC 1102. Interdisciplinary examination of Brazilian culture through cinema, music, literature, and fine arts. Spring.

LAS 4023 CAH-AS
African Caribbean Experience: PR: ENC 1102 or C.I. Interdisciplinary study of the evolution of African Caribbean culture, its influence on institutions, social and political movements, and contemporary Caribbean society. Occasional.

LAS 4910 CAH-LAS

LDR 2001 UGST-INTERDISC
Foundations of Leadership: PR: Student enrolled in LEAD Scholars, Leadership Studies minor or certificate. Introduction to the foundations of leadership, including leadership theories and related principles and practices. Fall.

LDR 2002 UGST-INTERDISC

LDR 2262 UGST-INTERDISC
Focused Volunteer Community Service: Students will engage in volunteer experiences and reflect upon the value of those experiences. Graded S/U. Fall, Spring.

LDR 3215 UGST-INTERDISC
Leadership Through Service: An Advanced Leadership Experience: PR: LDR 2001 and LDR 2002. Theoretical processes, and leadership role in social change will be explored, contemporary leadership theories and practices related to citizenship and civic engagement will be studied, and leadership will be practiced in various settings. Fall.

LDR 3950 UGST-INTERDISC
Leadership in Action: Capstone Experience for LEAD Scholars: PR: LDR 3215. Leadership issues and theories, including related principles and practices. Students will develop a professional portfolio, reflect on their course of study, practice public speaking, and articulate their leadership philosophy. Spring.

LEI 4266 ED-EDHS
Outdoor and Leisure Activities: PR: Admission to the Sport and Exercise Science Program or Community Sport and Fitness Minor, and minimum overall 2.5 GPA. Study of contemporary outdoor and leisure activities. Course will include but not be limited to the "adventure activities" cluster, camping, water activities, fishing, orienteering, hiking. Occasional.

LIN 3010 CAH-ENG

LIN 3673 CAH-WRITE
Rhetorical Grammar: PR: ENC 1102. Focus on learning and mastering the techniques that today's expert writers use to increase rhetorical impact on the reader. Occasional.

LIN 3713 HPA-COM S&ADIS
Language Science: PR: or CR: SPA 3471. Language components, models of language production and comprehension, and theories of language development. Fall, Spring.

LIN 3716 HPA-COM S&ADIS

LIN 4105 CAH-ENG
History of the English Language: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Study of the English language and its development from Anglo-Saxon to Modern. Fall, Spring.

LIN 4680 CAH-ENG
Linguistics and Language: PR: Grade of C (2.0) or better required in LIN 3010 or C.I. Language study as an aid to understanding literature. Occasional.

LIN 4801 CAH-ENG
Language and Meaning: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. A study of language and meaning in social, civic, cultural, and professional settings. Occasional.

LIN 5137 CAH-ENG
Linguistics: PR: Graduate status or senior standing or C.I. Modern linguistic theories and studies focusing on language acquisition and development, contemporary American English, semantics, and para-linguistics. Occasional.

LIN 5675 CAH-ENG
English Grammar and Usage: PR: Graduate status or senior standing or C.I. An overview of modern grammar, including structural, transformational and rhetorical grammar, along with an examination of controversial usage. Occasional.

LIT 2110 CAH-ENG
World Literature I: PR: ENC 1102. Poetry, prose, and drama selected from ancient Hebrew, Greek, and Oriental literature and from that of Renaissance Europe. Fall, Spring.

LIT 2120 CAH-ENG
World Literature II: PR: ENC 1102. Readings from Moliere, Voltaire, Goethe, Pushkin, Balzac, Tolstoy, Ibsen, Mann, Kafka, Camus, and others. Fall, Spring.

LIT 3082 CAH-ENG
Continental European Fiction Since 1900: PR: Grade of C (2.0) or better required in ENC 1102. A selection of significant works of fiction written in various languages during the present century, read in translation. Occasional.

LIT 3122 CAH-ENG
Legend & Literature of King Arthur: PR: Grade of "C" (2.0) or better required in ENC 1102. Traces how Carinian societies have achieved self-expression through documentary writing, prose fiction, and popular culture; in English. Occasional.

LIT 3129 CAH-ENG
Caribbean Literature: PR: Grade of C (2.0) or better required in ENC 1102 or C.I. To familiarize students with the new genre of literature that has arisen related to AIDS. Essay, short stories, plays, poetry, diaries, and novels will be covered. Occasional.

LIT 3192H CAH-ENG
Honors Caribbean Literature: PR: Permission of Honors and ENC 1102H or equivalent credit. How Caribbean societies have achieved self-expression through documentary writing, prose fiction, and popular culture, taught in English. Honors content. Occasional.

LIT 3202 CAH-ENG
Death and Dying: PR: Grade of "C" (2.0) or better required in ENC 1102 or C-I. Considering the topic of death and dying through a study of literature, the course includes facts, psychological impact, ideological responses to death and identity. Occasional.

LIT 3202H CAH-ENG
Honors Death and Dying: PR: ENC 1102H or equivalent credit, and consent of Honors. Explores the subject of death and grief in a variety of literary genres (fiction, memoir, non-fiction). With Honors content. Occasional.

LIT 3206 CAH-ENG
Place and Space in Literature: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. An investigation of how authors develop place and space and how this creates meaning in texts. Occasional.

LIT 3206H CAH-ENG
Honors Place and Space in Literature: PR: Consent of Honors. Analysis of how authors develop place and space and how this creates meaning in texts. With Honors content. Occasional.

LIT 3212 CAH-ENG
Research & Writing About Literature: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Research, writing, and critical analysis skills applicable to upper-level literature courses Occasional.

LIT 3313 CAH-ENG
Science Fiction: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. An investigation of science fiction as a literary form, together with selected readings. Occasional.

LIT 3313H CAH-ENG
Honors Science Fiction Literature: PR: Permission of Honors and ENC 1102H or equivalent credit. An investigation of science fiction as a literary form, together with selected readings. Honors content. Occasional.

LIT 3368 CAH-ENG
Magical Realism in Literature: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Magical realism in literature, including consideration of its popularity, development, and treatment in various cultural contexts. Occasional.

LIT 3381 CAH-ENG
Women Writers of Color: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Examines the cultural productions of women writers of color in the Americas with a particular focus on literature, theory, and film. Occasional.

LIT 3383 CAH-ENG
Women in Literature: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Fiction, poetry, drama and non-fiction by selected women writers, such as Emily Dickinson, Jane Austen, George Eliot, Kate Chopin, Zora Neale Hurston, Toni Morrison, Adrienne Rich, Gwendolyn Brooks. Occasional.

LIT 3383H CAH-ENG
Honors Women in Literature: PR: Permission of Honors and ENC 1102H or equivalent credit. Fiction, poetry, drama and non-fiction by selected women writers, such as Emily Dickinson, Jane Austen, George Eliot, Kate Chopin, Zora Neale Hurston, Toni Morrison, Adrienne Rich, Gwendolyn Brooks. Honors content. Occasional.

LIT 3394 CAH-ENG
Literature of AIDS: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. To familiarize students with the new genre of literature that has arisen related to AIDS. Essay, short stories, plays, poetry, diaries, and novels will be covered. Occasional.
LIT 3394H CAH-ENG 3(3,0) 

LIT 3437 CAH-ENG 3(3,0) 
International Environmental Justice Literature: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Analysis of media to determine popular values in the formation of popular cultural perceptions. Occasional.

LIT 3482 CAH-ENG 3(3,0) 
Literature & Popular Culture: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Analysis of media to determine popular values in the formation of popular cultural perceptions. Occasional.

LIT 3482H CAH-ENG 3(3,0) 

LIT 3605 CAH-ENG 3(3,0) 
Literature and War: PR: Grade of "C" (2.0) or better in ENC 1102, or C.I. Varied representations of war in literature. Occasional.

LIT 3607 CAH-ENG 3(3,0) 
Mad, Bad, and Dangerous: Roles and Images of Writers in Society: PR: English major or minor, and grade of "C" (2.0) or better required in CRW 3013 and CRW 3053, or C.I. Representations of writers in films, texts, including multi-cultural and gendered aspects, and how these ideals, stereotypes, and cultural roles affect writer's occupational. Occasional.

LIT 3714 CAH-ENG 3(3,0) 
Literary Modernism: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Examines a specific period, a literary movement, and a set of aesthetic and formal practices applied to poetry, novels, essays, and manifestos. Occasional.

LIT 3823 CAH-ENG 3(3,0) 
Hispanic Women Writers: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Hispanic women writers in European and Latin American literature. Occasional.

LIT 3833 CAH-ENG 3(3,0) 
Modern Asian Literature: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Asian literatures in different genres translated into English or written in English from the modern period. Various countries emphasized in different iterations. Occasional.

LIT 3835 CAH-ENG 3(3,0) 
Translated Modern Chinese Novels: PR: Grade of "C" (2.0) or better in ENC 1102, or C.I. Chinese novels in English translation from the modern and contemporary periods. Occasional.

LIT 3905 CAH-ENG 3(3,0) 
Directed experience in Literature: PR: ENC 1102, C.I. Individualized topics of study and/or research in literature with personalized faculty direction. May be repeated for credit. Occasional.

LIT 3931 CAH-ENG 3(3,0) 
Topics in World Literature: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Themes, modes, and genres from literature outside of the U.S. May be repeated for credit only if content is different. Occasional.

LIT 3932 CAH-ENG 3(3,0) 
Topics in Popular Fiction: PR: Grade of "C" (2.0) or better required in ENC 1102 or C.I. Examines genres in popular fiction such as the western, romance, detective, fantasy, horror, or mystery. May be repeated for credit only if content is different. Occasional.

LIT 3933 CAH-ENG 3(3,0) 
Literature and Law: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Reading, analysis, and discussion of law, crime, and punishment in literature from historical or contemporary perspectives. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

LIT 3933H CAH-ENG 3(3,0) 

LIT 4034 CAH-ENG 3(3,0) 
Contemporary Poetry In English: PR: Grade of C (2.0) or better required in ENG 3014 or C.I. Poetry written in English after the mid-twentieth century, including North American, British, Irish, and Anglophone countries. Occasional.

LIT 4043 CAH-ENG 3(3,0) 
Modern Drama As Literature: PR: Grade of C (2.0) or better required in ENG 3014. A study of important plays, playwrights, themes, movements, and styles in modern American, British, and European drama. Occasional.

LIT 4184 CAH-ENG 3(3,0) 
Irish Literature: PR: Grade of C (2.0) or better required in ENG 3014. Focus on the nature of colonial discourse, the shapes of post-colonial rewritings, and the relationship of post-colonial theory to other theories. Occasional.

LIT 4223 CAH-ENG 3(3,0) 
Postcolonial Theory and Literature: PR: Grade of C (2.0) or better required in ENG 3014. Focus on the nature of colonial discourse, the shape of post-colonial rewritings, and the relationship of post-colonial theory to other theories. Occasional.

LIT 4244 CAH-ENG 3(3,0) 
World Authors: PR: Grade of "C" (2.0) or better required in ENG 3014 or C.I. Study of the works of a single non-British and non-U.S. author who composes in English. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

LIT 4303 CAH-ENG 3(3,0) 
Post-World War II Fiction: PR: Grade of C (2.0) or better required in ENG 3014. A study of various modes of reality in the works of significant postmodern world authors, crossing cultural boundaries. Occasional.

LIT 4374 CAH-ENG 3(3,0) 
Literature of the Bible: PR: Grade of C (2.0) or better required in ENG 3014. Literary forms in the Bible — narrative, poetic, and dramatic — and their reflection in modern literature. Occasional.

LIT 4374H CAH-ENG 3(3,0) 
Honors Literature of the Bible: PR: Permission of Honors and ENC 1102H or equivalent credit. Literary forms in the Bible — narrative, poetic, and dramatic — and their reflection in modern literature. Honors content. Occasional.

LIT 4433 CAH-ENG 3(3,0) 
Literature of Science and Technology: PR: Grade of "C" (2.0) or better in ENC 1102 or C.I. Major works of non-fiction that address and describe the history, philosophy, politics, and new ideas in science and technology. Fall.

LIT 4554 CAH-ENG 3(3,0) 
Advanced Feminist Theories: PR: Grade of C (2.0) or better required in ENC 1102, WST 3015 or ENG 3014. An advanced exploration of feminist critical theories and practices. Occasional.

MAA 4226 COS-MATH 4(4,0) 

MAA 4227 COS-MATH 3(3,0) 
MAC 2311C COS-MATH (4,3,2)
Calculus with Analytic Geometry I: PR: Approval of the UCF Math Placement Exam, or MAC 1140C with a "C" (2.0) or better. Topics include functions, limits, continuity, derivative, and applications of derivatives. Not open to students with credit in MAC 2311. The "NC" grading policy applies to this course. Fall, Spring.

MAC 2311H COS-MATH (4,4,0)
Honors Calculus with Analytic Geometry I: PR: Approval of the UCF Math Placement Exam, or MAC 1140C with a "C" (2.0) or better. Options include functions, limits, continuity, derivative, and applications of derivatives. Not open to students with credit in MAC 2311. The "NC" grading policy applies to this course. Fall, Spring.

MAC 2312C COS-MATH (4,4,0)
Calculus with Analytic Geometry II: PR: Grade of "C" (2.0) or better in MAC 2311C, or score of 5 on the Calculus BC Advanced Placement Exam, or an AB sub-score of 5 or better on the Calculus BC Advanced Placement Exam. Integration and differentiation of exponential, logarithmic, inverse trigonometric functions; techniques of integration; further applications of integration; parametric equations, polar coordinates, infinite sequences and series. Fall, Spring.

MAC 2312H COS-MATH (4,4,0)
Honors Calculus with Analytic Geometry II: PR: Grade of "C" (2.0) or better in MAC 2311C, or score of 5 on the Calculus BC Advanced Placement Exam, or an AB sub-score of 5 or better on the Calculus BC Advanced Placement Exam, and consent of Honors. Analytic geometry; limits, continuity, differentiation of algebraic and trigonometric functions; applications of derivatives; integration and the fundamental theorem of calculus; applications of definite integrals; Taylor polynomials; and students with credit in MAC 2311. The "NC" grading policy applies to this course. With Honors content. Fall, Spring.

MAC 2313 COS-MATH (4,4,0)
Calculus with Analytic Geometry III: PR: Grade of "C" (2.0) or better in MAC 2312C, or score of 5 on the Calculus BC Advanced Placement Exam, or permission of Honors. Geometry of higher dimensional Euclidean space; vectors and vector functions; partial derivatives; multiple integrals; line integrals; vector fields; Green’s Theorem and Stokes’ Theorem. Fall, Spring.

MAC 2313H COS-MATH (4,4,0)
Honors Calculus with Analytic Geometry III: PR: Grade of "C" (2.0) or better in MAC 2312C, or score of 5 on the Calculus BC Advanced Placement Exam, and permission of Honors. Geometry of higher dimensional Euclidean space; vectors and vector functions; partial derivatives; multiple integrals; line integrals; vector fields; Green’s Theorem and Stokes’ Theorem. With Honors content. Spring.

MAD 2104 COS-MATH (3,3,0)
Foundations of Discrete Math: PR: 2 years of high school algebra and 1 year of geometry or C.I. Basic mathematical logic, methods of proof in mathematics, and application to elementary structure. Fall, Spring.

MAD 2403 COS-MATH (3,3,0)
Introduction to Combinatorics: PR: MAD 2312, and either MHF 3302 or COT 3100C, or C.I. Counting principles; permutations and combinations, multinomial theorem; generating functions and generating function combinational designs; the Polya theory of counting. Fall, Spring.

MAD 2401 COS-MATH (3,3,0)
Introduction to Graph Theory: PR: Either MHF 3302 or COT 3100C, or C.I. Graph theory; isomorphism, connectivity; traversability, matchings, factorizations; planarity, colorings, and Ramsey number. Spring.

MAD 4934 COS-MATH (3,3,0)
Topics in Discrete Mathematics: PR: MAD 3106 and MAD 4303, or C.I. Advanced topics in discrete mathematics. Selection of topics will vary. May be used in the degree program a maximum of 3 times. Occasional.

MAD 5205 COS-MATH (3,3,0)
Graph Theory I: PR: MAD 4203, graduate standing or Consent of Instructor. Trees, spanning trees, network flows, matchings, vertex and edge colorings planar graphs, extremal problems, Ramsey theory, spectral graph theory. Odd Spring.

MAE 2801 ED-TL&L (4,3,1)
Elementary School Mathematics: PR: MAC 1105G or MGF 1106. Mathematics appropriate for the elementary school including the six basic sets of numbers, concepts, learning sequences, algorithms, problem-solving techniques, error patterns, number systems, and geometry. Fall, Spring.

MAE 3310 ED-TL&L (3,3,0)
Elementary Mathematics for Teaching I: PR: Admission to the Elementary Education B.S. Exceptional Student Education B.S., Early Childhood Development and Education B.S. or Early Childhood Development and Education Pending program. This course will address pedagogical content knowledge for teaching whole number concepts, whole number operations and number concepts, geometry and algebraic reasoning. Fall, Spring.

MAE 3311 ED-TL&L (3,3,0)
Elementary Mathematics for Teaching II: PR: MAE 3310 with a "C" (2.0) or better. This course will address pedagogical content knowledge for teaching rational number concepts and operations, measurement, and algebraic reasoning. Fall, Spring.

MAE 3366 ED-TL&L (3,3,0)
Middle and High School Mathematics for Teaching: PR: Admission to Mathematics Education major or minor. The course will provide a focus on pedagogical content knowledge for teaching mathematics appropriate for the middle and high school settings with an emphasis on algebra and geometry. Spring.

MAE 4300 ED-CFCS (3,3,0)
Math Curriculum and Assessment in Early Childhood: PR: ECC 4601, ECC 4207, CR: ECC 3940. Methodologies for teaching and assessing young children in mathematics concepts and skills through an integrated, developmentally appropriate program. Fall.

MAE 4326 ED-TL&L (3,3,0)

MAE 4360 ED-TL&L (4,3,2)
Mathematics for Early Childhood Professionals: PR: EDG 4410 and MAE 4634, CR: MAE 3940. Study of course objectives for the middle grades and high school curriculum and survey of methods and materials which have special application for teaching mathematics. Fall, Spring.

MAE 4634 ED-TL&L (3,3,0)

MAE 5327 ED-TL&L (3,3,0)
Teaching Middle School Mathematics: PR: EDG 6415 and TSL 5085 or admission to Initial Teacher Professional Preparation certificate. Students will develop skills in planning and delivering mathematics instruction in the grades 5-9. The use of technology, cooperative learning, ESOL, and manipulatives is considered. Occasional.

MAE 5336 ED-TL&L (3,3,0)
Current Methods in Secondary School Mathematics: PR: EDG 6415, TSL 5085, or admission to MED 5000 program or Initial Teacher Professional Preparation certificate. Required special methods course for mathematics 6-12 certification. Assessment, curriculum, technology, practical classroom ideas and activities. Occasional.

MAE 5935 COS-MATH (3,3,0)
Post-Secondary Mathematics: PR: Graduate standing or consent of Honors. Topics will be chosen from issues that are faced by teachers of collegiate mathematics. topics will be selected from teaching issues, program issues, and other issues. Even Fall.

MAN 3025 BA-MAN (3,3,0)
Management of Organizations: PR: ACB 2013 and TSL 5083 with a grade of "C" (2.0) or better, or for non-major businesses, ECO 2013 or ECO 2023 with a grade of "C" (2.0) or better. Introduction to the theory and practice of managing formal organizations, including planning, organization theory, human behavior and control. Fall, Spring.

MAN 3025H BA-MAN (3,3,0)
Honors Management of Organizations: PR: ACB 2013 and ECO 2013 or ECO 2023 each with a grade of "C" (2.0) or better, and consent of Honors. Introduction to the theory and practice of managing formal organizations, including planning, organization theory, human behavior and control. Applicable to honors students. Spring.

MAN 3301 BA-MAN (3,3,0)
Strategic Human Resource Management: PR: Admission to the Management major. Provides students with a complete, comprehensive review of the strategic importance of the essential human resource management concepts and techniques for any student majoring in Management. Fall, Spring.

MAN 3302 BA-MAN (3,3,0)

MAN 3354 BA-MAN (3,3,0)
Employee Training for Non-Business Majors: PR: MAN 3025. Employee training needs and practices as performed by supervisors and managers under the direction of organizational specialists. Designed for non-business majors. Occasional.

MAN 3520 BA-MAN (3,3,0)

MAN 4025 BA-MAN (3,3,0)

MAN 4046 BA-MAN (3,3,0)
Teamwork, Collaboration, and Group Dynamics: PR: Admission to the Management major, Technological Entrepreneurship Minor, Entrepreneurship Minor or Entrepreneurship Certificate program Examination of concepts related to teams and group dynamics, and development of an understanding of how to become an effective team member, leader, and designer. Fall, Spring.

MAN 4101 BA-MAN (3,3,0)
Human Relations in Management: PR: Management major, MAN 3025. The study of individual, interpersonal, group, and intergroup problems in business organizations through the use of cases and experimental exercises. Fall, Spring.

MAN 4143 BA-MAN (3,3,0)
Leadership Development: PR: Admission to the Management major, Technological Entrepreneurship Minor, Entrepreneurship Minor or Entrepreneurship Certificate program. Provides a foundation on the leadership development process and the impact leaders can have on individuals, groups, and organizations. Fall, Spring.
### UCF Courses and Descriptions

**MAN 4209 BA-MAN** 3(3,0)
- **Designing Dynamic Organizations:** PR: Admission to the Management major. Explores how innovative organization design represents an important source of competitive advantage for organizations of all types. Fall, Spring.

**MAN 4240 BA-MAN** 3(3,0)
- **Organizations: Theory and Behavior:** PR: Management major, MAN 3025. A course providing a microeconomic approach to the study of organizations by integrating organizational theory and organizational behavioral science concepts. Fall, Spring.

**MAN 4320 BA-MAN** 3(3,0)
- **Human Resources Recruitment and Selection:** PR: Management major, MAN 3331. A concentrated investigation of the methods appropriate to the development, implementation and administration of the staffing process in contemporary organizations. Fall, Spring.

**MAN 4392 BA-MAN** 3(3,0)
- **Business Analytics in Human Resource Management:** PR: Admission to the Management major. Processes, methodologies, infrastructure, and current practices used to transform data from many sources into useful information for human resource management and decisions. Fall, Spring.

**MAN 4330 BA-MAN** 3(3,0)
- **Compensation Administration:** PR: Management major, MAN 3301. Presentation of compensation theory and current pay practices and their application to the design and administration of pay systems in large and small organizations. Fall, Odd Spring.

**MAN 4350 BA-MAN** 3(3,0)
- **Performance Management:** PR: Admission to the Management major. The management of worker performance through the training and development activities delivered by organizational specialists. Theory, issues, practices and problems are discussed. Fall, Spring.

**MAN 4441 BA-MAN** 3(3,0)
- **Conflict Resolution and Negotiation:** PR: MAN 3325. Conflict resolution and negotiation theories and processes applied to human resource management practices and other management activities in work organizations. Occasional.

**MAN 4532 BA-MAN** 3(3,0)
- **Introduction to Collaborative Design:** PR: Senior standing, C.I. Business students will learn with engineering students to obtain hands on experience at solving real world design problems in a team based environment. Fall, Spring.

**MAN 4583 BA-MAN** 3(3,0)
- **Project Management:** PR: Admission to the Integrated Business. Foundation of project management in assorted industries and organizations. Covers the project environment, the project manager’s role, and project phases from initiation to closing. Fall, Spring.

**MAN 4600 BA-MAN** 3(3,0)
- **International Management:** PR: Approved major or minor, MAN 3025. The course examines issues involved in multinational management of business firms, with special emphasis on comparative management. Fall, Spring.

**MAN 4720 BA-MAN** 3(3,0)
- **Strategic Management:** PR: Admission to Business major, senior standing, and completion of MAN 3025, MAN 3023, FIN 3403, ECO 3411, and ACG 3173 or ACG 3111. Students assume a strategic view of organizations and integrate and apply material learned in their business courses to modern organizational problems and opportunities. Fall, Spring.

**MAN 4941 BA-MAN** 3(3,0)
- **Management Internship:** PR: Management major, application approval, consent of department chair. Provides students a concentrated work experience in a sponsoring organization. See department for information; application required. May be repeated for credit. Occasional.

**MAP 2302 COS-MATH** 3(3,0)
- **Ordinary Differential Equations I:** PR: Grade of "C" (2.0) or better in MAC 2313, or C.I. Methods of solution for first order equations. Linear equations. Laplace transforms. Series solutions. Selected applications. Fall, Spring.

**MAP 2302H COS-MATH** 3(3,0)
- **Honors Ordinary Differential Equations:** PR: Grade of "C" (2.0) or better in MAC 2313, and permission of Honors. Methods of solution for first order equations. Linear equations. Numerical methods; Laplace transforms. Series solutions. Selected applications. Students will complete projects. For Honors students from all disciplines. Occasional.

**MAP 3482H COS-MATH** 3(3,0)
- **Honors Systems Modeling and Simulation:** PR: Permission of Honors and MAC 2313. Population growth dynamics; spread of an epidemic; ecological predator-prey relationships; insulin and its use in the control of diabetes; economic systems. Occasional.

**MAP 3923 COS-MATH** 1(1,0)
- **Frontiers in Mathematical Research:** PR: Graduate or MAC 2313. Research paper presentations, selected from the work of researchers. May not be used to satisfy requirements for mathematics major or minor. Grade S/U. May be used in the degree program a maximum of 3 times. Fall, Spring.

**MAP 4103 COS-MATH** 3(3,0)
- **Mathematical Modeling I:** PR: MAS 3105 or MAS 3106, and MAP 2302, or C.I. An introduction to the study of mathematical modeling. Spring.

**MAP 4113 COS-MATH** 3(3,0)
- **Probability, Random Processes and Applications:** PR: MAC 2313. Elementary probability theory; modes of convergence; martingales, Gaussian, Wiener, and diffusion processes; Brownian motion; applications. Fall.

**MAP 4153 COS-MATH** 3(3,0)
- **Vector and Tensor Analysis:** PR: MAS 3105 or MAS 3106, and MAP 2302, or C.I. Vector calculus. The theorems of Green, Gauss and Stokes. Introduction to tensors. Application in engineering and physical sciences. Fall.

**MAP 4171 COS-MATH** 3(3,0)
- **Optimization:** PR: MAC 2313, and MAP 2302, and MAS 3105 or MAS 3106, or C.I. Linear programming, dynamic programming, control theory, integer programming. Occasional.

**MAP 4303 COS-MATH** 3(3,0)
- **Ordinary Differential Equations II:** PR: MAP 2302, and MAS 3105 or MAS 3106, or C.I. Systems of linear differential equations, introduction to numerical solutions, stability theory and phase plane analysis, an introduction to limit cycles, bifurcations and chaos, power series solutions of differential equations. Occasional.

**MAP 4341 COS-MATH** 3(3,0)
- **Introduction to Partial Differential Equations:** PR: MAP 2302, and MAS 3105 or MAS 3106, or C.I. Introduction to second-order linear partial differential equations - heat, wave and Laplace equations, separation of variables in PDEs, Sturm-Liouville eigenvalue problems, Fourier series analysis and Green’s functions, Laplace and Fourier transform methods. Occasional.

**MAP 4342 COS-MATH** 3(3,0)
- **Partial Differential Equations II:** PR: MAP 3105 or MAS 3106, and MAP 4341. Green’s Functions, Integral Transforms, Laplace and Fourier transforms applied to heat, wave and potential equations. Bessel functions, Legendre functions, Fourier-Bessel series, PDEs in higher dimensions. Spring.
Marketing: PR: ACG 2021 and ECO 2013 or ECO 2023 each with a grade of “C” (2.0) or better, or for non-business majors, ECO 2013 or ECO 2023 with a grade of “C” (2.0) or better. Study of how firms create and communicate value in order to build and maintain customer relationships while benefiting the organization and its stakeholders. Fall, Spring.

Supply Chain and Operations Management: PR: Completion of each course in the Business common program prerequisites with a “C” (2.0) or better. Study of the planning and management of all activities involved in processes, assets, and flows of materials and information to meet customers’ needs. Fall, Spring.

Honors Supply Chain and Operations Management: PR: Completion of each course in the Business common program prerequisites with a “C” (2.0) or better. Study of the planning and management of all activities involved in processes, assets, and flows of materials and information to meet customers’ needs. Fall, Spring.

Integrated Marketing Communication: PR: Marketing minor and MAR 3023 with a “B” (3.0) or better. Planning and execution of advertising, sales promotion, and public relations programs consistent with integrated marketing communications programs. Fall, Spring.

Professional Selling: PR: Marketing major or Marketing minor, and MAR 3023 with a grade of “B” (3.0) or better. The communication processes that form the basis of professional selling to businesses and to individuals. Focus is on applied exercises and role-play situations. Fall, Spring.

Honors Professional Selling: PR: Marketing major or Marketing minor, and MAR 3023 with a grade of “B” (3.0) or better, and consent of the Honors College. The communication processes that form the basis of professional selling to business and to individuals. Focus is on applied exercises and role-play situations. Occasional.

Sales Force Management: PR: MAR 3023 with a “B” (3.0) or better and appropriate major or minor. An overview of the sales management process. Emphasis on sales program formulation and implementation. Occasional.


Consumer Behavior: PR: Admission to the Marketing major, minor, or C.I. Students, groups, or organizations and the processes utilized to select, secure, use, and dispose of products, services, or experiences to satisfy consumer needs and wants. Fall, Spring.

Marketing Analysis and Research Methods: PR: Marketing minor or Professional Selling minor, and MAR 3023 with a “B” (3.0) or better. Study of the analytical tools and research methods used by marketers to make more effective decisions. Fall, Spring.

Marketing Research: PR: MAR 315 with a grade of “C” (2.0) or better. The acquisition of information using various marketing research methods, as well as the application of results to marketing decision making. Fall, Spring.
**UCF Courses and Descriptions**

**MAT 5311 COS-MATH** 3(3.0)
Algebra I: PR: MAS 4301 or graduate standing or C.I. Sets and categories, groups and groupoids, group actions, the class equation, Sylow theorems, Jordan-Holder Theorem, Rings, Modules, Complexes, Factorization, and Irreducibility. Occasional.

**MAT 1033C COS-MATH** 3(1.3)

**MAT 3972 COS-MATH** 1(1.0)
Techniques of Problem Solving: PR: MAC 2311G and CR: MAC 2312; or C.I. Methods for solving problems in a wide variety of mathematical fields, with an emphasis on proper mathematical technique and writing of solutions. Graded S/U. May be repeated for credit. Fall, Spring.

**MAT 5712 COS-MATH** 3(3.0)
Scientific Computing: PR: MAC 2313, MAP 2302, and either MAS 3105 or MAS 3106, or C.I. Matlab fundamentals, computer arithmetic, nonlinear equations, polynomial interpolation, divided differences, splines, curve fitting, least-squares method, numerical differentiation and integration. Even Fall.

**MCE 1000 COMM-SBS** 3(3.0)
The Invisible World: PR: Introduction to microbes, their beneficial and detrimental activities, and their importance to our every day lives. Fall.

**MCE 1310 COMM-SBS** 3(3.0)

**MCE 2004 COMM-SBS** 4(2.2)
Microbiology for Health Professionals: PR: BSC 2010C, CHM 1102 or CHM 2045C. A survey of microbiology for the health professional. Spring. M&S fee $53.00

**MCE 3020 COMM-SBS** 5(3.4)
General Microbiology: PR: BSC 2010C, CHM 2046, or CR: CHM 2210. Fundamentals of microbiology, evaluating microbial structure and function, metabolism, microbial growth, genetics, virology, environmental control, ecology, pathogenicity, and laboratory techniques. Fall, Spring.

**MCE 3020C COMM-SBS** 5(3.5)
Honors General Microbiology: PR: BSC 2010C, CHM 2046 or CR: CHM 2210, and consent of Honors. Same as MCB 3020C with enrichment and further development of analytical skills in a separate laboratory and discussion section. With Honors content. Fall. M&S fee $53.00

**MCE 3202 COMM-SBS** 3(3.0)
Principles of Infectious Disease: PR: MCB 3020C. Introduction to host-pathogen interactions and microbial pathogenesis, with topics covering eukaryotic pathogens, virology, prokaryotic structure, pathogen identification, epidemiology, immunity, vaccines and antimicrobials, and virulence mechanisms. Occasional.

**MCE 3203 COMM-SBS** 3(3.0)
Pathogenic Microbiology: PR: MCB 3020C or C.I. Microorganisms producing disease in man and other animals; means of transmission; protection against disease. Spring.

**MCE 3203L COMM-SBS** 1(0.3)
Pathogenic Microbiology Lab: CR: MCB 3203. Laboratory investigation of pathogenic microorganisms, with emphasis on isolation and identification of pathogenic microorganisms. Spring. M&S fee $53.00

**MCE 3316H COMM-SBS** 3(3.0)

**MCE 4114C COMM-SBS** 4(3.3)

**MCE 4201 COMM-SBS** 3(3.0)
Microbial Stress Responses: PR: MCB 3020C and PCB 3522. Examination of the molecular genetic mechanisms that bacterial and fungal pathogens use to adapt to changes in their environment. Fall.

**MCE 4204 COMM-SBS** 3(3.0)
Cellular Microbiology: Host-Pathogen Therapy, immunology: PR: MCB 3020C. The infectious process and the response of host cells and tissue to infection. Fall.

**MCE 4224 COMM-SBS** 3(3.0)
Molecular Biology of Diseases: PR: PCB 3522 or PCB 3202. In-depth knowledge of current advances in the molecular mechanisms underlying human diseases. Topics include autoimmune, neurodegeneration, aging, drug addiction, obesity, and cancer. Spring.

**MCE 4276 COMM-SBS** 3(3.0)
Epidemiology of Infectious Diseases: PR: MCB 3020C. Study of descriptive and analytic epidemiology and its application to the study of infectious diseases and in the community health status. Spring.

**MCE 4312 COMM-SBS** 3(3.0)
Molecular Biotechnology: PR: MCB 3020C. Principles, techniques, and applications of Molecular Biotechnology in genetically modified food, cloning, gene therapy, and forensics; transgenic animals; patents and regulations. Fall.

**MCE 4404 COMM-SBS** 3(3.0)
Bacterial Genetics and Physiology: PR: PCB 3522. Basic principles of microbial genetic analysis emphasizing how microbial genetic approaches are used to understand fundamental physiological processes in bacteria. Spring.

**MCE 4410 COMM-SBS** 3(3.0)
Cellular Metabolism: PR: PCB 3522 or PCB 3202. Basic concepts of the mechanisms that define the functioning and regulation of prokaryotic and eukaryotic cell metabolism. Fall.

**MCE 4414 COMM-SBS** 3(3.0)
Microbial Metabolism: PR: BSC 3403. Interrelationship between cellular structure function and genetic traits in microorganisms. The interaction between microorganisms and their nutritional environment. Fall, Spring.

**MCE 4503C COMM-SBS** 3(3.0)

**MCE 4603 COMM-SBS** 3(3.0)
Environmental Microbiology: PR: MCB 3020C. Interrelationships between the biological activities of microorganisms and their terrestrial and aquatic environments. Fall.

**MCE 4653 COMM-SBS** 3(1.6)
Applied Industrial Microbiology: PR: MCB 3020C and BSC 3403C. Combination of molecular and biochemical analyses with applied industrial microbiology projects. Fall.

**MCE 4720 COMM-SBS** 3(3.0)
Industrial Perspectives Seminar: PR: Biotechnology major and CR: MCB 3020C. Concepts and techniques of basic research and drug development. Speakers from the biotechnology/pharmaceutical industry will show applications. Fall.

**MCE 4721C COMM-SBS** 4(2.4)
Methods in Biotechnology: PR: BSC 3403C. Fluorescence and luminescence-based assays used in biotechnological and biomedical research. Occasional. M&S fee $70.00

**MCE 4920 COMM-SBS** 3(1.4)
Group-Effort Applied Research: PR: MCB 3020C and BSC 3403C, Hands-on training class focused on real-world, applied research. Students participate as a group in a research project focusing on highly-parallel technical applications. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

**MCE 4920H COMM-SBS** 3(1.4)
Honors Group-Effort Applied Research (GEAR): PR: BSC 3403C and Consent from Honors. Hands-on training class focused on real-world, applied research. Students participate as a group in a research project focusing on highly-parallel technical applications. May be used in the degree program a maximum of 2 times only when course content is different. Occasional.

**MCE 4940 COMM-SBS** 0-3(3.4)
Methodology in Biomedical Sciences Instruction: PR: MCB 3020C, or PCB 3523, or PCB 37020 or ZOO 3733C or MCB 3020C, and C.I. Reinforces lab techniques; students will also gain experience in teaching by assisting instructors of different biomedical science labs. Fall, Spring.

**MCE 5205 COMM-SBS** 3(3.0)
Infectious Processes: PR: MCB 3020C or C.I. Discussion of current theories of the infectious process and the response of host cells and tissue to infection. Fall.

**MCE 5208 COMM-SBS** 3(3.0)
Cellular Microbiology: Host-Pathogen Interactions: PR: Graduate standing, PCB 3522. Examination of the molecular details of host-pathogen interactions. Key areas of cell biology will be considered in relation to microbial pathogenesis. Spring.

**MCE 5209 COMM-SBS** 3(3.0)
Microbial Stress Response: PR: Graduate standing or C.I. Examination of the molecular genetic mechanisms, bacterial and fungal pathogens used to adapt to changes in their environment. Fall.

**MCE 5225 COMM-SBS** 3(3.0)

**MCE 5415 COMM-SBS** 3(3.0)
Cellular Metabolism: PR: Graduate standing or C.I. Basic concepts of the mechanisms that define the functioning and regulation of prokaryotic and eukaryotic cell metabolism. Fall.

**MCE 5505 COMM-SBS** 3(3.0)
Molecular Virology: PR: Graduate standing or C.I. An in-depth overview of the fundamental aspects and current concerns in modern virology including HIV, tumor viruses, Prion disease, virotherapy, genome replication and pathogenesis. Occasional.

**MCE 5654 COMM-SBS** 3(1.6)
Applied Industrial Microbiology: PR: MCB 3020C, BSC 3403C or C.I. Combination of molecular and biochemical analyses with applied industrial microbiology projects. Occasional.

**MCE 5722 COMM-SBS** 3(2.4)
Biotechnology: PR: Graduate standing. A laboratory course that will train graduate students in fluorescence and luminescence-based assays used in biopharmaceutical industry for target validation. Occasional. M&S fee $70.00.
MCB 5932 COM-BSSB  VAR(VAR,VAR)
Current Topics in Molecular Biology: PR: Graduation; permission on demand. Topics taken from the primary literature reflecting recent advances in molecular biology. May be repeated for credit. Occasional.

MET 2104 COS-PHYS 3(3,0)

MGF 1106 COS-MATH 3(3,0)
Finite Mathematics: PR: Appropriate score on the UCF Math Placement test, or MAT 1033C with a C (2.0) or better, or C.I. Introduction to systematic counting, probability, geometry, statistics, sets and logic. This course is intended for students who are not planning to take upper level courses in mathematics. Fall, Spring.

MGF 1107 COS-MATH 3(3,0)
Explorations in Mathematics: The beauty and utility of mathematics, including patterns and symmetry, voting strategies, and finance. Connections between math and music, art, architecture, and nature. This course is intended for students not planning to take upper level mathematics. Fall, Spring.

MHS 3302 COS-MATH 3(3,0)

MHS 4404 COS-MATH 3(3,0)

MHS 4934 COS-MATH 3(3,0)
Topics in Foundations and History of Mathematics: PR: MHS 3302 and MAS 3106, or C.I. Mathematical foundations of the modern age. Emphasis on the development of concepts in the foundations and history of mathematics, ranging from set theory and mathematical logic to the history and development of mathematical theories. May be used in the degree program a maximum of 3 times. Occasional.

MHS 2090 ED-CFCS 3(3,0)
Introduction to Human Services: An overview of the field of human services including roles, boundaries and ethical issues. The course orients students to the operation of human service agencies. Fall, Spring.

MHS 2330 ED-CFCS 3(3,0)
Career Planning: Introduction to career and life planning theories and concepts that assists students in applying these to their own lives. Odd Fall, Even Spring.

MHS 2441 ED-CFCS 3(3,0)
Couples, Families and Intimate Relationships: Dynamics of families, couples, intimate relationships, dating, courtship and challenges of establishing stable and satisfying couples and families, impact of divorce, premarital and couples education. Fall, Spring.

MHS 3052 ED-CFCS 3(3,0)

MHS 3426 ED-CFCS 3(3,0)

MHS 5005 ED-CFCS 3(3,0)
Introduction to the Counseling Profession: PR: Counseling, SPH, MHS 5000. History of Education Professions. Preparation or C.I. Overview of the philosophy, organization, administration, and roles of counselors in various work settings. Fall, Spring.

MHS 3220C COM-BSSB 3(3,3)
Techniques in Clinical Microscopy: PR: CHM 2210, CHM 2210L. Analysis of body fluids and urine by chemical and microscopic methods with interpretation and correlation to human disease. Fall. M&S fee $70.00

MHS 3305 COM-BSSB 3(3,0)
Hematology: PR: CHM 2210 and PCB 3703C. Overview of the hematopoietic system and disease states associated with blood and bone marrow. Spring.

MHS 3305L COM-BSSB 1(0,6)
Hematology Lab: PR: MLS 3305. Practical laboratory procedures routinely performed for analyzing hematologic abnormalities. Spring.

MHS 3705 COM-BSSB 3(3,0)
Concepts in Education/Management: PR: Admission to professional phase of the MLS Program or C.I. Introduction to laboratory management, health delivery systems, and educational practices in clinical settings. Spring.

MHS 4334 COM-BSSB 3(3,0)
Hemostasis: PR: CHM 2210 and PCB 3703C. Overview of hemostatic and thrombolytic conditions at the time of disease and the relationship of lab tests to diagnosis. Occasional.

MHS 4430C COM-BSSB 3(3,2)
Clinical Parasitology: PR: MCB 3020C, CHM 2210, PCB 3703C or C.I. Instruction and laboratory practice in the examination and study of clinical material for detection and identification of human parasites. Fall. M&S fee $46.00.

MHS 4460L COM-BSSB 1(0,6)
Clinical Pathogenic Microbiology: Lab: PR: Admission to the professional phase of the MLS program or C.I. Laboratory examination of human pathogens from clinical samples to include bacteria and fungi. Spring, M&S fee $53.00.

MHS 4505C COM-BSSB 3(2,3)

MHS 4550 COM-BSSB 4(2,6)
Clinical Immunohematology: PR: Admission to the professional phase of the MLS program or C.I. Investigation of incompatible crossmatches; antibody identification, leukocyte and antibody identification procedures, problem solving. Spring. M&S fee $70.00.

MHS 4625 COM-BSSB 3(3,0)
Advanced Clinical Chemistry I: PR: CHM 2210, PCB 3703C or C.I. Correlation of lab test to specific disease states including deviations in carbohydrate, lipid, and protein metabolism. Spring.

MHS 4625L COM-BSSB 1(0,3)
Advanced Clinical Chem I Lab: CR: MLS 4625. Laboratory procedures routinely performed in a clinical chemistry laboratory. Fall. M&S fee $70.00.

MHS 4630 COM-BSSB 3(3,0)
Advanced Clinical Chemistry II: PR: CHM 2210, PCB 3703C or C.I. Correlation of laboratory tests to specific disease states. Spring.

MHS 4830L COM-BSSB 4(0,8)
Interpretive & Practical Clinical Chemistry: PR: Admission to the MLS program, MLS 4625, MLS 4630. Interpretation and practical application of chemical laboratory procedures at an off-campus affiliated hospital. Fall.

MHS 4831L COM-BSSB 4(0,8)
Interpretive & Practical Immunohematology: PR: Admission to the MLS program, MLS 4550, MLS 4625L, MLS 4630. Interpretation and practical application of blood banking and transfusion medicine laboratory procedures at an off-campus affiliated hospital. Fall.

MHS 4832L COM-BSSB 4(0,8)
Interpretive & Practical Hematology: PR: Admission to the MLS program, MLS 4625, MLS 4630. Interpretation and practical application of clinical hematology laboratory procedures at an off-campus affiliated hospital/c clinical site. Fall.

MHS 4833L COM-BSSB 4(0,8)
Diagnostic Microbiology: PR: Admission to the MLS program, MLS 4403C. Instruction and practice of clinical microbiological procedures at an off-campus affiliated hospital/c clinical site. Fall.

MHS 4910 COM-BSSB 1(1,0)
Introduction to Clinical Research: PR: MLS 3220C, MLS 4625, MLS 4550. Introduces students to different types of research within the clinical setting. Spring.

MHS 4933 COM-BSSB 2(2,0)

MMC 2004 COS-COMM 3(3,0)
Mass Media: Introduction to the nation’s mass media, including newspapers, radio, television, magazines, advertising, and public relations. Fall, Spring.

MMC 3200 COS-COMM 3(3,0)
Mass Communication Law: PR: One of the following: SPC 1608, SPC 1603C, COM 1000, or C.I. Legal rights and responsibilities of the mass media. Fall, Spring.

MMC 3200H COS-COMM 3(3,0)

MMC 3420 COS-COMM 3(3,0)
Mass Media Research Methods: PR: R-TV or Ad-PR or Journalism major; or Mass Co. minor; or C.I. Theory and methods of research used by mass professionals and academics, focusing on radio-television and advertising-public relations research. Fall, Spring.

MMC 3630 COS-COMM 3(3,0)
Social Media as Mass Communication: PR: Either SPC 1608, SPC 1603C, COM 1000, or C.I. Principles and practices of social media and its role in communicating to mass audiences. Occasional.

MMC 4263 COS-COMM 3(3,0)
New Media Technologies: PR: Majors only, RTV 3511. An examination of the technologies impacting the following: Social media, mass communications media environment and society. Occasional.

MMC 4300 COS-COMM 3(3,0)
International Media: PR: Junior standing or C.I. The student will analyze different communication systems from around the world. There will be at least six case studies from any of these areas - Asia, Latin American, Western Europe, Middle East, Africa. Occasional.

MMC 4303 COS-COMM 3(3,0)
Hispanics in Media in the US: PR: SPC 1603 or SPC 1603C or COM 1000, or C.I. Examines history and growth of Hispanics/Latinos in US media, including early depictions in media and current landscape of Spanish and English Hispanic/Latino Media. Fall.

MMC 4411 COS-COMM 3(3,0)
Ad-PR Campaigns: PR: Ad-PR majors only; ADV 3006 and PUR 4000 and either PUR 3100 or ADV 4101, and either PUR 4941 or ADV 4941. Planning and managing communication campaigns that integrate both advertising and public relations strategies. Capstone. Fall, Spring.

MMC 4602 COS-COMM 3(3,0)
Contemporary Media Issues: PR: One of the following: SPC 1608, SPC 1603C, COM 1000, or C.I. Relationship between the mass media and society; examination of social and ethical issues and responsibilities of the media’s relationship with government. Occasional.
MLT 5256 COS-MATH 3(3.0) Differential Geometry: PR: MAA 4227, graduate status or senior standing, or C.I. Differentiable manifolds, tangent space and tangent bundle, flows and vector fields, Lie derivatives, cotangent space and cotangent bundles, Riemann metrics, connections and geodesics, applications in classical mechanics. Occasional.

MUC 1010C CAH-MUSIC 2(1,1) Composition I: PR: MUT 1122 and MUL 2014 each with a grade of "C" (2.0) or better or C.I. Creative work in small forms. May be repeated for credit. Fall,Spring.

MUC 2104C CAH-MUSIC 2(1,1) Composition II: PR: MUC 1101C and Music or composition major. Continuation of Composition I. Competence determined by faculty jury. May be repeated for credit. Fall,Spring.

MUC 3105C CAH-MUSIC 3(1.0) Composition III: PR: MUC 2104C and competence determined by faculty jury. Continued study of composition, with additional intensive work expected for composition majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MUC 4106C CAH-MUSIC 4(1,1) Composition IV: PR: MUC 3105C and competence determined by faculty jury. Intensive advanced study of composition for composition majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MUC 4950 CAH-MUSIC 0(0.0) Composition Recital: CR: MUC 4106C. Culminating public concert of works written while studying Composition I-IV. Graded S/U. Odd Fall.

MUC 5112 CAH-MUSIC 2(1.0) Composition V: PR: Graduate standing in music education or C.I. Advanced music composition at the graduate level. May be used in the degree program at a maximum of 4 times. Occasional.

MUE 2040 CAH-MUSIC 2(2.0) Introduction to Music Education: An introduction to music education covering philosophy, history, and current practice and trends. Observation in schools required. Fall.


MUE 2346 CAH-MUSIC 1(0.2) Vocal Techniques: PR: Music major or C.I. Vocal function, and applications of today's methodology with applications for K-12 teaching. Odd Spring.

MUE 2440 CAH-MUSIC 2(0.2) String Techniques: PR: MUE major, junior standing or C.I. Class instruction in string playing and pedagogical techniques. Spring. M&S fee $30.00

MUE 2450 CAH-MUSIC 1(0.1) Woodwind Techniques I: PR: MUE major, Junior standing or C.I. Class instruction in woodwind playing and pedagogical techniques. Fall.

MUE 2460 CAH-MUSIC 1(0.2) Brass Techniques: PR: MUE major, junior standing or C.I. Class instruction in brass playing and pedagogical techniques. May be repeated for credit. Fall.

MUE 2470 CAH-MUSIC 1(0.2) Percussion Techniques: PR: MUE major, junior standing or C.I. Class instruction in percussion playing and pedagogical techniques. May be repeated for credit. Spring. M&S fee $35.00.

MUE 2471 CAH-MUSIC 1(1.1) Percussion Techniques II: PR: MUE 2470 or C.I. Additional performing and teaching techniques of the percussion family, as relevant to today’s music major. Odd Spring. M&S fee $35.00

MUE 3333 CAH-MUSIC 3(3.0) Music Learning Theory and Assessment: PR: Admission to BME Professional Program. Learning theory and practical applications of assessment techniques as applied in the music classroom. Fall.


MUE 3451 CAH-MUSIC 1(1.0) Woodwind Techniques II: PR: MUE 2460. MUED major, Junior standing or C.I. Continuation of Woodwind Techniques I, with emphasis on double reeds. Occasional.

MUE 3461 CAH-MUSIC 1(1.1) Brass Techniques II: PR: MUE 2460. Continued study of performance techniques, teaching skills, resources, and materials required to teach brass instruments to beginning, middle, and high school level students. Odd Spring.

MUE 3693 CAH-MUSIC 2(1.0) Technology in Music Education: PR: MUE 2404 or C.I. Productivity software, classroom management tools, web design and other technological tools for classroom teaching. Odd Spring.

MUE 3942 CAH-MUSIC 3(3.0) Music Internship I: PR: MUE 4311, MUE 3333, EDG 4410, TSL 4080, EDF 4603 and RED 4043. Students experience various roles of a music teacher in elementary and secondary settings, including observation, micro-teaching, and the completion of various assignments. Graded S/U. Fall,Spring.

MUE 4311 CAH-MUSIC 2(2.0) Elementary School Music Methods: PR: Junior standing, MUED major. Organization and administration of instruction for comprehensive music education, K-6; instructional planning, techniques, and materials for elementary music education. Fall.

MUE 4331 CAH-MUSIC 3(3.0) Secondary Choral Methods I: PR: Admission to BME Professional Program. Examination of vocal and choral literature, planning skills and rehearsal techniques for choral groups. Fall.

MUE 4332 CAH-MUSIC 3(3.0) Secondary Instrumental Methods I: PR: Admission to BME Professional Program. Wind, percussion, and string teaching methods for beginning and middle level students in a large classroom setting. Fall.

MUE 4335 CAH-MUSIC 3(3.0) Secondary Choral Methods II: PR: MUE 4331 with a grade of "C" (2.0) or better. Continued examination of vocal and choral literature, planning skills and rehearsal techniques for choral groups. Odd Spring.

MUE 4337 CAH-MUSIC 3(3.0) Secondary Instrumental Methods II: PR: MUE 4332 with grade of "C" (2.0) or better. Wind and percussion teaching methods for high school students in a larger classroom setting. Odd Spring.


MUE 4393 CAH-MUSIC 2(2.0) Music and Students with Special Needs: PR: MUE 2404 or C.I. Consideration of the general education music curriculum in regards to students with disabilities and special needs. Odd Fall.

MUE 4441 CAH-MUSIC 3(3.0) String Methods: PR: MUE 4332. String teaching methods for high school students in a large classroom setting. Odd Spring.

MUE 4791 CAH-MUSIC 0(0.0) BME ePortfolio: PR: MUE 3742 Music Internship I; CR: MUE 4943 Music Internship II. Required electronic portfolio for all Bachelor of Music Education majors to be taken in conjunction with MUE 4943 Music Internship II. Fall,Spring.
The Baroque period, 1600-1750.

MUG 3202 CAH-MUSIC VAR(VAR,VAR)

MUG 3302 CAH-MUSIC VAR(VAR,VAR)

MUH 2017 CAH-MUSIC 3(3,0)

MUH 2017H CAH-MUSIC 3(3,0)
Honors Survey of Rock Music: PR: Consent of Honors. Rock music, 1950s to present, with emphasis on cultural and musical meaning. With Honors consent. Even Fall.

MUH 2019 CAH-MUSIC 3(3,0)
American Popular Music, 1840s-present: Musical and cultural development of popular music in the United States from the 1840s to the present. Fall, Spring.

MUH 2021 CAH-MUSIC 3(3,0)

MUH 3211 CAH-MUSIC 3(3,0)
Music History and Literature I: PR: MUH 3633 or MUL 3400. Overview of the major styles and periods of Western European art music from Antiquity to 1800. Fall, Spring.

MUH 3212 CAH-MUSIC 3(3,0)
Music History and Literature II: PR: MUH 3211 with grade of "C" (2.0) or better. History of Western European art music from 1800 to present, Fall, Spring.

MUH 3633 CAH-MUSIC 3(3,0)
Music in the United States: PR: MUL 2720 and MUL 2722 with grade of "C" (2.0) or better. Music of the United States of America from pre-Revolutionary times to present. Includes vernacular, jazz, popular, and art music traditions indigenous to the USA. Fall, Spring.

MUH 4222 CAH-MUSIC 3(3,0)
Medieval and Renaissance Music: PR: MUH 3211 and MUH 3212 with grade of "C" (2.0) or better. Music and culture of Western Europe in the era c. 450-1600. Even Fall.

MUH 4341 CAH-MUSIC 3(3,0)
Music of the Baroque: PR: MUH 3211 and MUH 3212 with grade of "C" (2.0) or better. Music and culture of the Baroque period, 1600-1750. Even Fall.

MUH 4351 CAH-MUSIC 3(3,0)
Eighteenth-Century Music: PR: MUH 3211 and MUH 3212 with grade of "C" (2.0) or better. Music and culture of Western Europe in the era c. 1700-1830. Even Fall.

MUH 4361 CAH-MUSIC 3(3,0)
Music of the 19th Century: PR: MUH 3211 and MUH 3212 with grade of "C" (2.0) or better. Examination of Western European and American art music from the nineteenth century. Odd Fall.

MUH 4371 CAH-MUSIC 3(3,0)
Music Since 1900: PR: MUH 3211 and MUH 3212 with grade of "C" (2.0) or better. Western art music since 1900. Odd Spring.

MUH 4814 CAH-MUSIC 3(3,0)
Jazz Styles and Analysis: PR: MUL 3171. In MUH 2016 with grade of "C" (2.0) or better. Historical style periods and master artists in jazz music. Odd Spring.

MUH 5326 CAH-MUSIC 3(3,0)
Medieval and Renaissance Music: PR: Graduate standing in music education or C.I. Music and culture of Western Europe in the era c. 450-1600. Occasional.

MUH 5345 CAH-MUSIC 3(3,0)
Music of the Baroque: PR: Graduate standing in music or music education or C.I. Baroque music, 1600-1750. Investigates Baroque musical styles and composers within their diverse historical, musical, and cultural contexts. Even Spring.

MUH 5356 CAH-MUSIC 3(3,0)
Eighteenth-Century Music: PR: Graduate standing in music education or C.I. Music and culture of Western Europe in the era c. 1700-1800 Occasional.

MUH 5365 CAH-MUSIC 3(3,0)
Music of the 19th Century: PR: Graduate standing in Music or C.I. Western Art Music of the 19th Century. Odd Fall.

MUH 5375 CAH-MUSIC 3(3,0)
Music Since 1900: PR: Graduate standing in Music Education or C.I. Music and culture of Western and American art music from c. 1900 to the present. Occasional.

MUH 5665 CAH-MUSIC 3(3,0)
Development of Opera: PR: Graduate standing in Music or C.I. An in-depth examination of Western European opera, from its origins around 1600 until the present day. Even Spring.

MUH 5816 CAH-MUSIC 3(3,0)
Jazz Styles and Analysis: PR: Graduate standing or C.I. Advanced study of historical style periods and master artists in jazz music. Odd Fall.

MUL 2010 CAH-MUSIC 3(2,1)
Introduction to Music: PR: Non-music majors only. Designed to develop an understanding of musical principles and techniques for listening to music. Fall, Spring.

MUL 2010H CAH-MUSIC 3(3,0)
Honors Introduction to Music: PR: Consent of Honors. Designed to develop an understanding of musical principles and techniques for listening to music, with Honors consent. Fall, Spring.

MUL 2014 CAH-MUSIC 3(3,0)
Introduction to Music History and Literature: PR: Music major or C.I. Musical repertories and cultures from the Western art music tradition, American jazz, and non-western music. Odd Spring.

MUL 2016 CAH-MUSIC 3(3,0)
Evolution of Jazz: Survey of jazz literature and performance. Fall, Spring.

MUL 2720 CAH-MUSIC 3(3,0)

MUL 2721 CAH-MUSIC 3(3,0)
Survey of Latin American Music: Survey of Latin-American and Caribbean music, including musical traditions as well as Historical and cultural connections. Occasional.

MUL 3400 CAH-MUSIC 2(1,1)
Piano Literature I: PR: Major in Music or C.I. Survey of stringed keyboard literature from the 16th century to the present, with emphasis on technical, formal and performance problems. Odd Fall.

MUL 3401 CAH-MUSIC 2(1,1)

MUL 3463 CAH-MUSIC 2(2,0)

MUL 3602 CAH-MUSIC 3(3,0)
Song Literature: PR: MUL 2014 or C.I. Classical song repertoire in English and common foreign languages, and proven methods of effective song study. Odd Fall.

MUL 4437 CAH-MUSIC 3(3,0)

MUL 4438 CAH-MUSIC 3(3,0)

MUL 4444 CAH-MUSIC 3(3,0)

MUL 4552 CAH-MUSIC 3(3,0)
Band Literature: PR: MUL 1122 and MUL 2014, or C.I. Survey of materials for use in the public school band classroom, including beginning band methods, technique books, and musical selections appropriate for concert performance. Fall.

MUL 4643 CAH-MUSIC 3(3,0)
Choral Literature: PR: "C" (2.0) or better in MUL 3400 or MUL 3401, or C.I. Choral music from its beginnings to the present with consideration of historical perspective, genres, styles, and performance practice, major composers, and representative works. Fall.

MUL 5436 CAH-MUSIC 3(3,0)
Guitar Literature and Pedagogy: PR: Graduate standing in Music or C.I. Survey of significant repertoire and pedagogy for classical guitar. Odd Spring.

MUL 5439 CAH-MUSIC 3(3,0)
String Literature and Pedagogy: PR: Graduate standing in Music or C.I. Study of string literature from the Baroque period to the 20th century, along prominent pedagogical principles. Odd Fall.

MUL 5447 CAH-MUSIC 3(3,0)
Woodwind Literature and Pedagogy: PR: Graduate standing in Music or C.I. Major works written for woodwind instruments, as well as the study of the basic concepts and techniques fundamental to teaching woodwind instruments. Odd Spring.

MUL 5448 CAH-MUSIC 3(3,0)
Brass Literature and Pedagogy: PR: Graduate standing in Music or C.I. Significant brass repertoire, study materials and a review of teaching techniques for artistic brass performance. Even Fall.

MUL 5555 CAH-MUSIC 3(3,0)
Band Literature: PR: Graduate standing or C.I. Survey of materials for use in the public school band classroom, including beginning band methods, technique books, and musical selections appropriate for concert performance. Occasional.

MUL 5645 CAH-MUSIC 3(3,0)
Choral Literature: PR: Graduate standing or C.I. Survey of choral music from its beginnings to the present with consideration of historical perspective, genres, styles and performance practice, major composers and representative works. Occasional.
Preparation for appearance at football games and special development, marketing, and fund-raising. Fundamental elements of administration, audience performing arts organization (PAOs), examining the standing or senior standing or C.I. Structure of nonprofit MUN 3113 Fall.

Percussion/Mallet Ensemble: MUM 5806 and performance practice; major composers and program in Music, graduate standing or C.I. Survey of Literature: PR: Admission to the graduate program in Music, graduate standing or C.I. Survey of choral music from its beginnings to the present with consideration of historical perspective; genres, styles and performance practice; major composers and representative works. Occasional.

MUM 5806 CAH-MUSIC 3(0,3) Performing Arts Management: PR: Graduate standing or senior standing or C.I. Structure of nonprofit arts organization (PAOs), examining the fundamental elements of administration, audience development, marketing, and fund-raising. Spring.

MUN 2442 CAH-MUSIC 1(1,0) Percussion/Mallet Ensemble: PR: C.I. Preparation and performance of music for percussion with mallets. May be repeated for credit. Fall. M&S fee $30.00

MUN 3113 CAH-MUSIC 2(0,8) Marching Band: PR: Admission by audition. Preparation for appearance at football games and special occasions. May be repeated for credit. Fall. M&S fee $37.00

MUN 3123L CAH-MUSIC 1(0,3) Concert Band: PR: C.I. No audition required and open to all majors. Study and performance of music for large ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3133 CAH-MUSIC 1(0,4) Symphonic Band: PR: Open to all students by audition. Auditioned performance ensemble that presents multiple concerts each semester and performs a variety of musical literature for winds and percussion. Fall. Spring. M&S fee $20.00

MUN 3143 CAH-MUSIC 1(0,4) Wind Ensemble: PR: Open to all students by audition. Study and performance of music for wind ensemble and band. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3283 CAH-MUSIC 1(0,5) Symphony Orchestra: PR: Audition. Open to all students by audition. Rehearsal and performance of works from the symphonic repertoire. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3313 CAH-MUSIC 1(0,3) University Chorus: PR: C.I. Open to all students by audition. Study and performance of large ensemble music. Possible tours. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3323 CAH-MUSIC 1(0,3) Women’s Chorus: PR: Audition and C.I. Study and performance of music for women’s voices. Open to all students. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3343L CAH-MUSIC 1(0,3) Chamber Singers: PR: C.I. A chamber choir of advanced singers. Open to all students by audition. Additional rehearsals and commitments required. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3423 CAH-MUSIC 1(0,2) Woodwind Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3426 CAH-MUSIC 1(1,0) Saxophone Ensemble: PR: Students must pass an audition in front of the instructor. An in-depth study and performance of music written for an ensemble comprised of all saxophones. May be used in the degree program a maximum of 8 times. Fall. Spring. M&S fee $20.00

MUN 3427 CAH-MUSIC 1(1,0) Flute Ensemble: PR: Student must pass an audition in front of the instructor. Study and performance of music written for wind ensembles comprised of all flutes. May be used in the degree program a maximum of 8 times. Fall. Spring. M&S fee $20.00

MUN 3431L CAH-MUSIC 1(0,2) Brass Quintet: PR: Audition and Consent of Instructor. Rehearsal and performance of music for brass quintet. May be used in the degree program a maximum of 4 times only when course content is different. Fall. Spring. M&S fee $20.00

MUN 3433 CAH-MUSIC 1(0,2) Brass Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3437 CAH-MUSIC 1(1,0) Trumpet Ensemble: PR: C.I. Rehearsal and performance of music for trumpet ensembles. May be repeated for credit. Occasional.

MUN 3443 CAH-MUSIC 1(0,2) Percussion Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $35.00

MUN 3444 CAH-MUSIC 1(1,0) Mallet Ensemble: PR: C.I. Preparation and performance of music for mallet ensemble. May be repeated for credit. Fall. Odd. Spring. M&S fee $35.00

MUN 3453 CAH-MUSIC 1(0,3) Flute Ensemble: PR: Open to Music Majors or C.I. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3483 CAH-MUSIC 1(0,2) String Ensemble: PR: C.I. Open to all students. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3487 CAH-MUSIC 1(0,2) Guitar Ensemble: PR: Open to C.I. and study and performance of music for multiple guitars. May be used in the degree program a maximum of 8 times. Odd. Spring. M&S fee $20.00

MUN 3493 CAH-MUSIC 1(1,0) New Music Ensemble : PR: C.I. Open to all students. Study and performance of music for all percussion. May be repeated for credit. Fall. Spring. M&S fee $35.00

MUN 3713 CAH-MUSIC 1(0,4) Jazz Ensemble: PR: C.I. Open to all students by audition. Study and performance of music for small ensembles. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3714 CAH-MUSIC 1(0,2) Jazz Combo: PR: Junior standing and C.I. Rehearsal and performance of music for small jazz combo, emphasizing improvisation. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 3813 CAH-MUSIC 1(1,1) Steel Drum Ensemble: PR: C.I. Rehearsal and performance of music arranged for steel drum band. May be repeated for credit. Fall. Spring. M&S fee $20.00

MUN 5125 CAH-MUSIC 1(0,3) Concert Band: PR: Open to all graduate students by audition. Study and performance of music for large ensembles. May be used in the degree program a maximum of 4 times. Odd Fall. M&S fee $20.00

MUN 5145 CAH-MUSIC 1(0,4) Wind Ensemble: PR: Open to all graduate students by audition. Study and performance of music for wind ensembles for an ensemble comprised of all woodwinds. May be used in the degree program a maximum of 4 times. Odd Fall. M&S fee $20.00

MUN 5215 CAH-MUSIC 1(0,5) Symphony Orchestra: PR: Open to all graduate students by audition. Rehearsal and performance of works from the symphonic repertoire. May be used in the degree program a maximum of 4 times. Odd Fall. M&S fee $20.00

MUN 5325 CAH-MUSIC 1(0,3) Women’s Chorus: PR: Open to all graduate students by audition. Study and performance of choral music for women’s voices. May be used in the degree program a maximum of 4 times. Odd. Fall. M&S fee $20.00

MUN 5368L CAH-MUSIC 1(0,3) Graduate Chamber Singers: PR: Graduate standing in Music Education and C.I. A select, mixed choir that explores music appropriate to a small, advanced ensemble and performs in the Orlando area each semester. May be used in the degree program a maximum of 5 times. Occasional. M&S fee $20.00

MUN 5385L CAH-MUSIC 1(0,3) Graduate University Chorus: PR: Graduate standing in Music Education and C.I. Study and performance of large ensemble music. May be used in the degree program a maximum of 5 times. Occasional. M&S fee $20.00

MUN 5445 CAH-MUSIC 1(0,2) Percussion Ensemble: PR: Open to all graduate students by audition. Study and performance of music for small percussion ensembles. May be used in the degree program a maximum of 4 times. Odd Fall. M&S fee $35.00

MUN 5465L CAH-MUSIC 1(0,2) Graduate Chamber Music: PR: Graduate standing in Music Education and C.I. The study and performance of vocal or instrumental literature. Flexible instrumentation to meet student needs. May be used in the degree program a maximum of 5 times. Occasional. M&S fee $20.00

MUN 5478L CAH-MUSIC 1(0,3) Early Music Ensemble: PR: Graduate standing in Music Education and C.I. Graduate ensemble experience with instruments and repertoire of the Medieval, Renaissance, and Baroque periods. May be used in the degree program a maximum of 5 times. Occasional. M&S fee $5.00

MUN 5715L CAH-MUSIC 1(0,4) Jazz Ensemble: PR: Audition, graduate or senior standing, and C.I. Study and performance of jazz big band music. May be used in the degree program a maximum of 4 times only when course content is different. Fall. Spring. M&S fee $20.00

MUN 5716L CAH-MUSIC 1(0,2) Jazz Chamber Group: PR: Audition, graduate or senior standing or senior standing, and C.I. Study and performance of jazz small group music. May be used in the degree program a maximum of 4 times. Fall. Spring. M&S fee $20.00

MUO 2501C CAH-MUSIC 2(1,1) Opera Skills: PR: Open to all students by audition. Integration of singing, acting, and movement in opera; explores basic stage movement, character preparation, and performance of opera arias. Fall.

MUO 3503L CAH-MUSIC 1(0,3) Opera Workshop: PR: MUO 2501C, or C.I., and audition. Study, preparation, and performance of opera literature. May be used in the degree program a maximum of 8 times. Occasional. M&S fee $70.00

MUO 5505L CAH-MUSIC 1(0,3) Graduate Opera Workshop: PR: C.I. and audition. Study of audition techniques, operatic roles and repertoire, and characterization through performance. May be used in the degree program a maximum of 5 times. Occasional. M&S fee $70.00

MUS 1010 CAH-MUSIC 1(0,2) Music Forum: A series of special musical events required of music majors. Includes lectures and recitals by faculty, students, and guest artists. Graded S/U. May be repeated for credit. Fall. Spring.

MUS 1250 CAH-MUSIC 1(2,0) IPA for Singers: PR: Music major or C.I. The International Phonetic Alphabet and its application to English, French, German, and Italian music written for voice. Odd Fall.
MUS 2360C CAH-MUSIC 3(2,2)
Introduction to Music Technology: PR: Music major or C.I. Utilization of computers and keyboards to acquire skills in MIDI sequencing, notation, CDs, and the Internet. Fall, Spring.

MUS 3254 CAH-MUSIC 2(2,0)

MUS 3255 CAH-MUSIC 2(2,0)
German and English Lyric Diction: PR: MUS 1250. Study and applications of the correct sung pronunciation of the German and English languages. Odd Spring.

MUS 3953 CAH-MUSIC 0(1,0)
Recital Performance I: PR: Junior Level Applied Music and C.I. Public recital of 30 minutes to demonstrate performance skills. Graded S/U. May be used in the degree program a maximum of 2 times. Fall, Spring.

MUS 4320 CAH-MUSIC 3(3,0)
Music Business and Industry: PR: Music major; Music minor or Entertainment Management major, with a grade of "A" (2.0) or better in MUL 2101 or MUL 2720. Today's music industry copyright, publishing, contracts and licensing. Fall.

MUS 4674 CAH-MUSIC 3(3,0)

MUS 4900 CAH-MUSIC 3(3,0)
Music BA Capstone Project: PR: C.I. Self-designed project, completed under faculty supervision, that demonstrates ability to think critically and work independently while applying knowledge and skills from music and other subjects. Graded S/U. Occasional.

MUS 4905 CAH-MUSIC 1-4(1-4)
Directed Experience: PR: C.I. and Junior standing. Special topics of study and/or research as determined by student/faculty consultation. May be repeated for credit. Occasional.

MUS 5356 CAH-MUSIC 3(3,0)
Music and Technology: PR: Graduate status or senior standing, or C.I. The emergence of technology in music, including MIDI, CD-ROM, and the high-tech music classroom. Occasional.

MUS 5677 CAH-MUSIC 3(3,0)
Wellness for the Performing Musician: PR: Graduate standing in music education or C.I. Various techniques and methods of maintaining physical health and wellness for musicians. Occasional.

MUT 1004 CAH-MUSIC 3(3,0)
Fundamentals of Music I: Basic music theory and reading music. Fall.

MUT 1121 CAH-MUSIC 4(2,3)
Music Theory and Musicianship I: PR: MUT 1004 or C.I. Studies in music theory, both written and aural skills, including musical analysis, model composition, sight singing, ear training, and improvisation. Odd Spring.

MUT 1122 CAH-MUSIC 4(2,3)
Music Theory and Musicianship II: PR: MUT 1121 with a grade of "C" (2.0) or better. Continuation of MUT 1121. Studies in music theory, both written and aural skills, including musical analysis, model composition, sight singing, ear training, and improvisation. Odd Spring.

MUT 2127 CAH-MUSIC 4(2,3)
Music Theory and Musicianship IV: PR: MUT 2126 with a grade of "C" (2.0) or better. Continuation of MUT 2126. Studies in music theory, both written and aural skills, including musical analysis, model composition, sight singing, ear training, and improvisation. Odd Spring.

MUT 3170 CAH-MUSIC 3(3,0)
Jazz Theory I: PR: MUT 1122 with a grade of "C" (2.0) or better. Advanced study of theoretical concepts in jazz music, including practical keyboard applications. Even Fall.

MUT 3171 CAH-MUSIC 3(3,0)
Jazz Theory II: PR: MUT 3170 with a grade of "C" (2.0) or better. Advanced study of theoretical concepts in jazz music, including practical keyboard applications. Odd Spring.

MUT 3923 CAH-MUSIC 3(3,0)
Jazz Workshop: PR: MUT 3171 or C.I. Comprehensive musicianship in jazz studies. Improvisation, repertory, leadership and collaboration, studied in the context of a jazz group. May be repeated up to four times. Fall, Spring. Fall, Spring.

MUT 4031 CAH-MUSIC 1(1,0)
Review of Music Theory: PR: C.I. A comprehensive review of harmonic and analytic skills. May be repeated for credit. Occasional.

MUT 4311 CAH-MUSIC 3(3,0)
Orchestration: PR: MUS 2360C and MUT 2127 with a grade of "C" (2.0) or better. Technical and aesthetic principles of writing for instruments of the concert orchestra. Odd Spring.

MUT 4401 CAH-MUSIC 3(3,0)
Counterpoint: PR: MUT 2127 with a grade of "C" (2.0) or better. Counterpoint in Western music from the 16th to the 20th Centuries. Even Spring.

MUT 4571 CAH-MUSIC 3(3,0)
Analysis of Twentieth-Century Music: PR: MUT 2127 with a grade of "C" (2.0) or better. Techniques of analysis for various styles of twentieth-century music. Odd Fall.

MUT 5316 CAH-MUSIC 3(3,0)
Orchestration: PR: Graduate standing in Music or C.I. Study of the various instruments commonly found in orchestras and wind ensembles and how to write for these instruments in combination. Odd Spring.

MUT 5381 CAH-MUSIC 3(3,0)
Arranging and Composing Music: PR: Satisfactory placement tests in theory, sight-singing, and ear training, and graduate status or senior standing, or C.I. Arranging and composing music for instrumental and vocal ensembles. Some emphasis on compositional techniques of the 20th century. Occasional.

MUT 5445 CAH-MUSIC 3(3,0)
Counterpoint: PR: Graduate standing in Music or C.I. Principles of counterpoint and the construction of contrapuntal styles in Western music from the 16th century to the present day. Even Spring.

MUT 5620 CAH-MUSIC 3(3,0)
Analysis of Twentieth Century Music: PR: Graduate standing in Music or C.I. Analysis of music in a selection of the different styles practiced in the 20th century, with an emphasis on Western art music. Fall.

MUT 5936 CAH-MUSIC 3(3,0)
Music Theory Seminar: PR: Graduate standing in music education or C.I. One or more issues of importance in music theory with emphasis on recent scholarly literature and debates. May be used in the degree program a maximum of 4 times. Occasional.

MVB 1211 CAH-MUSIC 1(0,1)

MVB 1212 CAH-MUSIC 1(0,1)
Secondary French Horn: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in French Horn. Intended for non-music majors. May be repeated for credit. Fall, Spring.
UCF Courses and Descriptions

MVB 3435 CAH-MUSIC 2-3(1,1) Tuba III: PR: MVB 2425 and competence determined by faculty jury. Continued study of performance skills of the tuba, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVB 4441 CAH-MUSIC 4(1,1) Tuba IV: PR: MVB 3433 and competence determined by faculty jury. Intensive advanced performance study of the tuba, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVB 4442 CAH-MUSIC 4(1,1) French Horn IV: PR: MVB 3432 and competence determined by faculty jury. Intensive advanced performance study of the French horn, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVB 4443 CAH-MUSIC 4(1,1) Trombone IV: PR: MVB 3433 and competence determined by faculty jury. Intensive advanced performance study of the trombone, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVB 4445 CAH-MUSIC 4(1,1) Tubal IV: PR: MVB 3434 and competence determined by faculty jury. Progressive study of the tuba, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVB 5451 CAH-MUSIC 2(1,0) Trumpet V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVB 5452 CAH-MUSIC 2(1,0) French Horn V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVB 5453 CAH-MUSIC 2(1,0) Trombone V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVB 5454 CAH-MUSIC 2(1,0) Baritone V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVB 5455 CAH-MUSIC 2(1,0) Tuba V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVJ 1010 CAH-MUSIC 2(1,1) Jazz Piano I: PR: Music major or C.I. Scale studies, arpeggios, chord voicings, and other techniques in fundamentals of jazz piano skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 1213 CAH-MUSIC 2(1,1) Jazz Guitar I: PR: Music major or C.I. Scales, arpeggios, chord voicings, and other techniques in fundamentals of jazz guitar skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 1214 CAH-MUSIC 2(1,1) Jazz Bass I: PR: Music major or C.I. Basic Jazz Bass skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 1219 CAH-MUSIC 2(1,1) Jazz Drum Set I: PR: Music major or C.I. Basic Jazz Drum Set skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 2220 CAH-MUSIC 2(1,1) Jazz Piano II: PR: MVJ 1010. Continuation of MVJ 1010. Scale Studies, arpeggios, chord voicings, and other techniques included in progressive jazz piano skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 2223 CAH-MUSIC 2(1,1) Jazz Guitar II: PR: MVJ 1213. Continuation of MVJ 1213. Scales, arpeggios, chord voicings and other techniques included in progressive jazz guitar skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 2224 CAH-MUSIC 2(1,1) Jazz Bass II: PR: MVJ 1214. Continuation of MVJ 1214. Progressive Jazz Bass skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 2229 CAH-MUSIC 2(1,1) Jazz Drum Set II: PR: MVJ 1210. Continuation of MVJ 1210. Progressive Jazz Drum Set skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 3230 CAH-MUSIC 3(1,1) Jazz Piano III: PR: MVJ 2220. Continuation of MVJ 2220. Scale studies, arpeggios, chord voicings, and other techniques included in progressive jazz piano skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 3233 CAH-MUSIC 3(1,1) Jazz Bass III: PR: MVJ 2223. Continuation of MVJ 2223. Progressive Jazz Bass skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 3239 CAH-MUSIC 3(1,1) Jazz Drum Set III: PR: MVJ 2225. Continuation of MVJ 2225. Progressive Jazz Drum Set skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 4240 CAH-MUSIC 4(1,1) Jazz Piano IV: PR: MVJ 3230. Continuation of MVJ 3230. Scale studies, arpeggios, chord voicings, and other techniques included in advanced jazz piano skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 4243 CAH-MUSIC 4(1,1) Jazz Guitar IV: PR: MVJ 3233. Continuation of MVJ 3233. Scales, arpeggios, chord voicings, and other techniques included in advanced jazz guitar skills. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 4244 CAH-MUSIC 4(1,1) Jazz Bass IV: PR: MVJ 3234. Continuation of MVJ 3234. Advanced Jazz Bass skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 4349 CAH-MUSIC 4(1,1) Jazz Drum Set IV: PR: MVJ 3339. Continuation of MVJ 3339. Progressive Jazz Drum Set skills, including sound concept, technique, literature, style, history, and heritage. May be used in the degree program a maximum of 3 times. Odd Spring.

MVJ 5350C CAH-MUSIC 2(1,1) Jazz Piano V: PR: Audition, graduate standing or senior standing, and C.I. Study of jazz piano literature, styles, and techniques. May be used in the degree program a maximum of 3 times only when course content is different. Fall, Spring.

MVJ 5355C CAH-MUSIC 2(1,1) Jazz Guitar V: PR: Audition, graduate standing or senior standing, and C.I. Study of jazz guitar literature, styles and techniques. May be used in the degree program a maximum of 3 times only when course content is different. Fall, Spring.

MVJ 5354C CAH-MUSIC 2(1,1) Jazz Bass V: PR: Audition, graduate standing or senior standing, and C.I. Study of jazz bass literature, styles and techniques. May be used in the degree program a maximum of 3 times only when course content is different. Fall, Spring.

MVK 1111 CAH-MUSIC 1(0,2) Class Piano I: Class instruction for beginning piano students. Not open to music majors whose major performing medium is piano. Fall, Spring.

MVK 1112 CAH-MUSIC 1(0,2) Class Piano II: PR: MVK 1111 with grade of "C" (2.0) or better or C.I. Continuation of MVK 1111. Music majors only; not open to music majors whose major performing medium is piano. Fall, Spring.

MVK 2121 CAH-MUSIC 1(0,2) Class Piano III: PR: Consent of Music Chair, C.I. Performing ensemble. Advanced instruction in piano. Intended for non-music majors. May be repeated for credit. Fall, Spring.

MVK 1411 CAH-MUSIC 2(1,1) Piano I: PR: Major in music or consent of chairperson; audition. May be repeated for credit. Fall, Spring.

MVK 2121 CAH-MUSIC 1(0,2) Piano II: PR: MVK 2121 with grade of "C" (2.0) or better or C.I. Continuation of MVK 2121. Music majors only; not open to music majors whose major instrument is piano. Fall, Spring.

MVK 2122 CAH-MUSIC 1(0,2) Piano II: PR: MVK 2121 with grade of "C" (2.0) or better or C.I. Continuation of MVK 2121. Music majors only; not open to music majors whose major instrument is piano. Fall, Spring.

MVK 2421 CAH-MUSIC 2(1,1) Piano II: PR: MVK 1411 and competence determined by faculty jury. Continuation of MVK 1411. May be repeated for credit. Fall, Spring.

MVK 3431 CAH-MUSIC 3(2,1) Piano III: PR: MVK 2421 and competence determined by faculty jury. Continued study of performance skills of the piano, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVK 4441 CAH-MUSIC 4(1,1) Piano IV: PR: MVK 3431 and competence determined by faculty jury. Intensive advanced performance study of the piano, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVK 4640 CAH-MUSIC 2(2,0) Piano Pedagogy I: PR: MVK 1411 or C.I. Methods, materials for teaching individuals and classes of children and adults beginning to intermediate levels; demonstration and observation of procedures. May be used in the degree program a maximum of 2 times. Even Fall.

MVK 5451 CAH-MUSIC 2(1,0) Piano Pedagogy II: PR: MVK 1411 or C.I. Methods, materials for teaching individuals and classes of children and adults beginning to intermediate levels; demonstration and observation of procedures. May be used in the degree program a maximum of 2 times. Even Fall.

MVK 5650 CAH-MUSIC 2(2,0) Piano Pedagogy: PR: Graduate standing in Music or C.I. Techniques, methods, and experiences of former and current pedagogues to equip students for current or future piano teaching. Even Spring.

MVO 3250 CAH-MUSIC 1(1,0) Advanced Secondary Instruction: PR: Graduate status or senior standing, and C.I. Advanced instructional techniques on a secondary instrument or in voice. May be repeated for credit. Occasional.
MVP 1211 CAH-MUSIC 1(0,1) Secondary Percussion: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in percussion. Intended for non-music majors. May be repeated for credit. Occasional. M&S fee $35.00

MVP 1411 CAH-MUSIC 2(1,1) Percussion I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring. M&S fee $35.00

MVP 2421 CAH-MUSIC 2(1,1) Percussion II: PR: MVP 1411 and competence determined by faculty jury. Continuation of MVP 1411. May be repeated for credit. Fall,Spring. M&S fee $35.00

MVP 3431 CAH-MUSIC 2-3(1,1) Percussion III: PR: MVP 2421 and competence determined by faculty jury. Continued study of performance skills of percussion, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring. M&S fee $35.00

MVP 3630 CAH-MUSIC 2(2,0) Percussion Pedagogy: PR: Music major, C.I. Teaching methods and materials for percussion students and groups. Fall,Spring.

MVP 4441 CAH-MUSIC 4(1,1) Percussion IV: PR: MVP 3431 and competence determined by faculty jury. Intensive advanced performance study of percussion for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring. M&S fee $35.00

MVP 5451 CAH-MUSIC 2(1,0) Percussion V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall,Spring. M&S fee $35.00

MVS 1211 CAH-MUSIC 1(0,1) Secondary Violin: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in violin. Intended for non-music majors. May be repeated for credit. Fall,Spring.

MVS 1212 CAH-MUSIC 1(0,1) Secondary Viola: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in viola. Intended for non-music majors. May be repeated for credit. Fall,Spring.

MVS 1213 CAH-MUSIC 1(0,1) Secondary Cello: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in cello. Intended for non-music majors. May be repeated for credit. Fall,Spring.

MVS 1214 CAH-MUSIC 1(0,1) Secondary Bass: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in bass. Intended for non-music majors. May be repeated for credit. Fall,Spring.

MVS 1216 CAH-MUSIC 1(0,1) Secondary Guitar: PR: Consent of Music Chair. CR: Performing ensemble. Advanced instruction in guitar. Intended for non-music majors. May be repeated for credit. Fall,Spring.

MVS 1411 CAH-MUSIC 2(1,1) Violin I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 1412 CAH-MUSIC 2(1,1) Viola I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 1413 CAH-MUSIC 2(1,1) Cello I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 1414 CAH-MUSIC 2(1,1) Bass I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 1415 CAH-MUSIC 2(1,1) Harp I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 1416 CAH-MUSIC 2(1,1) Guitar I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall,Spring.

MVS 2421 CAH-MUSIC 2(1,1) Violin II: PR: MVS 1411 and competence determined by faculty jury. Continuation of MVS 1411. May be repeated for credit. Fall,Spring.

MVS 2422 CAH-MUSIC 2(1,1) Viola II: PR: MVS 1412 and competence determined by faculty jury. Continuation of MVS 1412. May be repeated for credit. Fall,Spring.

MVS 2423 CAH-MUSIC 2(1,1) Cello II: PR: MVS 1413 and competence determined by faculty jury. Continuation of MVS 1413. May be repeated for credit. Fall,Spring.

MVS 2424 CAH-MUSIC 2(1,1) Bass II: PR: MVS 1414 and competence determined by faculty jury. Continuation of MVS 1414. May be repeated for credit. Fall,Spring.

MVS 2425 CAH-MUSIC 2(1,1) Harp II: PR: MVS 1415 and competence determined by faculty jury. Continuation of MVS 1415. May be repeated for credit. Fall,Spring.

MVS 2426 CAH-MUSIC 2(1,1) Guitar II: PR: MVS 1416 and competence determined by faculty jury. Continuation of MVS 1416. May be repeated for credit. Fall,Spring.

MVS 3431 CAH-MUSIC 2-3(1,1) Violin III: PR: MVS 2421 and competence determined by faculty jury. Continued study of performance skills of the violin, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 3432 CAH-MUSIC 2-3(1,1) Violin IV: PR: MVS 2422 and competence determined by faculty jury. Continued study of performance skills of the violin, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 3433 CAH-MUSIC 2-3(1,1) Cello III: PR: MVS 2423 and competence determined by faculty jury. Continued study of performance skills of the cello, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 3434 CAH-MUSIC 2-3(1,1) Bass III: PR: MVS 2424 and competence determined by faculty jury. Continued study of performance skills of the string bass, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 3435 CAH-MUSIC 2-3(1,1) Harp III: PR: MVS 2425 and competence determined by faculty jury. Continued study of performance skills of the harp, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 3436 CAH-MUSIC 2-3(1,1) Guitar III: PR: MVS 2426 and competence determined by faculty jury. Continued study of performance skills of the guitar, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 4346 CAH-MUSIC 4(1,1) Guitar IV: PR: MVS 3436 and competence determined by faculty jury. Intensive advanced performance study of the guitar, for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.

MVS 4441 CAH-MUSIC 4(1,1) Violin IV: PR: MVS 3431 and competence determined by faculty jury. Intensive advanced performance study of the violin, for performance majors. May be used in the degree program a maximum of 3 times. Fall,Spring.
MVW 5651 CAH-MUSIC 2(3,0)
Voice Pedagogy: PR: Graduate standing in Music or C.I. Vocal function, anatomy, and pedagogical methods. Corequisite: with application to the voice teacher and performer. Odd Spring.

MVW 1211 CAH-MUSIC 1(0,1)

MVW 1212 CAH-MUSIC 1(0,1)

MVW 1213 CAH-MUSIC 1(0,1)

MVW 1214 CAH-MUSIC 1(0,1)

MVW 1411 CAH-MUSIC 2(1,1)
Flute I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall, Spring.

MVW 1412 CAH-MUSIC 2(1,1)
Oboe I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall, Spring.

MVW 1413 CAH-MUSIC 2(1,1)
Clarinet I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall, Spring.

MVW 1414 CAH-MUSIC 2(1,1)
Bassoon I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall, Spring.

MVW 1415 CAH-MUSIC 2(1,1)
Saxophone I: PR: Major in music or consent of chair; audition. May be repeated for credit. Fall, Spring.

MVW 2421 CAH-MUSIC 2(1,1)
Flute II: PR: MVW 1411 and competence determined by faculty jury. Continuation of MVW 1411. May be repeated for credit. Fall, Spring.

MVW 2422 CAH-MUSIC 2(1,1)
Oboe II: PR: MVW 1412 and competence determined by faculty jury. Continuation of MVW 1412. May be repeated for credit. Fall, Spring.

MVW 2423 CAH-MUSIC 2(1,1)
Clarinet II: PR: MVW 1413 and competence determined by faculty jury. Continuation of MVW 1413. May be repeated for credit. Fall, Spring.

MVW 2424 CAH-MUSIC 2(1,1)
Bassoon II: PR: MVW 1414 and competence determined by faculty jury. Continuation of MVW 1414. May be repeated for credit. Fall, Spring.

MVW 2425 CAH-MUSIC 2(1,1)
Saxophone II: PR: MVW 1415 and competence determined by faculty jury. Continuation of MVW 1415. May be repeated for credit. Fall, Spring.

MVW 3431 CAH-MUSIC 2(3,1)
Flute III: PR: MVW 2421 and competence determined by faculty jury. Continued study of performance skills of flute, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 3432 CAH-MUSIC 2(3,1)
Oboe III: PR: MVW 2422 and competence determined by faculty jury. Continued study of performance skills of the oboe, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 3433 CAH-MUSIC 2(3,1)
Clarinet III: PR: MVW 2423 and competence determined by faculty jury. Continued study of performance skills of the clarinet, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 3434 CAH-MUSIC 2(3,1)
Bassoon III: PR: MVW 2424 and competence determined by faculty jury. Continued study of performance skills of the bassoon, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 3435 CAH-MUSIC 2(3,1)
Saxophone III: PR: MVW 2425 and competence determined by faculty jury. Continued study of performance skills of the saxophone, with additional intensive work expected for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 4441 CAH-MUSIC 4(1,1)
Flute IV: PR: MVW 3431 and competence determined by faculty jury. Intensive advanced performance study of the flute, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 4442 CAH-MUSIC 4(1,1)
Oboe IV: PR: MVW 3432 and competence determined by faculty jury. Intensive advanced performance study of the oboe, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 4443 CAH-MUSIC 4(1,1)
Clarinet IV: PR: MVW 3433 and competence determined by faculty jury. Intensive performance study of the clarinet, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 4444 CAH-MUSIC 4(1,1)
Bassoon IV: PR: MVW 3434 and competence determined by faculty jury. Intensive advanced performance study of the bassoon, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 4445 CAH-MUSIC 4(1,1)
Saxophone IV: PR: MVW 3435 and competence determined by faculty jury. Intensive advanced performance study of the saxophone, for performance majors. May be used in the degree program a maximum of 3 times. Fall, Spring.

MVW 5451 CAH-MUSIC 2(1,0)
Flute V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVW 5452 CAH-MUSIC 2(1,0)
Oboe V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVW 5453 CAH-MUSIC 2(1,0)
Clarinet V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVW 5454 CAH-MUSIC 2(1,0)
Bassoon V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

MVW 5455 CAH-MUSIC 2(1,0)
Saxophone V: PR: Graduate status or senior standing and C.I. May be repeated for credit. Fall, Spring.

NGR 5003 CON-NURS 2(2,0)
Advanced Health Assessment and Diagnostic Reasoning Lab: PR: CR or CR: NGR 5141; CR: NGR 5003. Admission to the M.S. in Nursing or Doctor of Nursing Practice program or C.I. Application of concepts and skills for advanced health assessment and diagnostic reasoning over the lifespan. May be used in the degree program a maximum of two times. Fall, Spring. M&S fee $45.00

NGR 5090 CON-NURS 3(0)
Urgent Care for the Advanced Practice Nurse: PR: NGR 6240 or C.I. Advanced practice evaluation and management of clients in urgent care settings. Occasional.

NGR 5141 CON-NURS 3(0)
Pathophysiological Bases for Advanced Nursing Practice: PR: Admission to M.S. in Nursing or Doctor of Nursing Practice program or C.I. Critical examination of the physiological and pathophysiological mechanisms affecting individuals. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5190 CON-NURS 3(0)
Core Clinical Concepts for Nurse Educators: PR: Admission to the Graduate Nursing Program or C.I. NGR 5141 or equivalent. Integrates concepts of Pharmacology and Health Assessment. Provides the foundation for Advanced Nursing Practice within the Nurse Educator role.

NGR 5638 CON-NURS 3(3)
Health Promotion: PR: Admission to M. S. in Nursing or Doctor of Nursing Practice or C.I. Exploration and analysis of concepts, theories, research evidence, clinical assessment and interventions for health promotion and wellness. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5660 CON-NURS 3(0)
Health Disparities: Issues and Strategies: PR: Graduate standing; explores disparities in access, utilization services, outcomes, and determinants of health among U.S. populations: data, research, programmatic issues, and strategies to close the gaps. May be used in the degree program a maximum of 2 times. Occasional.

NGR 5690 CON-NURS 3(0)
Interdisciplinary Care at End-of-Life: PR: Graduate status or C.I. Examination of interdisciplinary roles and strategies for enabling patients, families, and caregivers to approach end-of-life free from avoidable distress and suffering. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5720 CON-NURS 3(0)
Organizational Dynamics: PR: Baccalaureate degree in Nursing or C.I. Analysis of organizational theories related to health care organizations and the use of leadership, communication and power to influence health care delivery and policy. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5800 CON-NURS 3(0)
Theory for Advanced Practice Nursing: PR: Baccalaureate degree in Nursing or C.I. Conceptual and theoretical bases of nursing practice and research with emphasis on scholarly writing and critique. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5871 CON-NURS 3(0)
Health Care Informatics: PR: Baccalaureate in health related field or C.I. Use of information systems, clinical decision support, and communication technologies, and decision-making models. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5884 CON-NURS 3(0)
Legal and Professional Behavior in Advanced Practice Nursing: PR: Graduate standing and admission to the M.S. in Nursing or Doctor of Nursing Practice program. Examination of legal, ethical, cultural, and political issues related to professional practice. May be used in the degree program a maximum of 2 times. Fall, Spring.

NGR 5894C CON-NURS 3(2,1)
International Perspectives of Global Health: PR: Graduate standing or C.I. An analysis of global health in comparison with that of USA and other nation’s health care systems. Occasional.
Admission to BSN program. Concepts and nursing care in long-term care.

Admission to BSN program, or C.I. Clinical application of technical psychomotor nursing skills. Integrate 3065L. Apply nursing process and core scientific principles to BSN program. CR: NUR 3028L; NUR 3065 and NUR 3065L. Application of the nursing process, scientific and evidence-based principles in the nursing care of clients in long-term care. Graded S/U. Fall, Spring. M&S fee $20.00

Admission to BSN program. CR: NUR 3225 and NUR 3225L. Application of the nursing process, scientific and evidence-based principles in the nursing care of clients in long-term care. Graded S/U. Fall, Spring. M&S fee $20.00

NSP 4695 CON-NURS 3(3,0)

Family and Interpersonal Violence: Perspectives for Nurses: CR: Admission to BSN program or C.I. An overview of the historical, social, economic, political, and community development that have contributed to the impact of violence on individuals, families, and communities.

NSP 4685 CON-NURS 3(3,0)

Death & Dying: Nursing Considerations: PR: Admission to Program or C.I. An in-depth look at issues encountered in nursing practice related to the process of death, dying, and end of life. Occasional.

NSP 4695 CON-NURS 3(3,0)

Forensic Nursing Principles and Practice: PR: Admission to Program or C.I. Models of care and application of principles and practices to apply to a variety of settings; an examination of the scope of practice of forensic nursing. Occasional.

NUR 3028 CON-NURS 3(3,0)

Essentials of Nursing Practice: PR: Admission to BSN program. CR: NUR 3028L; NUR 3065 and NUR 3065L. Apply nursing process and core scientific principles to physical psychomotor nursing skills. Integrate evidence-based principles and nursing process to clients in long-term care. Fall, Spring.

NUR 3028L CON-NURS 1(0,2)

Essentials of Nursing Practice Lab: PR: Admission to BSN program. CR: NUR 3028; NUR 3065 and NUR 3065L. Lab to learn and apply scientific and evidence-based principles as they relate to technical psychomotor nursing skills. Graded S/U. Fall, Spring. M&S fee $30.00

NUR 3065 CON-NURS 2(2,0)

Health Assessment: PR: or CR: NUR 3065L and Admission to BSN program, or C.I. Concepts of health assessment of clients. Fall, Spring.

NUR 3065L CON-NURS 1(0,1)

Health Assessment Lab: CR: NUR 3065 and Admission to BSN program, or C.I. Clinical application of concepts and techniques of health assessment of clients Fall, Spring. M&S fee $16.00

NUR 3125 CON-NURS 3(3,0)

Pathophysiologies for Nursing Practice: PR: Admission to BSN program. Concepts and nursing care applications of the pathophysiopathological basis of illness. Fall, Spring.

NUR 3145 CON-NURS 3(3,0)

Pharmacology for Nursing Practice: PR: Admission to BSN program. CR: NUR 3225 and NUR 3225L. Principles of pharmacology and application to nursing practice. Fall, Spring.

NUR 3165 CON-NURS 3(3,0)

Nursing Research: PR: Admission to BSN program and successful completion of first semester or C.I. Nursing research as a basis for nursing practice. Selected experiences in reviewing, analyzing, and interpreting nursing research for nursing practice. Fall, Spring.

NUR 3165H CON-NURS 3(3,0)

Honors Nursing Research: PR: Permission of honors. Admission to BSN program and successful completion of first semester or C.I. Researching as a basis for nursing practice. Selected experiences in reviewing, analyzing, and interpreting nursing research for nursing practice. With Honors content. Occasional.

NUR 3167 CON-NURS 1(2,0)

Accelerated Nursing Research Seminar: PR: Admission to BSN program; previous undergraduate or graduate research course with approval from the CON; or C.I. Accelerated study of research approaches to problematic situations in nursing. Selected experiences in investigating, analyzing, and interpreting nursing research and nursing issues. Spring.

NUR 3225 CON-NURS 3(3,0)

Nursing Care of the Adult I: PR: Admission to BSN program, successful completion of the first semester in the nursing curriculum, and concurrent enrollment in NUR 3225L; NUR 3145; NUR 3445; NUR 3445L. Integrate biopsychosocial models of practice for individuals and families experiencing health risks, short-term illness or chronic health problems. Fall, Spring.

NUR 3225L CON-NURS 2(0,6)

Nursing Care of the Adult I: Clinical Practice: PR: Admission to BSN program; successful completion of all courses in the first semester of the nursing curriculum, and concurrent enrollment in NUR 3225; NUR 3445; NUR 3445L. Clinical experience applying biopsychosocial models of nursing practice for clients experiencing health risks, short-term illness, or chronic health problems. Graded S/U. Fall, Spring. M&S fee $40.00

NUR 3445 CON-NURS 4(0,4)

Nursing Care of Families: PR: Admission to BSN program, successful completion of the first semester in the nursing curriculum, and concurrent enrollment in NUR 3225; NUR 3225L; NUR 3145; NUR 3445; NUR 3445L. Concepts of family nursing as they relate to health promotion, maintenance and illness management for childbearing and childbearing families. Fall, Spring.

NUR 3445L CON-NURS 2(0,6)

Nursing Care of Families Clinical: PR: Admission to BSN program, successful completion of the first semester in the nursing curriculum, and concurrent enrollment in NUR 3225; NUR 3225L; NUR 3145; NUR 3445. Nursing care to clients experiencing health risks, short-term illness, or chronic health problems. Graded S/U. Fall, Spring. M&S fee $20.00

NUR 3616 CON-NURS 2(2,0)

Health Promotion Across the Lifespan: PR: Admission to BSN program and CR: NUR 3616L. The concepts of health promotion and prevention for individuals and families living in the community across the lifespan. Fall, Spring.

NUR 3616L CON-NURS 1(1,0)

Health Promotion Across the Lifespan Clinical: PR: Admission to BSN program and CR: NUR 3616L. Clinical concepts of community health nursing focusing on community as client and levels of prevention across the lifespan. Fall, Spring.

NUR 3634 CON-NURS 3(3,0)

Community Health Nursing: PR: Admission to BSN program. CR: NUR 3634L. Concepts of community health nursing focusing on community as client, and levels of prevention across the lifespan. Graded S/U. Occasional. M&S fee $55.00

NUR 3755L CON-NURS 2(0,6)


NUR 3795 CON-NURS 3(3,0)


NUR 3805 CON-NURS 3(3,0)

Dimensions of Professional Nursing Practice: PR: Admission to BSN program or C.I. Theoretical bases of professional nursing practice for RN to BSN students. Fall, Spring.

NUR 3806 CON-NURS 1(1,0)

Professional Communication Seminar: PR: Admission to BSN program or C.I. Application of library utilization and professional writing skills, critical thinking and stress management principles to the beginning role of the professional nurse. Fall, Spring.

NUR 3816 CON-NURS 1(1,0)

Professional Nurse Seminar: PR: Admission to BSN program. CR: NUR 3225. The role and function of the professional nurse including professional standards, ethics, and legal and practice issues. Fall, Spring.

NUR 3825 CON-NURS 2(2,0)

The Role of the Professional Nurse: PR: Admission to BSN program. Examination of the role and function of the professional nurse, including professional standards, legal, and practice issues. Occasional.

NUR 3825H CON-NURS 2(2,0)

Honors The Role of the Professional Nurse: PR: Admission to BSN program. Permission of honors. The role and function of the professional nurse, including professional standards, legal, and practice issues with honors content. Occasional.

NUR 3826 CON-NURS 3(3,0)


NUR 3826H CON-NURS 3(3,0)


NUR 3936 CON-NURS 3(2,2)

International Perspectives of Nursing and Health Care: PR: Admission to BSN program or C.I. Comparative analysis of professional nursing practice and health care systems in the United States and selected countries. May be repeated for credit. Occasional.

NUR 4177 CON-NURS 3(3,0)

Holistic Nursing: PR: Admission to BSN program or C.I. Explore lived experience of health-wellness, illness-disease focusing on mind-body-spirit, transpersonal healing and complementary interventions to maximize nursing care outcomes. Occasional.

NUR 4178 CON-NURS 3(3,0)

Complementary Therapies: Options for Integrative Nursing Practice: PR: Junior or senior undergraduate standing in nursing, or C.I. History, principles, techniques, outcomes, and research of complementary and integrative health. Concepts of wellness, healing and integrative practice from nursing and consumer perspectives. Occasional.

NUR 4197 CON-NURS 3(3,0)

Genetics and Genomics in Nursing Practice: PR: Admission to BSN program or C.I. The application of genetics and genomic principles to clinical nursing practice. Occasional.
NUR 4227L CON-NURS 3(0.3)
Nursing Case Studies of the Adult II: Clinical Practice: PR: Admission to BSN program; successful completion of the first three semesters in the nursing curriculum. CR: NUR 4227L, or C.I. Nursing care of clients and their families experiencing acute, unstable, or life-threatening health problems. Fall, Spring.

NUR 4257 Introduction to Critical Care Nursing: PR: Admission to BSN program and successful completion of NUR 4227 and NUR 4227L, or C.I. Theories and principles of comprehensive nursing care of individuals and families in critical care settings. Fall, Spring.

NUR 4286 Gerontologic Nursing: PR: Admission to BSN program or C.I. Theories and principles related to the promotion, maintenance, and restoration of health in older adults in various situations. Occasional.

NUR 4340 CON-NURS 3(0.0)
Obesity in Children and Adolescents: Nursing Management: PR: Admission to BSN program or C.I. Examines multiple factors that predispose children and adolescents to obesity; explores nursing management and public health and policy strategies for prevention and treatment. Occasional.

NUR 4493 CON-NURS 3(0.0)

NUR 4516 CON-NURS 3(0.0)

NUR 4535 CON-NURS 3(0.0)
Psychiatric Mental Health Nursing: PR: Admission to BSN program. CR: NUR 4535L. Nursing in the promotion of mental health and the prevention, treatment, and rehabilitation of mental illness. Fall, Spring.

NUR 4535L CON-NURS 2(0.6)
Psychiatric Mental Health Clinical: PR: Admission to BSN program. CR: NUR 4535L. Clinical Application of Nursing interventions in the promotion of mental health, the prevention, treatment, and rehabilitation of mental illness. Graded S/U. Fall, Spring.

NUR 4604L CON-NURS 4(0.12)
Practicum in Community and Public Health Nursing for RNs: PR: Admission to BSN program. Synthesis of theories and concepts incorporated throughout the curriculum, applied in the community health and public health nursing setting, and directed toward professional role development. Graded S/U. Fall, Spring.

NUR 4637 CON-NURS 3(0.0)

NUR 4637L CON-NURS 1(0.3)
Public Health Nursing Clinical: PR: Admission to the BSN program. CR: NUR 4637L. Clinical Course to apply concepts of public health nursing. Students will have opportunities to apply their learning and have regular contact with the public health nursing field. Fall, Spring.

NUR 4675 CON-NURS 3(0.0)
Issues in Rural Health Care: PR: Admission to BSN program or C.I. The rural environment and appropriate health care services and programs for rural populations. Occasional.

NUR 4760 CON-NURS 3(0.0)
Principles of Pain Management: PR: Admission to BSN program or C.I. Principles of pain and pain management. Concepts of pain from neurones to the elderly, including practices across healthcare settings, from acute care to home care. Occasional.

NUR 4765 CON-NURS 3(0.0)
Rehabilitation Nursing: Principles and Practice: PR: Admission to BSN program or C.I. Rehabilitation principles are the practices that may be incorporated into any healthcare setting and applied to clients of all age groups. Occasional.

NUR 4828 CON-NURS 3(0.0)
Nursing Leadership, Management and Role Transition: PR: Admission to BSN program or C.I. Professional development and role transition of baccalaureate graduates entering professional nursing practice focusing on principles of leadership and management applied to health care settings. Fall, Spring.

NUR 4828H CON-NURS 3(0.0)
Honors Leadership, Management and Role Transition: PR: Admission to the BSN program; admission to the Honors or Honors in the major program or C.I. Application of leadership and management principles to the beginning role of the professional nurse with honors content. Spring.

NUR 4829 CON-NURS 3(0.0)
Accelerated Transitioning into Professional Practice as a Leader: PR: Admission to BSN program, CR: NUR 4845, or C.I. Application of leadership and management principles to the beginning role of the professional nurse. Occasional.

NUR 4837 CON-NURS 3(0.0)
Health Care Issues, Policy, and Economics: PR: Admission to BSN program or C.I. Study of selected health care policy issues relevant to the financing, organization, and delivery of nursing services to populations in the community. Fall, Spring.

NUR 4837H CON-NURS 3(0.0)
Honors Health Care Issues, Policy, and Economics: PR: Admission to BSN program; or C.I. Study of selected health care policy issues relevant to the financing, organization, and delivery of nursing services to populations in the community with honors content. Occasional.

NUR 4906 CON-NURS VAR(VAR,VAR) Independent Study: Directed Study. Graded S/U or Letter grade. May be repeated for credit. Occasional.

NUR 4907H CON-NURS 3(0.0)
Honors Directed Reading/Research: PR: Permission of Honors and admission to major. The student will review and synthesize literature on a selected topic in preparation for the Honors Thesis or Project. Graded S/U or Letter grade. Occasional.

NUR 4942L CON-NURS 3(0.0)
Nursing Practicum for International Students: PR: C.I. In-depth study of clinical nursing practice for international students. Graded S/U. May be used in the degree program a maximum of 2 times. Occasional.

NUR 4945L CON-NURS 4(0.0)
Nursing Practicum: PR: Admission to the BSN program and successful completion of all previous clinical courses on plan of study. Designed to enhance student’s knowledge and expertise in an area of nursing practice chosen by the student and school of nursing faculty. Graded S/U. Spring.

NUR 4971H CON-NURS 1-3(1-3.0)
Honors Thesis or Project Works: PR: Permission of Honors. Faculty mentoring through the process of writing and defending the Honors Thesis or Project. May be taken the second time for 1-3 credit hours. May be used in the degree program a maximum of 2 times. Occasional.

OCE 3008 COS-BIOL 3(3.0)
Oceanography: PR: CHM 2045C and CHM 2046, and a “C” (2.0) or better in BSC 2010. Biological, physical, and chemical oceanography. Occasional.

OCE 3052 OPT-OPT 3(1.0)

OCE 3052L OPT-OPT 1(0.3)
Introduction to Photonics Laboratory: PR: MAP 2302, CR: OSE 3052. Laboratory experiments introducing geometric and physical optics. Image formation, Fiber transmission. Laser beams, interferometers, Optical systems (cameras, scanners, sensors). Polarization devices. Fall. M&S fee $15.00

OCE 3053 OPT-OPT 3(0.0)

OCE 3200 OPT-OPT 3(0.0)

OCE 3490 OPT-OPT 3(0.0)
Nanophotonics: PR: PHY 2049C or C.I. Optical photonic processes on nano scale and interactions with elements of physics & engineering. Occasional.

OCE 4410 OPT-OPT 3(0.0)

OCE 4410L OPT-OPT 3(0.0)
Optoelectronics Laboratory: CR: OSE 4410. Experiments in the basics of semiconductor optoelectronic devices including photodiodes, light-emitting diodes, lasers, and CCDs. Applications include solar cells, displays, photodetectors, and optical communications. Spring. M&S fee $18.00

OCE 4470 OPT-OPT 3(0.0)
Infrared Optic Communications: PR: EEL 3550 and OSE 3052 and “C” (2.0) or better in EEL 3123C. Introduction to the principles and design of semiconductor optoelectronic devices including physical-optical wave conversion. Solar cells, light-emitting diodes, laser diodes, and CCDs. Applications include photovoltaics, displays, imaging. Spring.

OCE 4470L OPT-OPT 1(0.3)
Fiber-Optic Communications Laboratory: CR: OCE 4470. Laboratory experiments covering the optical fiber as a communication channel, couplers, transmitters and receivers using optoelectronic devices, multiplexing, and overall systems performance. Fall. M&S fee $16.00

OCE 4520 OPT-OPT 3(0.0)

OCE 4520L OPT-OPT 1(0.3)
and complex dynamics of the recovery process are reduced to the effects of natural and technological disasters. Fall.

PAD 4390 HPA-PUB 3(3,0)
Hazard Mitigation and Preparedness: PR: Junior standing and Public Administration major or Emergency Management and Homeland Security minor or Urban and Regional Planning minor, or C.I. Specialized knowledge and skills necessary to develop a proactive hazard mitigation plan to reduce the effects of natural and technological disasters. Fall. 

PAD 4392 HPA-PUB 3(3,0)
Emergency Management and Homeland Security: PR: Junior standing and Public Administration major or Emergency Management and Homeland Security minor or Urban and Regional Planning minor, or C.I. After a public emergency, a variety of services must be provided to the victims. This course reviews and analyzes coordination and management of these services. Fall.

PAD 4395 HPA-PUB 3(3,0)
Disaster Response and Recovery: PR: Junior standing and Public Administration major or Emergency Management and Homeland Security minor or Urban and Regional Planning minor, or C.I. Individual, group and community behavior and recovery from disasters. Service delivery strategies are highlighted and improved dynamics of the recovery process are emphasized. Spring.

PAD 4414 HPA-PUB 3(3,0)
Human Resource Administration: PR: Either a Public Administration major with a “C” or better in PAD 3003 and PAD 3733 and in all PAD common program prerequisites or a Public Administration major with a “C” (2.0) or better in PAD 3003 and PAD 3733, or Nonprofit Management minor, or C.I. The history, operating components, structural characteristics, and increasing impact of laws and related sanctions on personnel practices of public agencies. Fall. Spring.

PAD 4446 HPA-PUB 3(3,0)
Multiculturalism in Public Administration: PR: C.H.P.A major or minor, and Junior standing, or C.I. This course is designed to help public managers examine public and personal attitudes and values, ethical dilemmas, and social consequences related to issues of diversity. Occasional.

PAD 4712 HPA-PUB 3(3,0)
Information Systems for Public Managers and Planners: PR: Junior standing and Public Administration major or Emergency Management and Homeland Security minor or Urban and Regional Planning minor or complex knowledge and skills concerning information technologies important for planners and public managers, including use of GIS to manipulate and analyze spatial data. Spring.

PAD 4720 HPA-PUB 3(3,0)
Survey Research in Public Administration: PR: Either a Public Administration major with a “C” (2.0) or better in PAD 3003 and PAD 3733 and in all PAD common program prerequisites courses, or Public Administration minor with a “C” (2.0) or better in PAD 3003 and PAD 3733, or C.I. Introduction to the concepts, design, methodology, computer applications, and data analysis in applied research in the public sector. Fall. Spring.

PAD 4803 HPA-PUB 3(3,0)
Issues in Urban Administration: PR: Junior standing and Public Administration major or Urban and Regional Planning minor, or C.I. To provide students with an understanding of public policy and administrative responses to socioeconomic problems within the urban context. Occasional.

PAD 4822 HPA-PUB 3(3,0)
Intergovernmental Administration: PR: Junior standing and Public Administration major or Emergency Management and Homeland Security minor or Urban and Regional Planning minor, or C.I. Various approaches to studying and explaining the American intergovernmental system. Emphasis on interorganizational activities, i.e. negotiation, cooperation, and coordination within the legal setting. Fall.

PAD 4941 HPA-PUB 3(12,3-12) Public Administration Internship: PR: Junior standing and permission by the internship coordinator in the Public Administration program. Internship in a municipal, county, state, or federal government, including assignments in such fields as personnel, planning, budget, and fiscal, procurement, and public safety. Fall. Spring.

PAD 4948 HPA-PUB 3(2,0)
Nonprofit Management Internship: PR: Junior standing and enrollment in nonprofit minor, and PR or CR: one credit hour of PAD 3930. Supervised internships for students in the Nonprofit Leadership Alliance program. Requires minimum of 300 hours placement in a nonprofit human services organization. May be used in the degree program a maximum of 2 times. Fall. Spring.

PAD 5041 HPA-PUB 3(3,0)

PAD 5145 HPA-PUB 3(3,0)
Volunteerism in Nonprofit Management: PR: Admission to Master of Nonprofit Management degree, Nonprofit certificate or C.I. Volunteer development in nonprofit organizations, including board selection, development and leadership, volunteer recruitment, training, retention and theories of motivation, leadership, ethical issues. Fall. Spring.

PAD 5146 HPA-PUB 3(3,0)

PAD 5336 HPA-PUB 3(3,0)
Introduction to Urban Planning: PR: Admission to Master of Science in Urban and Regional Planning, or Master of Public Administration, or Master of Nonprofit Management, or Certificate in Urban and Regional Planning, or C. I. Planning techniques such as planned unit developments, capital improvements planning, and growth management, and planning methods, including needs assessment and graphic design. Fall.

PAD 5338 HPA-PUB 3(3,0)

PAD 5356 HPA-PUB 3(3,0)
Managing Community and Economic Development: PR: Admission to Master of Science in Urban and Regional Planning, or Master of Public Administration, or Master of Nonprofit Management, or Certificate in Emergency Management and Homeland Security, or Certificate in Urban and Regional Planning, or C. I. Overview of economic development activities focusing on policy and managerial issues at the local level. Spring.

PAD 5425 HPA-PUB 3(3,0)
Dispute Resolution in the Public Sector: An examination of the skills needed to resolve disputes in the public sector through facilitation, mediation, and other alternative methods. Occasional.

PAD 5427 HPA-PUB 3(3,0)

PAD 5807 HPA-PUB 3(3,0)
Local Government Operations: PR: Junior standing and permission by the internship coordinator in the Public Administration program. Internship in a municipal, county, state, or federal government, including assignments in such fields as personnel, planning, budget, and fiscal, procurement, and public safety. Fall. Spring.

PAD 5855 HPA-PUB 3(3,0)
Introduction to Public Procurement: PR: Admission to Master of Public Administration or C.I. Acquisition of knowledge and skills relating to the public procurement process. Occasional.

PAD 5937 HPA-PUB 3(3,0)
Introduction to Public Procurement: PR: C.I. Acquisition of knowledge and skills relating to the public procurement process. Occasional.

PAP 2162 HPA-HPA 2(2,0)
Public Affairs Careers: Introduction and examination of public affairs programs of study and career opportunities that will prepare students for future careers. Fall.

PAP 4754 HPA-PUB AFF 3(3,0)
Interdisciplinary Leadership in Public Affairs: PR: Junior Standing and ENC 1101 or C.I. Global public affairs leadership in social and economic development, social justice, transnational and interdisciplinary partnerships, and social change. Occasional.

PAZ 4234 COS-BIOL 3(3,0)
Zoo and Aquarium Management: PR: A “C” (2.0) or better in both PCB 3044 and PCB 3063, or C.I. Conservation, propagation and exhibition of wild animals in captivity. Occasional.

PAZ 5235 COS-BIOL 3(3,0)

PCB 3023 COS-BIOL 3(3,0)
Molecular Cell Biology: PR: CHM 2210 and a “C” (2.0) or better in both BSC 2010C and PCB 3063, or C.I. Structure and function of eukaryotic cells including bioenergetics, protein structure and function, chromosome structure, DNA repair and recombination, membrane structure and transport, intracellular vesicle trafficking, cell signaling, apoptosis and cell cycle control and organization and functions of the cytoskeleton and extracellular matrix. Fall. Spring.

PCB 3044 COS-BIOL 3(3,0)
Principles of Ecology: PR: CHM 2045C or CHM 2041, and a “C” (2.0) or better in both BSC 2010C and PCB 2010C, or C.I. Principles of ecosystems, biogeochemical cycling, environmental factor interactions, population dynamics, and community development. Fall.
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PCB 3044H COS-BIOL 3(3,0)
Honors Principles of Ecology: PR: CHM 2045 and a C (2.0) or better in BSC 210C and BSC 211C. CR: PCB 3044L (Honors version). Elements of ecosystem ecology, biogeochemical cycling, environmental and biotic interactions, population dynamics, and community change. With Honors consent Occasional.

PCB 3044L COS-BIOL 1(0,1)
Honors Principles of Ecology Lab: PR: (CHM 2045 or CHM 2041) and a C (2.0) or better in BSC 210C and BSC 211C or I-I Co-Requisite: PCB 3044H Ecology (Honors Version) Elements of ecosystem ecology, biogeochemical cycling, environmental and biotic interactions, population dynamics, and community change. With Honors consent Occasional.

PCB 3044L COS-BIOL 1(0,3)
Principles of Ecology Laboratory: PR: or CR: PCB 3044 or C.I. Field and laboratory investigations of natural ecosystems, with emphasis on current methodology in ecology. Fall.

PCB 3063 COS-BIOL 3(3,0)
Genetics: PR: CHM 2046 and a "C" (2.0) or better in BSC 300C or C.I. Basic principles of heredity as applied to prokaryotes and eukaryotes. Fall, Spring.

PCB 3063H COS-BIOL 3(3,0)
Honors Genetics: PR: CHM 2046 and a "C" (2.0) or better in BSC 301C or C.I., and consent of Honors. Basic principles of heredity as applied to prokaryotes and eukaryotes with honors content. Occasional.

PCB 3063L COS-BIOL 1(0,3)
Genetics Laboratory: PR: or CR: PCB 3063 or C.I. Introduction to laboratory techniques of genetics. Fall, Spring. M&S fee $28.00

PCB 3233 COM-BBSS 3(3,0)
Immunology: PR: BSC 201C, BSC 210C, or C.I. Basic principles of immune reactions, antigen antibody interactions, cell-mediated immunity, tumor immunity, and immunological therapy. Fall.

PCB 3233L COM-BBSS 1(0,3)
Immunology Laboratory: CR: PCB 3233. Introduction to laboratory techniques in immunology. Fall, Spring. M&S fee $46.00

PCB 3343L COS-BIOL 2-5(0,6-15)
Principles of Field Ecology: PR: BSC 211C, PCB 3044 or C.I. Applied study of biodiversity, ecology and conservation through field trips, field research and/or lectures. Emphasis and location varies by instructor. May be repeated for credit only when course content is different. Occasional.

PCB 3354 COS-BIOL 3(3,0)
Tropical Ecology and Conservation: PR: PCB 3044 with a grade of "C" (2.0) or better, or C.I. Geography, ecology, and environmental problems encountered in various tropical ecosystems with emphasis on terrestrial systems in tropical rainforests. Occasional.

PCB 3355L COS-BIOL 2(0,2)
Tropical Marine Biology: PR: A "C" (2.0) or better in both BSC 210C and BSC 211C, or C.I. Intensive, one week field course at an institute of marine science. Diving/ snorkeling will be used extensively to study organisms on pristine coral reefs. Occasional.

PCB 3442 COS-BIOL 3(3,0)
Aquatic Ecology: PR: A minimum grade of C (2.0) in both BSC 210C and BSC 211C, or C.I. An introduction to aquatic ecology of Florida with emphasis on ponds, lakes, streams, and rivers. Occasional.

PCB 3522 COM-BBSS 3(3,0)
Molecular Biology I: PR: CHM 2211 and MCB 3020C or C.I. The general principles governing the structure and function of both procaryotic and eucaryotic genes. Fall, Spring.

PCB 3522H COM-BBSS 3(3,0)
Honors Molecular Biology I: PR: CHM 2211 and MCB 3020C or C.I. The general principles governing the structure and function of both procaryotic and eucaryotic genes. Occasional.

PCB 3703C COM-BBSS 4(3,3)
Honors Human Physiology: PR: BSC 210C, CHM 2046 and consent of Honors College. The physiology and interrelationships of organ systems of the human body. With honors level content. Fall.

PCB 3703C COM-BBSS 4(3,3)
Human Physiology: PR: BSC 210C, CHM 1032 or CHM 2045C. The physiology and interrelationships of organ systems of the human body. Fall, Spring. M&S fee $70.00

PCB 4028 COM-BBSS 3(3,0)
Molecular and Cellular Pharmacology: PR: PCB 3522. The cellular and molecular events that lead to disease states and the molecular basis of agents that modulate these processes will be covered. Spring.

PCB 4135 COM-BBSS 3(3,0)

PCB 4174 COM-BBSS 3(3,0)

PCB 4234 COM-BBSS 3(3,0)

PCB 4264 COM-BBSS 3(3,0)
Stem Cell Biology: PR: PCB 3522 or PCB 3023. Introduction to embryonic and adult stem cells, procedures to isolate them, principles and applications of stem cells in animal and human diseases. Occasional.

PCB 4280 COM-BBSS 3(3,0)
Molecular Immunology: PR: PCB 3233. Advanced understanding of the workings of the immune system, correlating cellular and molecular mechanisms with clinical cases. Fall.

PCB 4284 COM-BBSS 3(3,0)
Immunobiology: PR: PCB 3233. Investigating innate host defense utilizing an approach that combines online didactic coursework with paper-based analytical studies. Recommended for students interested in research. Occasional.

PCB 4353 COS-BIOL 3(3,0)

PCB 4402 COS-BIOL 3(3,0)
Disease Ecology & Ecoimmunology: PR: A grade of "B" (3.0) or better in PCB 3063 and PCB 3522. Same as PCB 4524 with honors level content. Fall.

PCB 4524 COM-BBSS 3(3,0)

PCB 4524H COM-BBSS 3(3,0)
Honors Molecular Biology II: PR: Permission of Honors and PCB 3522. Same as PCB 4524 with honors level content. Spring.

PCB 4529C COM-BBSS 4(3,4)
Experimental Molecular Cell Biology: PR: BSC 3430C with a "B" (3.0) or better, or PCB 3023 with a "B" (3.0) or better. Examination of the experimental basis for current knowledge in molecular and cellular biology topics and will link classroom discussions with a required laboratory component. Spring.

PCB 4663 COM-BBSS 3(3,0)
Human Genetics: PR: PCB 3522 or PCB 3023. Topics include the principles of genetics as applied in humans, human hereditary disorders, and the impact of genetics and technology on medicine and medical practices. Spring.

PCB 4678 COS-BIOL 3(3,0)
Evolution and Medicine: PR: A "B" (3.0) or better in PCB 4683, or C.I. Evolutionary theory and perspectives to investigate problems in human health and disease. Odd Fall.

PCB 4683 COS-BIOL 4(4,0)
Evolutionary Biology: PR: A grade of "C" (2.0) or better in PCB 3063 and junior standing or C.I. Demographic and genetic structure of populations and their relationship to specialization, adaptation, and macroevolutionary processes in plants and animals. Fall, Spring.

PCB 4683L COS-BIOL 1(0,2)
Evolutionary Biology Lab: PR: or CR: PCB 4683. Reading, problem solving and discussion on current topics in evolutionary biology. Fall, Spring. M&S fee $3.00

PCB 4684 COS-BIOL 3(3,0)
Population Genetics: PR: A "C" (2.0) or better in both PCB 3063 and PCB 4683, or C.I. Field of population genetics and the study of the various forces that result in evolutionary changes through time. Even Spring.

PCB 4708L COM-BBSS 3(0,6)
Laboratory Virtual Simulations in Physiology: PR: PCB 3703C or ZOO 3733C. Conduct experiments in physiology that enhance the ability to design, collect, analyze data and report results in a scientific manner. Occasional.

PCB 4722 COS-BIOL 4(4,0)
Comparative Animal Nutrition: PR: BSC 210C, BSC 211C, BSC 2210, BSC 2211, PCB 3044. The fundamental topics of animal nutrition, including all known nutrients important for animal life. Spring.

PCB 4723 COS-BIOL 4(4,0)
Animal Physiology: PR: A "C" (2.0) or better in PCB 3023, or C.I. Functions of body processes occurring in animals, with emphasis on vertebrate physiology. Fall.

PCB 4802 COS-BIOL 3(3,0)
Comparative Endocrinology: PR: A "C" (2.0) or better in both PCB 3023 and PCB 3044, or C.I. Hormonal regulation of an animal's physiological responses to environmental changes. Occasional.

PCB 4805 COS-BBSS 3(3,0)
Endocrinology: PR: PCB 3703C or equivalent; CHM 2211. Mechanisms of action of hormones; interrelationships between the nervous and endocrine systems. Occasional.

PCB 4813 COS-BBSS 3(3,0)
Molecular Aspects of Obesity, Diabetes & Metabolism: PR: PCB 3522 or BSC 4053. Advanced topics of physiological processes at the cellular, molecular and system level. Spring.

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PCB 4832 COM-BSBS 3(3.0)
Cellular and Molecular Basis of Brain Functions: PR: PCB 3522, PCB 3703C, ZOO 3733C. Designed to provide advanced undergraduate students the concepts required to understand the physiological basis of brain functions at the molecular and system levels. Fall.

PCB 4833 COM-BSBS 3(3.0)
Advanced Human Physiology: PR: PCB 3252, PCB 3703C, ZOO 3733C. Advanced topics of physiological processes at the cellular, molecular and system levels. Fall.

PCB 4843 COM-BSBS 3(3.0)
Cellular and Molecular Neuroscience: PR: ZOO 3733C or equivalent. A course based on and through course providing understanding of the cellular components and molecular signaling pathways involved in the nervous system function. Spring.

PCB 4943 COM-BSBS 3(3.0)
Peer Instruction and Laboratory: PR: Graduate standing. PCB 3522. The cellular and molecular events that lead to disease states and the molecular basis of agents that modulate these processes will be covered. Spring.

PCB 5045 COS-BIOL 4(4.0)
Conservation Biology: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, or Certificate in Conservation Biology, or C.I. Scientific basis of conservation concerning ecosystems, populations, exploited species, and endangered species. Fall.

PCB 5235 COM-BSBS 3(3.0)
Molecular Immunology: PR: MCB 3020C or equivalent. Fundamental functions of the human immune system, focusing on cellular and molecular aspects of the innate and adaptive immune response. Fall.

PCB 5236 COM-BSBS 3(3.0)

PCB 5238 COM-BSBS 3(3.0)
Immunobiology: PR: PCB 3233, PCB 4269. Advanced topics in immune system dysregulation with special emphasis on innate immunity. Spring.

PCB 5265 COM-BSBS 3(3.0)
Stem Cell Biology: PR: Graduate standing. Introduction to embryonic and adult stem cells, procedures to isolate them, principles and applications of stem cells in animal and human diseases. Occasional.

PCB 5275 COM-BSBS 3(3.0)
Signal Transduction Mechanisms: PR: PCB 3522 and PCB 4524. A course emphasizing various signal transduction cascades used in mammalian cells to control growth and differentiation. Discussion of original research papers will occur. Occasional.

PCB 5326C COS-BIOL 5(3.2)
Ecosystems of Florida: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Ecosystems of Florida will be discussed to include geography, geology, climate, energetics, nutrient cycling, community structure and conservation. Occasional. M&S fee $12.00.

PCB 5435C COS-BIOL 4(2.6)

PCB 5447 COS-BIOL 3(3.0)
Disease Ecology & Ecoinmunology: PR: A grade of B (3.0) or better in Genetics (PCB 3063 or equivalent) and Ecology (PCB 3044 or equivalent), or C.I. or graduate standing. Examination of how hosts, parasites and environment interact to shape organisms, populations and communities. Occasional.

PCB 5485 COS-BIOL 3(3.0)
Models in Ecology: PR: PCB 3044, MAC 2311C (or equivalent), or graduate status or senior standing. C.I. A survey of how simulation models are applied to ecological questions of both a theoretical and managerial nature. Occasional.

PCB 5527 COM-BSBS 3(3.0)
Genetic Engineering and Biotechnology: PR: PCB 3522 and PCB 4524 or C.I. Principles of Genetic Engineering/Biotechnology in Bacteria, Yeast, Viral, Mammalian, Non-mammalian systems. Plants, including human gene therapy, nuclear pharmaceuticals, recombinant proteins will be discussed in depth. Fall.

PCB 5596 COM-BSBS 3(3.0)
Biomedical Informatics: Sequence Analysis: PR: PCB 3522 or equivalent or C.I. Introduction of useful bioinformatics tools and resources on sequence analysis. Fall.

PCB 5687 COS-BIOL 3(3.0)
Evolutionary Ecology: PR: PCB 4683 or equivalent and C.I. Evolution of life history traits (e.g., propagule size/number, age/size at maturity, survivorship and senescence) examined using a quantitative genetic framework. Even Fall.

PCB 5709C COM-BSBS 3(1.2)
Laboratory Virtual Simulations in Physiology: CR: PCB 5834C Advanced Human Physiology. Conduct experiments in physiology that enhance the ability to design, collect, analyze data and report results in a scientific manner. Occasional.

PCB 5815 COM-BSBS 3(3.0)
Molecular Aspects of Obesity, Diabetes & Metabolism: PR: PCB 3522 or BCH 4053 or BSC 6432. Biochemical, molecular and physiological aspects of obesity, diabetes and metabolic diseases and how scientific findings can be translated towards prevention and treatment. Odd Spring.

PCB 5834C COM-BSBS 4(3.2)
Advanced Human Physiology: PR: Graduate standing or C.I. Designed to provide graduate students advanced knowledge of physiological processes at the cellular, molecular and system levels. Fall.

PCB 5837 COM-BSBS 3(3.0)
Cellular and Molecular Neuroscience: PR: Graduate standing. An advanced and thorough course providing understanding of the cellular components and molecular signaling pathways involved in the nervous system function. Spring.

PCB 5838 COM-BSBS 3(3.0)
Cellular and Molecular Basis of Brain Functions: PR: Graduate Standing or C.I. Designed to provide graduate students the concepts required to understand the physiological basis of brain functions at the molecular, cellular and system levels. Fall.

PCB 5935 COS-BIOL 3(3.0)
Population Genetics: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Population genetics and the study of the various forces that result in evolutionary changes throughout time. Even Fall.

PCO 4203 COS-PSYCH 3(3.0)
Interviewing and Counseling: PR: PSY 2012. A review of various interviewing and counseling theories and techniques used in Mental Health settings as well as practical experience in interviewing and counseling procedures. Fall, Spring.

PEL 2011 ED-E&HS 2(1.1)
Basic Volleyball and Softball: The analysis of offensive and defensive alignment, techniques, and strategies. Occasional.

PEL 2111 ED-E&HS 2(1.1)

PEL 2112 ED-E&HS 2(1.1)
Intermediate Bowling: PR: PEL 2111, bowling experience, or average of 140 verification by league sheet. This course provides in-depth information that is necessary for the development of high bowling averages. Occasional.

PEL 2121 ED-E&HS 2(1.1)
Beginning Golf: Performance and application of basic skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport. Fall, Spring.

PEL 2122 ED-E&HS 2(1.1)

PEL 2341 ED-E&HS 2(1.1)
Beginning Tennis: Performance and application of basic skills, rules and etiquette. Physiological and social values accruing from this lifetime sport. Occasional.

PEL 2342 ED-E&HS 2(1.1)
Intermediate Tennis: PR: PEL 2341 or equivalent competency. Performance and application of advanced skills, rules, and etiquette. Physiological and social values accruing from this lifetime sport. Occasional.

PEL 2640 ED-E&HS 2(1.1)
Basic Football and Basketball: The analysis of offensive and defensive alignment, techniques, and strategies. Occasional.

PEM 2010 ED-E&HS 2(1.1)
Body Development: An in-depth study of individual physical (musculo-skeletal, neuromuscular, cardiorespiratory) fitness. Emphasis on individual diagnosis, principles, procedures, and conduct of related exercise programs. Fall, Even Spring.

PEM 2014 ED-E&HS 3(2.1)
Personal Fitness: Study of personal fitness concepts, with opportunities to develop an individual, optimal level of fitness and an improved lifestyle through high-level wellness. Fall, Spring.

PEM 2121 ED-E&HS 3(1.3)
Yoga: Performance and application of a series of basic movement, breathing, and concentration techniques designed to enhance body awareness, flexibility, strength, alignment, and balance, and to allow the mind to be focused and centered. Fall, Spring.

PEM 2122 CAH-MUSIC 1(0.2)
Yoga for Performers: The practice and study of Yoga, including postures, breathing and meditation, focusing on the needs of performers Fall, Spring.

PEM 2127C ED-E&HS 2(1.0)
Pilates: The Pilates method of body conditioning emphasizing core musculature as it applies to everyday movement. Occasional.

PEM 2131 ED-E&HS 2(1.1)
Strength Resistance Training: Study of fitness and strength development through resistance exercise. Fall, Spring.

PEM 2134C ED-E&HS 2(1.1)
Adventure Recreation: Options for adventure recreation including: outdoor living skills, canoeing, kayaking, rock climbing, hiking and backpacking, Occasional.

PEM 2171 ED-E&HS 2(1.0)
Aerobics: Appropriate rhythmic muscle toning movements that develop aerobic fitness; concepts taught include warm-up, flexibility, stretching, cool down, and heart rate. Fall, Spring.

PEM 2173 ED-E&HS 2(1.0)
Step Aerobics: Appropriate rhythmic muscle toning movements utilizing the step to develop aerobic fitness. Concepts taught include warm-up, flexibility, work-out, and cool-down. Occasional.
PEO 3324 Fall, Spring. Outcome behaviors in grades K-12. GPA. Teaching methodology utilizing games for specific and defensive techniques and strategies. Fall, Spring.

PEO 2431 ED-E&HS Beginning Judo: Study and application of basic skills, theory, and techniques, basic self-defense, terminology, philosophy and fitness training involved in the Olympic sport of Judo. Fall, Spring.

PEO 2432 ED-E&HS Intermediate Judo: PR: PEM 2431 or CIJ. Study and application of intermediate skills, body and strength conditioning, appropriate protocols and terminology involved in Judo training. Fall, Spring.

PEM 5408C ED-CFCS Controlling Classroom Violence: PR: Graduate standing; certified teacher. A hands-on course dealing with controlling disruption and violence as well as how teachers can protect themselves. Occasional.

PEO 2011 ED-E&HS Team Sports: Skill proficiency and knowledge to plan, implement and evaluate team sports as part of the Physical Education program. Fall, Spring.

PEO 2031 ED-E&HS Individual Sports: Skill proficiency and knowledge to plan, implement and evaluate individual sports. Fall, Spring.

PEO 3041 ED-E&HS Games Analysis: PR: Admission to Sport and Exercise Science program and minimum overall 2.5 GPA. Teaching methodology utilizing games for specific outcome behaviors in grades K-12. Fall, Spring.

PEO 3324 ED-E&HS Coaching Volleyball: PR: Admission to Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Theory and methods of coaching volleyball, including the analysis of offensive and defensive alignment techniques and strategies. Spring.

PEO 3514C ED-E&HS Coaching Soccer: PR: Admission to the Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Theory and methods of coaching soccer, including the analysis of offensive and defensive techniques and strategies. Fall, Spring.

PEO 3624 ED-E&HS Coaching Basketball: PR: Admission to the Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Theory and methods of coaching basketball, including the analysis of offensive and defensive strategies and strategies. Fall, Spring.

PEO 3644 ED-E&HS Coaching Football: PR: Admission to the Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Theory and methods of coaching football, including the analysis of offensive and defensive techniques and strategies. Occasional.


PET 2081 ED-E&HS Wellness, Children and Schools: Exploration and promotion of wellness for children in schools. Fall, Spring.

PET 3005 ED-E&HS Introduction to Sport and Exercise Science: PR: Admission to Sport and Exercise Science program or Sport and Exercise Science Pending or department consent. An introduction to sport and exercise science with emphasis in fitness, recreation, physical activity, and human performance. Fall, Spring.


PET 3125 ED-E&HS Fitness and Weight Management: PR: Admission to Sport and Exercise Science program or Fitness Training Minor and minimum overall 2.5 GPA. Provides current and future professionals with the requisite knowledge of fitness and weight management research, theories, and practice. Fall, Spring.

PET 3137 ED-E&HS Concepts and Practices in Sport and Exercise Science: PR: Admission to the Sport and Exercise Science program or C.I. Examination of experiences in Sport and Exercise Science program: concepts, practices, and science. Fall, Spring.

PET 3361 ED-E&HS Nutrition and Metabolism in Sport and Exercise Science: PR: Admission to Sport and Exercise Science program or Fitness Training Minor, BSC 2010C or equivalent and minimum overall 2.5 GPA. A study and application of nutritional strategies designed to meet nutrient demands for physical activity, exercise, metabolism, and athletic performance in sport and exercise sciences. Fall, Spring.

PET 3510C HPA-HP Physiologic & Metabolic Basis of Human Movement & Performance: PR: Admission to Athletic Training B.S. Program. Exercise physiology, drugs & nutrition, and performance & injury; each focusing on the key elements for the application of athletic training principles. Fall.

PET 3765 ED-E&HS Coaching Theory: PR: Admission to Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Theories of coaching team and individual sports. Fall, Spring.

PET 3768 ED-E&HS Group Exercise Instruction: PR: Admission to Sport and Exercise Science Program or Fitness Training Minor and minimum overall 2.5 GPA. An in-depth study into group exercise instruction and fitness related concepts. Fall.

PET 3771 ED-E&HS Strength and Conditioning Concepts: PR: Admission to the Sport and Exercise Science Program or Fitness Training Minor, BSC 2010C or equivalent, ZOO 3736C or ZOO 3733C or equivalent and minimum overall 2.5 GPA. Integration of advanced concepts of muscular strength training and endurance conditioning for the sport and exercise professional. Fall, Spring.

PET 3820 ED-E&HS Teaching Sports Skills I: PR: Admission to the Sport and Exercise Science Program, Sport and Exercise Science Pending or Community Sport and Fitness Minor. Skill proficiency and knowledge to plan, implement and evaluate sports and leisure activities in physical education programs. Fall, Spring.

PET 4050C ED-E&HS Motor Development and Learning: PR: Admission to Sport and Exercise Science program or Early Childhood Development and Education program and minimum overall 2.5 GPA. An analysis of the theories and factors influencing the motor development of children and the learning of gross and fine motor skills. Fall, Spring.

PET 4083 ED-E&HS Personal Training Methods: PR: Admission to Sport and Exercise Science program or Fitness Training Minor and minimum overall 2.5 GPA. An in-depth study into personal training and fitness related concepts. Fall, Spring.

PET 4088 ED-E&HS Physical Activity & Preventive Medicine: PR: Admission to the Sport and Exercise Science Program, BSC 2010C or equivalent, ZOO 3736C or ZOO 3733C or equivalent and minimum overall 2.5 GPA. Critique and analysis of evidence that exercise training can prevent some diseases and increase quality of life. Fall, Spring.

PET 4143 ED-E&HS Trends & Issues in Sport and Exercise Science: PR: Admission to Sport and Exercise Science and equivalent and minimum overall 2.5 GPA. Examination of the current issues and trends encountered by professionals in sport and exercise science. Fall, Spring.

PET 4215 ED-E&HS Motivational Aspects of Athletic Performance: PR: Admission to Sport and Exercise Science program, Fitness Training Minor or Coaching Minor. An analysis of the theory of attitude, motivation, effort, persistence, mental focus, visualization, and an exploration of techniques to enhance athlete performance. Fall, Spring.

PET 4312C ED-E&HS Applied Biomechanics: PR: Admission to the Sport and Exercise Science Program and minimum overall 2.5 GPA. Analysis and application of anatomical and mechanical principles involved in human movement. Fall, Spring.

PET 4315C HPA-HP Biomechanics of Sport: PR: Phy 2045C or PHY 2048C. Assessment and recognition of physiological and mechanical aspects of sports and injuries. Spring.

PET 4325 ED-E&HS Functional Kinesiology for Sport and Exercise Science: PR: Admission to the Sport and Exercise Science Program or Fitness Training Minor, BSC 2010C or equivalent, ZOO 3736C or ZOO 3733C or equivalent and minimum overall 2.5 GPA. Study of functional anatomy and elementary biomechanics. Emphasis placed on analysis of skeletal, muscular, and nervous systems and biomechanical factors associated with efficient motor development. Fall, Spring.

PET 4401 ED-E&HS Administration and Evaluation in Sport and Fitness: PR: Admission to the Sport and Exercise Science Program and minimum overall 2.5 GPA. Addressing administrative, measurement and evaluation aspects of Sport and Fitness programs. Fall, Spring.

PET 4550C ED-E&HS Assessment and Evaluation in Exercise Science: PR: Admission to the Sport and Exercise Science Program or Fitness Training Minor, BSC 2010C or equivalent, ZOO 3736C or ZOO 3733C or equivalent and minimum overall 2.5 GPA. A study and acquisition of health related fitness, exercise strategies and related assessment techniques. Fall, Spring.

PET 4552 ED-E&HS Exercise Prescription for Special Populations: PR: Admission to the Sport and Exercise Science Program or Fitness Training Minor, BSC 2010C or equivalent, ZOO 3736C or ZOO 3733C or equivalent, APK 4110C and minimum overall 2.5 GPA. Students integrate knowledge of exercise science, physiology, and fitness conditioning to develop exercise for populations dealing with aging, osteoporosis, diabetes, obesity, heart disease, and pregnancy. Fall, Spring.

PET 4606 HPA-HP Applied Fitness in Sport: PR: ZOO 3733C or ZOO 3736C and PCB 3703C. Junior standing; COHPA majors and Health Sciences minors only. Physiological adaptations to exercise, biomechanics, psychology, performance enhancing substances, nutrition, fitness testing procedures, exercise technique, program design, advanced rehabilitation and administration. Spring.
PET 4710 ED-E&HS 3(3,0)
Methods for Physical Activity for Children and Adolescents: PR: Admission to Sport and Exercise Science program and minimum overall 2.5 GPA. Develop effective instructional skills through planning, teaching, and assessment. Curricular and instructional considerations for physical activity in children and adolescents. Fall,Spring.

PET 4763 ED-E&HS 3(3,0)
Coaching Methods And Principles: PR: Admission to Sport and Exercise Science program, Sport and Exercise Science Pending or Coaching Minor. Assist students in understanding and conceptually integrating teaching methods/coaching strategies with emphasis given to conditioning and leadership styles. Fall,Spring.

PET 4901 ED-E&HS 3(3,0)
Capstone in Sport and Exercise Science: PR: Senior standing in Sport and Exercise Science program, minimum overall 2.5 GPA and Advisor Consent. Enhances students' oral and written presentation ability in issues and topics related to sport and exercise science. Fall,Spring.

PGY 2401C CAH-SVAD 3(2,4)
Beginning Photography: PR: ART 2201C, ART 2300C or C.I. Introduction to photography with an art emphasis. Fall,Spring. M&S fee $45.00

PGY 3002 CAH-SVAD 3(3,0)
Contemporary Photography: PR: PGY 2401C or C.I. Late 20th and 21st century (1970's-present) contemporary movements in photography, special emphasis on issues and ideas relative to contemporary image making. Occasional.

PGY 3205C CAH-SVAD 3(2,4)
Photographic Lighting Techniques: PR: PET 2107 (offered through Daytona State College) or equivalent. Knowledge in photography in both the studio setting and on location, with projects in the editorial, advertising, or fine art genres. Occasional. M&S fee $70.00

PGY 3276 CAH-SVAD 3(3,0)
The Professional Environment: PR: PGY 3002 or C.I. Concepts necessary for operation of a photography studio. Includes legal, ethical issues; marketing; self-promotion strategies; funding opportunities; professional development; and professional presentation. Occasional.

PGY 3410C CAH-SVAD 3(3,2)

PGY 3451C CAH-SVAD 3(2,4)
Alternative Processes: PR: PGY 3472C or C.I. 19th century photographic processes with related contemporary non-traditional methods of image creation and presentation. Occasional. M&S fee $45.00

PGY 3472C CAH-SVAD 3(2,4)
Photography: PR: PGY 2000 (offered through Daytona State College) or equivalent. Analysis of visual problems with an emphasis on communicating and applying a theoretical language to photographic imagery. Occasional. M&S fee $68.00

PGY 3480 CAH-SVAD 3(1,4)
Photography: PR: PGY 3002 Contemporary Photography. The museum and gallery environment focusing on the acquisition and display of photographic media with an emphasis on professional functions. The course includes a service learning component. Occasional.

PGY 3610C COS-COMM 3(1,4)
Photojournalism I: PR: Journalism majors only. Digital photojournalism and visual storytelling, with emphasis on camera basics, composition skills, digital photo-editing skills, and caption writing skills. See instructor for minimal camera requirements. Occasional.

PGY 3620C COS-COMM 3(1,2)

PGY 3651C CAH-SVAD 3(2,4)
Narrative Editorial Photography: PR: PGY 3650 (offered through Daytona State College) or equivalent. Explores photography in narrative, documentary, and editorial form, Research, story, text, and visual style will be addressed. M&S fee $70.00

PGY 3653C CAH-SVAD 3(2,4)
Advanced Editorial Photography: PR: PGY 3651C. Exploration of imagery created to illustrate articles, including still-life, portrait, documentary, and/or fashion photography. Emphasis on the creation of multiple or consecutive images. Spring. M&S fee $68.00

PGY 3703C CAH-SVAD 3(2,4)
Photography & the Web: PR: PGY 3611C or C.I. Advanced issues in digital imaging, emphasis on professional output solutions for the photographer such as web as an interface, large format printing, and film recorder. Occasional. M&S fee $45.00

PGY 3751C CAH-SVAD 3(2,4)

PGY 3821C CAH-SVAD 3(2,4)
Advanced Digital Photography: PR: PGY 3611C or C.I. Current digital imaging software and its application to contemporary work. Occasional. M&S fee $69.00

PGY 3933C CAH-SVAD 3(2,4)
The Photo-book: PR: PGY 2401C. The study and application of the major trends and movements that have shaped the photo-book genre since the birth of photography to the self-publishing boom. Spring.

PGY 4003 CAH-SVAD 3(3,0)
Image, Culture, and Society: PR: PGY 3002 or C.I. The role of media and media imagery in culture and society. Occasional.

PGY 4228C CAH-SVAD 3(2,4)
Advanced Illustrative Photography: PR: PGY 3205C or C.I. Various avenues of photographic illustration, including lighting, historical and contemporary issues, style, presentation, and social concerns. Occasional. M&S fee $70.00

PGY 4235C CAH-SVAD 3(2,4)
Professional Photographic Workshop: PR: PGY 3205C. Creative, logistical, and technical processes as related to a variety of special lighting problems in the photographic studio and on location. Occasional. M&S fee $70.00

PGY 4420C CAH-SVAD 3(2,3)
Advanced Photography: PR: ART 2201C, ART 2205C, ART 2300C, ART 2301C, and a satisfactory portfolio review or C.I. Advanced photography skills and portfolio development. Designed for art majors. May be repeated for credit. Fall,Spring. M&S fee $49.00

PGY 4440C CAH-SVAD 3(2,4)

PGY 4471C CAH-SVAD 3(2,4)
Photography Thesis: PR: PGY 3276. Senior thesis project culminating in a public exhibition or portfolio presentation. Occasional. M&S fee $68.00

PGY 4493C CAH-SVAD 3(2,4)
Photography and Art: PR: PGY 3472C, or PGY 4219C. The development of a photographic related to the creation of a personal or conceptual, philosophical, or social work. M&S fee $68.00

PGY 5108C CAH-SVAD 3(2,4)
Advanced Techniques and Concepts in Photography: PR: PGY 3472C, PGY 4219C, and PGY 4420C, or admission into MFA graduate program. Advanced techniques and concepts in photography, introducing historic and contemporary photographic works. May be used in the degree program a maximum of 3 times. Occasional.

PHI 3100 CAH-PHIL 3(3,0)
Ancient Philosophy: PR: PHI 2010 or C.I. Foundations of Western philosophy in ancient Greek thought, including knowledge about human beings and nature, including the pre-Socratic, Socrates, Plato, Aristotle. Occasional.

PHI 3200 CAH-PHIL 3(3,0)
Medieval Philosophy: PR: PHI 2010 or C.I. The influence of Greek philosophical thought in medieval Muslim, Jewish and Christian philosophy, as expressed in its main problems and representative thinkers. Occasional.

PHI 3460 CAH-PHIL 3(3,0)
Modern Western Philosophy: PR: PHI 2010. Major western philosophers and philosophical movements from Descartes to Nietzsche, Even Fall.

PHI 3510 CAH-PHIL 3(3,0)
Marx and Nietzsche: PR: Junior standing. The philosophies of Marx and Nietzsche, important differences in outlook and emphasis, the significance of their respective critiques of society, the implications of their contrasting standpoints for understanding human life, the philosophical and ideological influences on their work, and their contemporary relevance Occasional.

PHI 3600 CAH-PHIL 3(3,0)
Contemporary Philosophy: PR: PHI 2010 or C.I. Current and recent trends in philosophy, including philosophical analysis, phenomenology, structuralism, post-structuralism, and liberation philosophy. Occasional.

PHI 3700 CAH-PHIL 3(3,0)
American Philosophy: PR: PHI 2010 or AMH 2010 or AMH 2020 or C.I. A thematic and chronological survey of philosophical, religious, and scientific developments in American thought, with primary focus on the American spirit of individualism and reform. Even Spring.
PHY 5218L HPA-HP 1(0,2) Theories and Procedures I lab: CR: Theories and Procedures I. Lab course on the clinical applications of heat, light, color, water, sound, and massage. Spring. M&S fee $30.00

PHY 5240 HPA-HP 1(1,0) Physical Assessment: PR: Physical Assessment Lab. Extensive theory and practice in the examination of the patient. Incorporates a systems approach, utilizing screening, and patient problem solving. Fall.

PHY 5240L HPA-HP 2(0,4) Physical Assessment Lab: CR: Physical Assessment Lab course emphasizing the examinations required to perform an evaluation of physical therapy patient. Fall. M&S fee $45.00


PHY 5241L HPA-HP 2(0,4) Therapeutic Exercise Lab I: PR: Therapeutic Exercises I. Lab course emphasizing therapeutic exercises skills for the treatment of patients with musculoskeletal dysfunction. Spring. M&S fee $20.00

PHY 5260 HPA-HP 2(2,0) Patient Care Skills: CR: Patient Care Skills Lab. Affective, cognitive, and psychomotor skills, regarding patient care. Basic skills of patient care, transfers, mobility skills, draping, gait training. Fall.

PHY 5260L HPA-HP 1(0,2) Patient Care Skills Lab: CR: Patient Care Skills. Skills of patient care, transfers, mobility skills. Fall. M&S fee $30.00


PHY 5718L HPA-HP 1(0,2) Neurological Physical Therapy Lab: CR: Neurological Physical Therapy Lab. Course emphasizing the clinical application of selected neurorotator theories. Occasional. M&S fee $30.00

PHY 1038 COS-PHYS 3(3,0) Physics of Energy, Climate Change and Environment: CR: None. Basic principles of physics, under the unifying theme of the production and use of energy and its interaction with the climate system and global environment. Spring.

PHY 1935 COS-PHYS 1(1,0) Freshman Physics Seminar: Introduction to physics and the Physics Department research groups to prepare students for a successful physics career. Odd Fall.

PHY 2020 COS-PHYS 3(3,0) Concepts of Physics: An introductory course in physics designed for non-science majors, emphasizing topics relevant to everyday life. The course focuses on major physical discoveries and their implications for the world around us. Fall.

PHY 2048C COS-PHYS 4(3,3) Introduction to Physics: CR: MAC 2311C (or equivalent) with grade C (2.0) or better. Mechanics, Thermodynamics, fluids. Fall. Spring. M&S fee $15.00

PHY 2048C COS-PHYS 4(3,3) MAC 2311C (or equivalent) with grade C (2.0) or better. Mechanics, Thermodynamics, fluids. Fall. Spring. M&S fee $15.00

PHY 2049C COS-PHYS 4(3,3) General Physics Using Calculus II: CR: MAC 2312 and PHY 2048C with grades C (2.0) or better. Electricity, magnetism, optics. Fall. Spring. M&S fee $15.00

PHY 2053C COS-PHYS 3(3,0) General Physics Using Calculus III: CR: MAC 1105C and MAC 1114C or equivalent or C.I. Mechanics, waves, thermodynamics. Fall. Spring. M&S fee $14.00

PHY 2053C COS-PHYS 3(3,0) Honors College Physics I: CR: MAC 1105C and MAC 1114C or C.I. and consent of Honors. Mechanics, waves, thermodynamics. With Honors content. Fall.

PHY 2054C COS-PHYS 3(3,0) Honors College Physics II: CR: PHY 2053C and consent of Honors. Fluids, electricity, and magnetism, optics, x-rays, radioactivity. With Honors content. Spring.

PHY 2054C COS-PHYS 3(3,0) College Physics II: CR: PHY 2053C, Fluids, electricity and magnetism, optics, x-rays, radioactivity. Fall. Spring. M&S fee $15.00


PHY 3322 COS-PHYS 3(3,0) Electricity and Magnetism I: CR: PHY 2048C, MAC 2313, and Consent of Honors. Fluids, electricity, and magnetism, optics, x-rays, radioactivity. Fall. Spring. M&S fee $15.00

PHY 3513 COS-PHYS 3(3,0) Thermal and Statistical Physics: CR: PHY 3101 or PHY 3101H or C.I. Thermodynamics, kinetic theory, elements of statistical mechanics. Fall.


PHY 3802L COS-PHYS 1(1,5) Intermediate Physics Laboratory: CR: PHY 3101 or C.I. Laboratory work in basic measurements of physical constants; experiments in electronics, modern physics, nuclear physics, optics, and solid state physics. May be repeated for credit. Fall.

PHY 3945 COS-PHYS 1(2,0) Physics Pedagogy Seminar: CR: PHY 2048C or PHY 2053C. Designed for students serving as Learning Assistants in the physics department and will help LAs to integrate educational theory, pedagogy and practice. Graded S/U. May be used in the degree program a maximum of 2 times. Occasional.

PHY 4012 COS-PHYS 3(3,0) Teaching Introductory Physics: CR: PHY 3101 or C.I. Specialized matter required for teaching introductory physics by reviewing variety of physics concepts integrated with coherent teaching methods. Odd Spring.

PHY 4254 COS-PHYS 3(3,0) Physics of Fluids and Biofluids: CR: PHY 3322, PHY 3752C, and MAP 2302, or C.I. Ideal fluids: basic equation of fluid flow; viscous flow, instability and turbulence; thermal and mass transfers in fluids; biofluid mechanics of blood circulation. Even Spring.


PHY 4445 COS-PHYS 3(3,0) Lasers: CR: PHY 3101, MAP 2302, PHY 4424, or C.I. Principles of laser gain media, properties of resonators and modes, and description of specific laser systems. Occasional.

PHY 4604 COS-PHYS 3(3,0) Wave Mechanics I: CR: PHY 3113 and PHY 3220. Postulates of quantum mechanics, operators and observables, Schroedinger equation with simple applications. Odd Fall.


PHY 4803L COS-PHYS 3(1,5) Advanced Physics Laboratory: CR: PHY 3802L. Experiment in optics, electronics, nuclear and solid state physics. Emphasis on design, data, and scientific writing. Occasional. M&S fee $20.00

PHY 5015C COS-PHYS 3(2,2) Physics for Teachers II: CR: Graduate status or senior standing or C.I. “Hands-on” lecture-laboratory course. Dynamics, electricity, magnetism, optics, nuclear radiation. Occasional.

PHY 5140C COS-PHYS 3(3,0) Non-Solid Interactions: CR: PHY 4604 or PHY 4324, graduate status or senior standing, or C.I. Physical principals and related scientific and technological applications of on-solid interactions. Occasional.

PHY 5255 COS-PHYS 3(3,0) Physics of Fluids and Biofluids: CR: PHY 3101, PHY 3322, and MAP 2302 or C.I. Ideal Fluids: Basic equation of fluid flow; Viscous flow, instability and turbulence; Thermal and mass transfers in fluids, biofluid mechanics of blood circulation. Even Spring.

PHY 5346 COS-PHYS 3(3,0) Electrodynamics I: CR: PHY 4324, and graduate status or senior standing or C.I. Boundary value problems in electrodynamics and magnetostatics. Maxwell’s equations, EM fields in matter, wave generation and propagation; wave guides, resonant cavities. Fall.


PHY 5560 COS-PHYS 3(3,0) Quantum Mechanics I: CR: PHY 4605, and graduate status or senior standing or C.I. Basic postulates of quantum mechanics, operators, eigenvalues, parity, symmetry, quantization, wells, harmonic and C.I. Boundary value problems in electrodynamics and magnetostatics. Even Spring.

PHY 5715 COS-PHYS 3(3,0) Physical Basis of Life: CR: Graduate standing or C.I. Molecular and physical principles of origin of life, physical and chemical interpretation of life processes. Fall.
PHYS 5817L COS-PHYS 1(0,3) Building Physics Apparatus: PR: Graduate standing or senior standing and C.I. Hands-on shop course. Focus will be on machine shop practice with possible extension to printed circuit boards and glass work. Occasional. M&S fee $45.00

PHYS 5933 COS-PHYS 3(3,0) Selected topics in biophysics of macromolecules: PR: PHY 3101, CHI 2046, and graduate standing or senior standing or C.I. Physical concepts and techniques used in the spectroscopic study of dynamic structure and function of biological macromolecules as proteins. Connections with other complex systems. May be repeated for credit. Occasional.

PHYS 5937 COS-PHYS 3(3,0) Device Prototyping: PR: Graduate standing or C.I. Fabrication and characterization of micro-scale devices, including micro-electrical-mechanical systems, sensors, optical devices and micro-fluidic devices. Occasional.

PHZ 3113 COS-PHYS 3(3,0) Introduction to Theoretical Methods of Physics: PR: MAP 2302. Analytical techniques to solve problems of physics. Spring.

PHZ 3150 COS-PHYS 3(3,0) Introduction to Numerical Computing: PR: MAC 2311C, or C.I First exposure to computer as a calculating tool. Simple programming, problem-solving workflows, 2D and 3D visualization principles, logging, numerical methods and tools. Computer required. Fall, Spring.


PHZ 3422 COS-PHYS 3(3,0) Nanophysics: PR: PHY 3011 or C.I. Physical phenomena occurring in nanometer-length scale, including nano colloids, and nano transport. Occasional.

PHZ 3462 COS-PHYS 3(3,0) Nanoscience II: The Science and Social Impacts: PR: (PHY 2049C or PHY 2054C) and (CHM 2045C or CHS 1440) Provides a broad view of nanoscience and the basic theoretical principles behind it, with special focus on fundamental properties and implications to society. Fall.

PHZ 3464 COS-PHYS 3(3,0) Nanoscience II: Theoretical Applications: PR: (PHY 2049C or PHY 2054C), and (CHM 2045C or CHS 1440) A theoretical text on the most relevant experimental advances in nanoscience and their applications in current technologies as well as their potential for future emerging technologies. Spring.

PHZ 3466 COS-PHYS 3(3,0) Nanoscience II: A Virtual Laboratory: PR: (PHY 2049C or PHY 2054C) and (CHM 2045C or CHS 1440) The computational aspects of nanoscience. Students will model the nano-world using simulation software. Fall.


PHZ 4390 COS-PHYS 3(3,0) Nuclear and Particle Physics: PR: PHY 4605 or C.I. The properties of the nuclei and the fundamental particles and how the universe is built from particles. Occasional.

PHZ 4404 COS-PHYS 3(3,0) Solid State Physics: PR: PHY 3101 or C.I. Atomic binding, crystalline structure, diffraction and reciprocal lattice, lattice vibration, phonons, electrons in solids, energy bands, semiconductors. Occasional.

PHZ 4434 COS-PHYS 3(3,0) Nanoscale Surface Physics: PR: PHY 3101 or C.I. Physical and chemical properties of nanoscale surfaces. Even Fall.

PHZ 5156 COS-PHYS 3(3,0) Computational Physics: PR: PHZ 3151 or C.I. Computational methods applied to the solution of problems in many branches of physics. May be repeated for credit. Fall.

PHZ 5304 COS-PHYS 3(3,0) Nuclear and Particle Physics: PR: PHY 4604 or equivalent, and graduate status or senior standing or C.I. Particles and nuclei, symmetries and conservation laws, problems in modern physics. Occasional.

PHZ 5405 COS-PHYS 3(3,0) Condensed Matter Physics: PR: PHY 4601, PHY 3101, and graduate status or senior standing or C.I. Crystal lattice cell structure, phonons, free electron model, band theory of solids, Fermi surface, solid state applications, and polymers. Occasional.

PHZ 5425C COS-PHYS 3(3,0) Electron Solid Interactions: PR: Undergraduate senior or graduate status or C.I. The physics and applications of electron interactions with solids. Classroom and hands-on laboratory content. Occasional.

PHZ 5432 COS-PHYS 3(3,0) Introduction to Soft Condensed Matter Physics: PR: PHY 3513 or C.I. Introduction to the physics of polymers, colloids, surfactants using basic tools of statistical mechanics. Occasional.

PHZ 5437 COS-PHYS 3(3,0) Nanoscale Surface Physics: PR: Undergraduate Quantum Mechanics at the level of PHY 4604 or C.I. Overview of physical and chemical properties of nanoscale surfaces. Occasional.

PHZ 5505 COS-PHYS 3(3,0) Plasma Physics: PR: PHY 4324, and graduate status or senior standing or C.I. Introduction to theory and experimental basis of both weakly and highly ionized plasmas. Instabilities, plasma waves, nonlinear effects, controlled thermonuclear fusion. Occasional.

PHZ 5625 COS-PHYS 3(3,0) General Relativity: PR: Graduate standing or C.I. Introduction to Einstein’s theory of gravitation. Odd Spring.

PLA 3014 HPA-LS 3(3,0) Law and the Legal System: PR: ENC 1102, Consent of Honors, and C.I. Interdisciplinary course on selected topics in Constitutional Law, focusing on persuasive writing, oral advocacy, public speaking, and research skills through UCF’s appellate advocacy/moot court program. Fall.

PLA 3951H HPA-LS 3(3,0) Honors Moot Court: PR: Junior Standing and Consent of Honors, and C.I. Interdisciplinary course on selected topics in Constitutional Law, focusing on persuasive writing, oral advocacy, public speaking, and research skills through UCF’s appellate advocacy/moot court program. Fall.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA 4464</td>
<td>HPA-LS Bankruptcy Law: PR: or CR: PLA 3014, and PR: Junior Standing or C.I. This course will acquaint students with the substantive law and procedures associated with the rights and obligations of debtors and creditors. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4472</td>
<td>HPA-LS Employment Discrimination Law: PR: or CR: PLA 3014, and PR: Junior Standing or C.I. This course will address employment discrimination based on race, gender, religion, national origin, age, disability and sexual orientation. Issues such as workplace harassment will be analyzed. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4485</td>
<td>HPA-LS Administrative Law: PR: or CR: PLA 3014, and PR: Junior Standing or C.I. This course will examine the institutions, structure and sources of law in the Continental, Common Law and Anglo-American legal systems. Occasional.</td>
<td>3(3,0)</td>
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</tr>
<tr>
<td>PLA 4521</td>
<td>HPA-LS World Hunger Morality &amp; the Law: PR: Junior Standing and C.I. Examine world hunger as a complex issue of sustainable human development, root causes and consequences of domestic and global hunger, and effect on legal systems. Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4530</td>
<td>HPA-LS Legal Issues of the Elderly: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. Legal concerns faced by older Americans as they plan their later years and seek to maximize their personal autonomy. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4554</td>
<td>HPA-LS Environmental Law: PR: or CR: PLA 3014, and PR: Junior Standing, or C.I. Environmental Law and policy related to the protection of natural resources, including an examination of toxic pollutants, endangered species, and climate change. Odd Fall,Odd Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4583</td>
<td>HPA-LS Cyber Law I: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. Analysis of copyright, trademark, and patent issues in cyberspace. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4607</td>
<td>HPA-LS Estates and Trusts: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. A study of wills and trusts, and applicable legal principles of administration of estates through the processes of the Probate Court. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4609</td>
<td>HPA-LS Estate Administration: PR: (PLA 4607 and Junior standing) or C.I. Study of the laws and procedures applicable to administration of estates. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4703</td>
<td>HPA-LS Professional Ethics and Liability: PR: or CR: PLA 3014, and PR: Sophomore Standing, or C.I. Ethical responsibilities of professionals, canons of legal ethics, liability for professional malpractice. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4734</td>
<td>HPA-LS Advanced Legal Applications Computer Software: PR: or CR: PLA 3014, and PR: Junior Standing, or C.I. Course will acquaint students with contemporary computer software applications used to satisfy the demands of today’s law firms and law-related fields. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4764</td>
<td>HPA-LS Law Office Practices: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. Organization, operation and management of law office. Interviewing techniques and practical application of work that is done in a law office. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4806</td>
<td>HPA-LS Domestic Relations Law: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. An in-depth study of family law focusing on divorce, custody, child support, alimony, adoption and other related matters with an emphasis on Florida law. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4813</td>
<td>HPA-LS Juvenile Law and Procedure: PR: or CR: PLA 3104, and PR: Junior Standing, or C.I. Examine both the substantive and procedural law for juvenile delinquency and dependency. Emphasis on Florida law and comparison with other jurisdictions. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4823</td>
<td>HPA-LS Sports Law: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. Examination of the legal issues and regulation of sports, focusing on torts, contracts, agency and constitutional law as applied to athletes. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4824</td>
<td>HPA-LS Legal Issues for Athletes Training: PR: ATR 3102 and Athletic Training major. Analysis of the legal issues affecting athletes. Occasional.</td>
<td>3(3,0)</td>
<td></td>
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<tr>
<td>PLA 4825</td>
<td>HPA-LS Entertainment Law: PR: or CR: PLA 3014, and PR: Junior standing, or C.I. Introduction to the control and regulation of the entertainment industry and the associated legal issues. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4830</td>
<td>HPA-LS World Legal Systems: PR: or CR: PLA 3014, and PR: Junior Standing, or C.I. Examination of various legal traditions and systems of the World. Substantive and procedural laws will be examined. Occasional.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4834</td>
<td>HPA-LS Study Abroad: US/UK Comparative Law: PR: PLA 3014, and PR: Junior Standing, or C.I. The law as it applies to aviation and aerospace activities internationally and domestically, including post-9/11 national aviation policy and emerging technologies (drones). Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4864</td>
<td>HPA-LS Immigration Law and Policy: PR: PLA 3014, and Junior Standing. Major topics in U.S. immigration law to include the statutory, historical, and procedural foundations of U.S. immigration law and policy. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4910</td>
<td>HPA-LS Trial Advocacy: PR: PLA 4263 or C.I. Analysis of the entire litigation process from the initial client interview through the appellate stage, and development of oral advocacy skills. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 4935</td>
<td>HPA-LS Capstone: Legal Issues: PR: senior status, PLA 3155, Legal Studies major. The legal and socio-legal analysis of issues that require students to synthesize their legal studies education. Course will assist students entering employment or graduate education. Fall, Spring.</td>
<td>3(3,0)</td>
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<tr>
<td>PLA 5587</td>
<td>HPA-LS Current Issues in Cyberlaw: PR: Graduate standing or C.I. Advanced examination or discussion of free speech, copyright, trademark, patent and privacy issues in the online environment through interactive class discussions, online discussions, postings, case studies, reviews, and legal research projects. Occasional.</td>
<td>3(3,0)</td>
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</tr>
<tr>
<td>POR 1120C</td>
<td>CAH-LANG Elementary Portuguese Language and Civilization I: Introduces the student to Portuguese culture through the major language skills: listening, speaking, reading, and writing. Open only to students with no experience in this language. Fall.</td>
<td>4(3,1)</td>
<td></td>
</tr>
</tbody>
</table>

American Constitutional Law I: PR: ENC 1102 or POS 2041 or C.I. Development of American federalism and national power, commerce clause, and nationalization of the military. Occasional.

American Constitutional Law II: PR: ENC 1102 or POS 2041 or C.I. Development of civil liberties and civil rights in the American federal system. Spring.

Politics and Civil Rights: PR: ENC 1102 or POS 2041 or C.I. Examination of civil rights issues in the context of political behavior, political institutions and public policy since 1865. Occasional.

Guns, Freedom and Citizenship: PR: POS 2041 or C.I. Examines the relationship between individual gun ownership and the meaning of freedom, citizenship, and rights in the United States and selected countries. Occasional.

Teaching American Politics and Government: PR: POS 2041 or C.I. Overview of teaching and learning U.S. and Florida politics and government in elementary, middle and high school focusing on Florida civics and government benchmarks. Fall.

GIS for Political Analysis: PR: POS 2041 and ENC 1102. Use of mapping and other spatial methods in political science research. Occasional.

Political Science Internship: PR: C.I. Internship working with the national, state, county or municipal government. Assignments with selected civic organizations, elected or appointed officials. May be repeated for credit. Occasional.

Exit Exam: PR: POS 2041 and Senior Standing. Complete the departmental exit exam during the semester of graduation. Fall/Spring.

American Political Thought: PR: ENC 1102 or POS 2041 or C.I. From its sources to the 20th century, including liberalism, puritanism, the Federalist, the rise of industrialism, resulting social movements, modern variations. Odd Fall.


Political Theory: PR: ENC 1102. Examination of various normative approaches to the study of political science, stressing contemporary developments in the field. Occasional.


Contemporary Political Theory: PR: ENC 1102. Study of the contemporary debate about the status of rights, utilitarianism, and liberalism, and communitarian Marx, libertarian, and feminist critiques of liberalism. Occasional.

An examination of politics and the political process through the medium of literature. Occasional.
The important role public relations has played in the international space programs.

Occasional.

Science, social accountability, and the role of the scientist--and government. Focus is upon governmental support for the development of land, air, and water resources.

Odd Fall.

Making concerning issues of conservation, pollution and Odd Fall.

2041 or C.I. An examination of politics and policy-making.

Sample topics include education, growth management, Topics in Public Policy: PUB 3014

COS-POLS

Odd Fall.

PUP 3014

Comparative Public Policy: PR: POS 2041 or CPO 3103 or C.I. Areas of public policy such as immigration, education, trade, taxation, and fiscal policy in selected countries. Occasional.

PUP 3203

Environmental Policies: PR: ENC 1102 or POS 2041 or C.I. An examination of politics and policy-making concerning issues of conservation, pollution and development of land, air, and water resources. Odd Fall.

PUP 3204

Sustainability: PR: ENC 1102 or Junior standing. Environmental policies through the lens of "sustainability." Attention devoted to the relationships of culture, economics, and ecology. Odd Fall.

PUP 3314

Minorities in American Politics: PR: ENC 1102 or POS 2041 or C.I. Historical and contemporary role of minorities in the American political process, including an examination of their electoral significance and relevant legislative, executive, and judicial policies. Occasional.

PUP 4003

American Public Policy: PR: POS 2041 or C.I. Policy formulation and evaluation, with a focus upon contemporary American problems, including the malapportionment of societal power and social conflict. Occasional.

PUP 4209

Urban Environmental Policy: PR: ENC 1102 or POS 2041 or C.P. Policy formulation, ecology, and the urban political landscape explored by tracing their development and prospects for sustainable cities. Occasional.

PUP 4323

Women and Public Policy: PR: POS 2041 or ENC 1102, or C.I. Public policies and processes that achieve a disparity in the treatment of women and men's lives in the United States. Occasional.

PUP 4404

Education and Politics: PR: Junior standing or C.I. Western education and the connection between citizenship and education, education funding, and the politics of education reform. Occasional.

PUP 4503

Government and Science: PR: ENC 1102 or POS 2041 or C.I. Examination of interface between science and government. Focus is upon governmental support for science, social accountability, and the role of the scientist--policy maker in comparative context. Occasional.

PUP 4510

Space Policy: PR: ENC 1102. An examination of the politics and policy-making involved with the US space program in the context of domestic demands and other international space programs. Even Fall.

PUP 4744

Government and Business: PR: ENC 1102. Analysis of public policies regarding business. Study includes various levels of government including international organizations. Occasional.

PUP 4931

Topics in Public Policy: PR: ENC 1102 or POS 2041, or C.I. Intensive analysis of a current policy problem. Sample topics include education, growth management, housing, affirmative action, welfare, and transportation. May be used in degree program a maximum of 2 times. Occasional.

PUR 3004

Public Relations and Society: PR: One of the following: SPC 1608, SPC 1603C, COM 1000, or C.I. The important role public relations has played in the development of contemporary society. Occasional.

PUR 3100

Writing for Public Relations: PR: Ad-PR Majors only. Development of skills in writing for public relations.

Fall, Spring.

PUR 3210


PUR 3210H

Honors Communication Approach to Corporate Social Responsibility: PR: Consent of Honors and either SPC 1608, SPC 1603, COM 1000, or C.I. Advanced review of a communication based approach to corporate social responsibility.

Occasional.

PUR 3912

Collaborative Experimental Research Practicum: PR: Either SPC 1608, SPC 1603C or COM 1000, and C.I. Students will work as research assistants in a team, under faculty supervision, and learn first-hand the process of conducting science research. May be used in the degree program a maximum of 2 times. Occasional.

PUR 4000

Public Relations: PR: SPC 1608, or SPC 1603C, or COM 1000. Principles and practice of Public Relations including techniques, research tools publicity and management.

Fall, Spring.

PUR 4000H

Honors Public Relations: PR: Consent of Honors, and one of the following: SPC 1608, SPC 1603C, COM 1000, or C.I. A communication-based approach to the field of principles and practice of public relations including techniques, research tools, publicity and management.

Occasional.

PUR 4014

Preparing for Public Relations Certification: PR: PUR 4000, and ADV 4941 or PUR 4941, and senior standing, or C.I. Advanced study in the history, principles, skills, ethics of PR and preparation for the Certification in Principles of Public Relations exam administered by the IAP. Fall, Spring.

PUR 4110C

Public Relations Publications: PR: Ad-PR majors and one of the following courses: Development of production of public relations publications. Fall, Spring.

PUR 4203

Advertising and Law: PR: Admission to the Early Childhood Education Program. Focus is upon contemporary American problems, including the malapportionment of societal power and social conflict. Occasional.

PUR 4400

Crisis Communication: PR: SPC 1603 or SPC 1608 or COM 1000, and Ad-PR major, or Communication and Conflict major or Mass Communication minor, or C.I. The theory, process, and best practices of crisis communication. Occasional.

PUR 4801

Public Relations Case Studies: PR: Ad-PR majors only and PUR 4000 or C.I. Discussion and analysis of public relations cases highlighting the application of PR theory to advance organizational goals Fall, Spring.

QMB 4700

Managerial Decision Making: PR: GEB 3301 and MAN 3025. Computer-based quantitative decision models (including linear programming and extensions, queuing, network models, simulation) and decision support systems for business organizational problems. Occasional.

REIA 1105

College Reading I: College reading improvement focusing on content areas and advanced study skills, comprehension, vocabulary growth, reading rate, note taking, and test preparation.

Fall, Spring.

RED 3012

Basic Methods of Reading: PR: Ad-PR Majors only and C.I. Principles, procedures, and current practices for teaching reading. Specific techniques and materials for word identification, content reading and comprehension.

Fall, Spring.

RED 3310


RED 4043

Content Reading in Kindergarten through Grade 12: PR: Junior or senior standing. Admission to the teacher education program. Content literacy in the K-12 school curriculum. Principles, strategies, assessment, and promising practices. Fall, Spring.

RED 4311


RED 4519


RED 4942

Practicum for Assessment and Instruction of Reading: PR: RED 4519. Cooperative Internship. Practicum that provides opportunity to apply knowledge of reading assessment and instruction in order to increase reading proficiency of struggling readers. Concurrent school experience required. Fall, Spring.

RED 5147

Developmental Reading: PR: Graduate standing or C.I. Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction. Occasional.

RED 5517

Interdisciplinary Classroom Diagnosis and Development of Reading Proficiencies: PR: RED 5147 or equivalent. Classroom diagnosis and corrective teaching in reading; instructional materials. Case study required. Even Fall, Spring.

RED 5848

Practicum in Reading Assessment and Instruction: PR: RED 5517. Practicum that requires application of reading assessment and instruction in order to increase reading proficiency of struggling readers. Concurrent K-12 experiences required. Fall, Spring.

REE 3043

BA-FIN

Fundamentals of Real Estate: PR: Junior standing. Application of basic tools of economics, finance, and marketing to solve private and public sector real estate problems. Fall, Spring.

REE 3433

BA-FIN

Real Estate Law: PR: Junior standing. An analysis of real estate law with emphasis on Florida statutes and case law. Fall, Spring.

REE 3614

BA-FIN

Environmental Issues for Real Estate: PR: REE 3343, REE 3433. Open to majors or minors which require this course. Political, cultural, institutional, and scientific mechanisms which shape environmental policy. The effects of hazard, risk and uncertainty in policy development. Occasional.

REE 4103

BA-FIN


REE 4203

BA-FIN

Fall. with emphasis on the religious dynamics involved but often means of various postmodern, theoretical perspectives.

REL 3320 CAH-PHIL 3(3,0)
Moses, Jesus and Muhammad: PR: HUM 2230, REL 2300, or C.I. Main themes of Judaism, Christianity, and Islam as found in the teachings of Moses, Jesus, and Muhammad. Occasional.

REL 3333 CAH-PHIL 3(3,0)
Hindusism: PR: HUM 2230, REL 2300, or C.I. A survey of the development of Hindu thought and culture from Vedic times to the modern age. Epic Literature to the modern age. Even Spring.

REL 3340 CAH-PHIL 3(3,0)
Buddhism: PR: HUM 2230 or REL 2300 or C.I. An introduction to Buddhist thought, practices, cultures and history. It traces the development of Buddhism through South-East Asia, East Asia, Tibet and the West. Odd Fall, Spring.

REL 3363 CAH-PHIL 3(3,0)
Islam: PR: REL 2300 or C.I. Development of Islamic religious thought and culture, emphasizing the teachings of the Qur'an, hadith, Islamic law, and philosophy with special focus on perceptions of Islam in the West. Fall.

REL 3403 CAH-PHIL 3(3,0)
Christianity: PR: REL 2300. A study of Christianity and the history of its associated beliefs, rituals, and art with special attention to issues concerning human nature, social justice, the role of war, science, and attitudes toward women. Occasional.

REL 3432 CAH-PHIL 3(3,0)
Roots of Western Mysticism: PR: HUM 3431, HUM 3435, REL 3403, REL 3320, PHH 3100, or PHH 3200. Ancient, medieval, and early modern European mystical traditions and its influence on religion, philosophy, art, and scientific thought in the West. Even Fall, Odd Spring.

REL 4100 CAH-PHIL 3(3,0)
Religion and the Arts: PR: At least one of the following: HUM 2210, HUM 2230, ARH 2050, ARH 2051, or REL 2300. Art, music, dance, and ritual practices in religious traditions, with an emphasis on contemporary society. Occasional.

REL 4178 CAH-PHIL 3(3,0)
Religion and Law: PR: POS 2041. Ideas and events which mark the relationship of religious ideas and practice, law and politics and cultural values which inform them. Fall.

REL 4180 CAH-PHIL 3(3,0)
Religion and Medicine: PR: Junior standing and Consents of Honors. A comparative study of the approaches toward medicine and healing in different religious traditions, both in the U.S. and abroad. Occasional.

REL 4180H CAH-PHIL 3(3,0)

REL 4496 CAH-PHIL 3(3,0)
Key Concepts in Religion and Cultural Studies: PR: REL 2000, or C.I. Study of the development, meaning, and implications of a central concept in Religious Studies. May be repeated for credit only when course content is different. Occasional.

REL 4901 CAH-PHIL 1(1,0)
Portfolio: PR: Final semesters as Humanities/Religious Studies track major. Presentation of a representative sampling of a student's best undergraduate work, with appropriate revision, including a cover narrative indicating development of knowledge and skills in the subject area. Graded S/U. Occasional.

REL 4910 CAH-PHIL 3(3,0)
Senior Research Seminar: PR: Senior standing and Religious Studies major, or C.I. Capstone course on research, developing effective oral and written communication skills. Spring.

REL 4936 CAH-PHIL 3(3,0)
Key Figures in Religion and Cultural Studies: PR: REL 2000, or C.I. Study of a central figure's work, influence, and effect. May be repeated for credit only when course content is different. Occasional.

RMI 3011 BA-FIN 3(3,0)
Principles of Risk and Insurance: PR: FIN 3403. Emphasis is on insurance as a risk-handling device, with attention given to risk assumption, risk avoidance, and loss prevention. Spring.

RTV 2100 COS-COMM 3(3,0)
Writing for the Electronic Media: PR: ENC 1102, RTV Major. Practical experience in writing for various electronic media including radio, television, corporate, and other electronic media. Writing styles and creative applications. Fall, Spring.

RTV 3007 COS-COMM 3(3,0)
Development and Structure of Electronic Media and New Technology: PR: SP 1608 or SP 1603C or COM 1000 or C.I. Nature of the media, the mechanics of operation of analog and digital systems, history, economics, programming, and internal and external controls. Fall, Spring.

RTV 3301 COS-COMM 3(3,0)
Electronic Journalism I: PR: Journalism major and a minimum grade of "C" (2.0) in JOU 2100C. Writing and newsgathering skills and strategies and their accompanying ethical considerations for analog and digital delivery of broadcast journalism. Fall, Spring.

RTV 3304 COS-COMM 3(3,0)
Electronic Journalism II: PR: RTV 3301, RTV 3321, and JOU major. Newsgathering and newsgathering strategies learned in RTV 3301 are integrated into a newsgathering context for actual production of analog and digital radio and television news packages. Fall, Spring. M&S fee $10.00

RTV 3321 COS-COMM 4(4,0)
Electronic News Gathering: PR: JOU 2100 and status as either an RTV or Journalism major, or C.I. An introduction to the production and video news. Students plan, research, report, write and execute electronic news productions from concept to finished product. Fall, Spring.

RTV 3511 COS-COMM 3(3,0)
Production Fundamentals and Aesthetics of Electronic Media: PR: Either SP 1608, SP 1603, or COM 1000, or C.I. Technical and creative concepts of analog and digital electronic media production for radio, television, and multimedia delivery systems. Fall, Spring.

RTV 3531C COS-COMM 4(3,1)
Single Camera Video Production and Editing: PR: RTV 3511 and RTV Major. Production Specialization or Broadcast Journalism Specialization. Technical and aesthetic requirements of analog and digital single-camera video production and editing, including techniques for electronic news gathering (ENG) and electronic field production (EFP). Students should expect significant work in the RTV facility outside of class. Fall, Spring. M&S fee $20.00

RTV 3543C COS-COMM 4(3,1)
Studio Television Production: PR: RTV 3511 and RTV Major - Production Specialization. Analog and digital television studio production including audio production, voice-overs, cable remote, off-camera sound, retakes, mixing, and electronic graphics. Students should expect significant work in the RTV facility outside of class. Fall, Spring. M&S fee $20.00

RTV 3556C COS-COMM 3(2,1)
Audio Production I: PR: RTV 3511 and RTV Major - Production Specialization. Audio production theory and recording techniques utilizing various microphone types, and digital and analog recording equipment. Students should expect significant work in the RTV facility outside of class. Fall, Spring. M&S fee $10.00
RTV 3571C COS-COMM 3(2,1)
Advanced Video Post-Production: PR: RTV 3531C and RTV Major - Production Specialization. Advanced non-linear video production techniques and integration of video and digital video, including A/B roll time code editing, digital video effects, electronic graphics, and non-linear video editing. Students should expect significant work in the RTV lab facility outside of class. Fall, Spring.

RTV 3581C COS-COMM 3(2,1)
Lighting for Video: PR: RTV 3543C or RTV 3551C, and RTV Major - Production Specialization. Basic lighting techniques for both studio and location, single and multiple-camera video production. Students should expect significant work in the RTV lab facility outside of class. Fall, Spring. M&S fee $20.00

RTV 3590C COS-COMM 3(2,1)
Production of Interactive Multimedia: PR: CGS 1060C, major status in R-TV, Ad-PR, Journalism, and RTV 3531C and RTV Major - Production Specialization. Preparation and production of electronic interactive multimedia for the broadcast industry. Students should expect significant work in the RTV lab facility outside of class. Fall. M&S fee $10.00

RTV 3601C COS-COMM 3(2,1)
Broadcast Announcing and Performance: PR: RTV Major, Junior standing, and C.I. Development of performance skills and techniques required to be a professional broadcaster. Techniques for analog and digital resources, with emphasis on dramatic value and direction of programs, using both digital and analog resources, with emphasis on dramatic value and direction of programs, using both digital and analog resources. Students should expect significant work in the RTV lab facility outside of class. Fall, Spring. M&S fee $10.00

RTV 3912 COS-COMM 3(3,0)
Collaborative Experiential Research Practicum: PR: Either SPC 1608, SPC 1603C or COM 1000, and C.I. Students will work as research assistants in a team under faculty supervision, and learn first-hand the process of conducting communication/social scientific research. May be used in the degree program a maximum of two times. Occasional.

RTV 3942L COS-COMM 1-3(0,3-9)
Practicum: PR: C.I. RTV Major, and either RTV 3565C, RTV 3543C, or RTV 3531C. Student will serve in some position of responsibility for UCF Weekly News or other RTV program. Graded S/U. May be repeated for credit. Occasional.

RTV 4403 COS-COMM 3(3,0)
Electronic Media, Technology, and Society: PR: MMC 2004 and Journalism major, or PR or CR: RTV 3007; or C.I. Theories of mass communication, mass communication history and the role of emerging communication technologies, including digital media. Fall, Spring.

RTV 4503 COS-COMM 3(3,0)
Sports Programming in Electronic Media: PR: Either SPC 1608, COM 1000, RTV 3007, or C.I. Factors that determine how sporting events are constructed for programming on broadcast stations, cable television, and other forms of electronic media. Fall.

RTV 4505 COS-COMM 3(2,1)
Program Issues for TV & Motion Pictures: PR: RTV 3007 or FIL 2030 or C.I. An examination of program development theories, strategies and issues in the television and motion picture industries. Students should expect significant work in the RTV lab facility outside of class. Occasional.

RTV 4544 COS-COMM 4(4,0)
Advanced Studio Production: PR: RTV 3531 and RTV 3543C and either RTV 3007! or C.I. Advanced techniques in production and directing television programs and video projects both in-studio and on-location. Fall, Spring.

RTV 4557C COS-COMM 3(2,1)
Audio Production II: PR: RTV 3565C and RTV Major - Production Specialization. Study and production of sound recording and mixing in the analog and digital domain. Students should expect significant work in the RTV lab facility outside of class. Occasional. M&S fee $15.00

RTV 4561C COS-COMM 3(2,1)
Radio Production and Programming: PR: RTV 3511 and RTV Major - Production or Media Management & Operations Specialization. Study and production of current radio formats, the integration of digital resources, and their effects on today's radio listener. Students should expect significant work in the RTV lab facility outside of class. Fall.

RTV 4591C COS-COMM 3(2,1)
Webcasting I: PR: RTV Major and PR or CR: RTV 3590C. Presentation of broadcast material on the web. Integrates the distribution of radio, television, and web content. Students should expect significant work in the RTV lab facility outside of class. Occasional. M&S fee $15.00

RTV 4592C COS-COMM 3(2,1)
Webcasting II: PR: RTV 4591C and RTV Major. Production of digital media in conjunction with other RTV production activities to repurpose broadcast content for delivery on the web. Students should expect significant work in the RTV lab facility outside of class. Occasional. M&S fee $15.00

RTV 4673C COS-COMM 3(2,1)
Television Directing: PR: RTV 3543C, RTV 3551C, and RTV Major - Production Specialization. Preparation and direction of programs, using both digital and analog resources, with emphasis on dramatic value and direction of programs, using both digital and analog resources. Students should expect significant work in the RTV lab facility outside of class. Fall. M&S fee $20.00

RTV 4681C COS-COMM 4(1,3)
Television News: PR: RTV 3304 and RTV Major - Broadcast Journalism Specialization or C.I. Production of weekly campus newscast. Daily newsgathering and production decisions are conducted by students under the advisement of the instructor functioning as news director. Students should expect significant work in the RTV lab facility outside of class. Fall, Spring. M&S fee $20.00

RTV 4682C COS-COMM 2(2,1)
Advanced TV News: PR: RTV 4681C, RTV Major only. and C.I. Supervised broadcast news experience and/ or practice in the weekly UCF news program. Students should expect significant work in the RTV lab facility outside of class. Occasional.

RTV 4700 COS-COMM 3(3,0)
Regulation of Broadcasting: PR: RTV Major or Mass Comm. minor, and RTV 3007. Federal, state, local and self-regulatory agencies and practices which govern electronic media. Fall.

RTV 4800 COS-COMM 3(3,0)
Broadcast Management: PR: RTV Major only. Examination of broadcast management problems in station operations at local, regional, and national levels. Spring.

RUS 1120 CAH-LANG 4(4,1)
Elementary Russian Language and Civilization I: Introduction to Russian culture through the major language skills: listening, speaking, reading and writing. Open only to students with no experience in this language. Occasional.

RUS 1121 CAH-LANG 4(4,1)
Elementary Russian Language and Civilization II: Continuation of RUS 1120 or equivalent. Continuation of RUS 1120. Occasional.

RUS 2200 CAH-LANG 3(3,1)

RUS 2201 CAH-LANG 3(3,1)
Intermediate Russian Language and Civilization II: PR: RUS 2200 or equivalent. Continuation of RUS 2200, with emphasis on Russian civilization. Occasional.

RUS 3240 CAH-LANG 3(3,0)
Russian Conversation: PR: RUS 2201 or equivalent. Development of skills in conversation and comprehension through practice. Occasional.

RUS 3760 CAH-LANG 3(3,0)
Advanced Russian Oral Communication: PR: RUS 2201 or equivalent. Vocabulary building with systematic training in dictation and location. Speeches and oral presentations as well as production and delivery of real-life dialogues. Occasional.

RUT 3505 CAH-LANG 3(3,0)
Russian Culture and Civilization: PR: ENC 1102 or C.I. Russian culture and civilization through a variety of topics and media. Occasional.

SCC 3003 HPA-CJ 3(3,0)

SCC 3311 HPA-CJ 3(3,0)
Security Administration: Discussion of modern security administration and the security-law enforcement interface, emphasizing a systems approach and utilizing the design of a security plan for a plant. Occasional.

SCC 3316 HPA-CJ 3(3,0)
Special Security Problems: PR: SCC 3311 or C.I. Analysis and application of basic security concepts; selected concepts organizing for instruction; techniques; evaluation procedures. Fall, Spring. M&S fee $10.00

SCC 4304 ED-CFCFS 3(3,0)
Teaching Science and Technology to Young Children: Provides the knowledge and skills needed to plan and implement a discovery science/design technology program for young children in an integrated, interactive curriculum. Fall.

SCC 4360 ED-TL&L 4(4,0)
Science Instructional Analysis: PR: EDG 4410 or C.I.; CR: SCE 3040. Course objectives for a school curriculum and methods and materials for the middle grades and high school. Fall, Spring. M&S fee $10.00

SCC 4361 ED-TL&L 3(3,0)
Programs in Teaching Science: PR: Admission to the Bachelor of Science in Science Education program or C.I. Special programs, strategies, and materials for middle and secondary school science education majors. Spring.

SCC 5325 ED-TL&L 3(3,0)
Teaching Middle School Science: PR: EDG 6415, TSL 5085 or admission to MED program or Initial Teacher Professional Preparation certificate. Secondary science education special methods course is designed to augment students' understanding of instructional methods and their applications to middle and high school science curriculum. Fall, Spring.

SCC 5836 ED-TL&L 3(3,0)
Space and Physical Science for Educators: PR: Graduate standing or C.I. Introduction to space and physical science, manned space flight, and space education curriculum. Occasional.

SLS 1282 ED-CFCFS 1(1,0)
Foundations of American University Life: PR: C.I. Orientation of international students to American cultural contexts. Success through active learner-centered dynamics. Methods to sustain student success beyond the first year and the university. Fall, Spring.
SOW 2311C HPA-SOWK 3(3,0)
Human Behavior and the Social Environment: An overview of the pre-health professions career as a medical professional and their role in society. Designed to help new transfer students connect, acclimate and succeed at UCF and in the College of Sciences. Students will explore their respective College of Sciences majors, develop relevant skills and discover how or if their major aligns with their goals and intended career. Fall, Spring.

SOW 3004 COS-PSYCH 3(3,0)
Social Psychology: PR: PSY 2012. A psychological investigation of the effects of social situations on behavior and thinking. Topics covered will include learning, perception, social cognition, social judgment, social influence, and social motivation. Fall, Spring.

SOP 3742 COS-PSYCH 3(3,0)
Legal Aspects of Psychology: PR: PSY 2012 or SYG 2000, or C.I. A study of the legal, ethical and professional issues affecting psychologists and the delivery of psychological services. Fall, Spring.

SOP 3748 COS-PSYCH 3(3,0)
Psychology of Diverse Populations: PR: PSY 2012. An introduction to the knowledge of social behavior and thinking that is influenced by ethnicity and culture, gender, sexual orientation, and age. Fall, Spring.

SOP 4735 COS-PSYCH 3(3,0)

SOP 4736 COS-PSYCH 3(3,0)

SOP 4737 COS-PSYCH 3(3,0)

SOP 4738 COS-PSYCH 3(3,0)
Social Work Practice with Older Adults: PR: SOW 3300 and SOW 3352. Study of social work roles, interventions, and practice situations. Fall.

SOP 4739 COS-PSYCH 3(3,0)

SOP 4740 COS-PSYCH 3(3,0)

SOP 4741 COS-PSYCH 3(3,0)

SOW 3320 HPA-SOWK 3(2,1)
Introduction to Social Work Practice: PR: SOW 3300. Study and practice of interviewing, group leadership, written communication, and oral presentations, in consensual as well as conflictual contexts of social work. Spring.

SOW 3325 HPA-SOWK 3(2,1)

SOW 3340 HPA-SOWK 3(3,0)
Social Work Practice with Social Justice: PR: Junior Standing or C.I. Examination of the social justice mission of the social work profession. Addresses professional values, the rights of marginalized populations, and justice within practice fields. Fall, Spring.

SOW 3360 HPA-SOWK 3(3,0)
Culturally Competent Social Work Practice: PR: STA 2014C or STA 2023. Study of quantitative and qualitative methods of building knowledge for social work and the ethical use of research in professional practice. Spring.

SOW 3362 HPA-SOWK 3(3,0)
Social Work Practice with Loss & Life's Transitions: PR: Junior Standing or C.I. A wide range of losses across the life span will be presented from a strengths perspective. Assessment & intervention recognizing cultural differences will be addressed. Fall.

SOW 3363 HPA-SOWK 3(3,0)
Aspects of Sexuality & Spirituality in Social Work Practice: PR: SOW 3264 and SOW 3620 or C.I. Aspects of sexuality and spirituality as they relate to the social work profession. Addresses personal and professional values in practice. Fall.

SOW 3365 HPA-SOWK 3(3,0)
Introduction to Military & Veteran Culture for Social Work Practice: PR: Junior Standing or C.I. An overview of the military culture and how it affects homeless and transitioning service men and women. Fall, Spring.

SOW 3379 HPA-SOWK 3(3,0)
Study of Social Work Roles, Interventions, and Ethical Issues: PR: SOW 3300, SOW 3352. Study and practice of social work roles and tasks in systemic problem solving with individuals, families and supportive and remedial groups. Fall.

SOW 3383 HPA-SOWK 3(3,0)
Micro-Level Roles and Interventions in Social Work: PR: SOW 3300. Study and simulated practice of roles and tasks in systemic problem solving to obtain and improve social welfare resources within organizations and communities. Fall.

SOP 4715 COS-PSYCH 3(1,2)
Field Education: PR: Completion of required courses in major: GPA 2.5 in major C.R. SOP 4225. Supervised learning experiences in agencies that relate social work practice to theory, requiring 420 clock hours in the field. Graded S/U. Spring.

SOP 4716 COS-PSYCH 1(2-2,0)
Part Time Field Education Seminar: PR: Completion of all required social work courses for the major and CR: SOW 4941. Weekly seminar to examine the field experience and to relate theory with practice situations. Spring.

SOP 4722 HPA-SOWK 3(2,1)
Part-Time Field Education Seminar: PR: Completion of all required courses in major. CR: SOW 4510. Weekly seminar to examine the field experience and to relate theory with practice situations. Spring.

SOP 4725 HPA-SOWK 3(3,0)
Social Work in Health Settings: PR: Junior Standing or C.I. Study of social work roles, interventions, and issues related to helping patients in health settings. Fall.

SOP 4726 HPA-SOWK 3(3,0)
Social Services for the Elderly: PR: Junior Standing or C.I. Development of interventional skills for obtaining, providing, and improving social services in behalf of elderly persons and their families. Fall.

SOP 4727 HPA-SOWK 3(3,0)
Child Abuse: Treatment and Prevention: PR: SOW 3300 and Admission to BSW program or C.I. The social worker's role and interventions with victims of child abuse. Fall.

SOP 4728 HPA-SOWK 3(3,0)
Children's Services: PR: (Admission to BSW program) or (PR: or CR: SOW 3104). Study of societal responses to children's needs. Development of skills for preventing family breakdown, placing children in alternative care, and reuniting children with their families. Fall, Spring.

SOP 4729 HPA-SOWK 3(3,0)
Social Work Practice: The Lesbian, Gay, Bisexual, and Transgendered (+) Experience: PR: SOW 3264, SOW 3300, 3350, or C.I. The role of social workers with people of the LGBTQ+ community. Fall, Spring.

SOP 4730 HPA-SOWK 3(3,0)
Social Work Practice: The Elderly: PR: Junior Standing or C.I. An overview of the elderly and the role of social workers in helping them adapt to their later years. Fall, Spring.

SOP 4731 HPA-SOWK 3(3,0)
Social Work and the Law: PR: Junior Standing or C.I. An overview of the legal system focusing on roles social workers play within the courts and legal processes pertaining to family law, mental health, child welfare. Fall.

SOP 4732 HPA-SOWK 3(3,0)
Social Work Practice with Groups: PR: SOW 3104 and Junior Standing. Provide theory and skills of generalist social work practice with small groups in a wide range of social service agencies and with diverse client populations. Spring.

SOP 4733 HPA-SOWK 3(3,0)
Micro-Level Roles and Interventions in Social Work: PR: SOW 3300, SOW 3352. Study and simulated practice of roles and tasks in systemic problem solving with individuals, families and supportive and remedial groups. Fall.

SOP 4734 HPA-SOWK 3(1,2)
Field Education: PR: Completion of required courses in major: GPA 2.5 in major C.R. SOP 4225. Supervised learning experiences in agencies that relate social work practice to theory, requiring 420 clock hours in the field. Graded S/U. Spring.

SOP 4715 HPA-SOWK 1(2-2,0)
Part Time Field Education Seminar: PR: Completion of all required social work courses for the major and CR: SOW 4941. Weekly seminar to examine the field experience and to relate theory with practice situations. Spring.
SOW 4794 HPA-SOWK 3(3,0) Social Work with Immigrants and Refugees: PR: SOW 3020 and Junior Standing, or C.I. Social work practice with immigrants and refugees, specifically addressing social policies, programs and legal issues impacting from a national and an international perspective. Fall.

SOW 4148 HPA-SOWK 3(3,0) Introduction to Military & Veteran Culture for Social Work Practice: PR: Junior standing; CR: SOW 3284 or C.I. An introduction to military life providing specific ways to better understand, communicate, and effectively interact with military, veterans, and their families. Occasional.

SOW 5015 HPA-SOWK 3(3,0) Social Behavior and Social Environment I: Individual: PR: Admission to MSW program. Study of human development and psychosocial functioning of individuals at various life stages with particular attention to implications of human diversity. Fall.

SOW 5016 HPA-SOWK 3(3,0) Human Behavior and Social Environment II: Social Systems: Study of the patterns and dynamics of families, groups, organizations, and communities from a social work and a systems perspective. Spring.

SOW 5017 HPA-SOWK 3(3,0) Human Behavior in the Social Environment: PR: Admission to MSW program. Study of human development and psychosocial functioning of individuals, groups, families and communities with particular attention to implications of human diversity. Fall, Spring.

SOW 5105 HPA-SOWK 3(3,0) Human Behavior and Social Environment I: Individual: PR: Admission to MSW program. Study of human development and psychosocial functioning of individuals at various life stages with particular attention to implications of human diversity. Fall.

SOW 5106 HPA-SOWK 3(3,0) Human Behavior and Social Environment II: Social Systems: Study of the patterns and dynamics of families, groups, organizations, and communities from a social work and a systems perspective. Spring.

SOW 5107 HPA-SOWK 3(3,0) Human Behavior in the Social Environment: PR: Admission to MSW program. Study of human development and psychosocial functioning of individuals, groups, families and communities with particular attention to implications of human diversity. Fall, Spring.

SOW 5108 HPA-SOWK 3(3,0) Military and Veteran Culture with Historical Frameworks: PR: Admission to Master of Social Work program or C.I. Thorough analysis of military and veteran systems. Provides the frameworks to assist social workers in better understanding, communicating and practicing with veterans and their families. Spring.

SOW 5217 HPA-SOWK 3(3,0) Foundations of Behavioral Health Policy and Social Work Practice: PR: Admission to MSW program, or C.I. An overview of the legislative, political, and economic forces that influence the development of policies and programs. Fall, Spring.

SOW 5242 HPA-SOWK 3(3,0) Social Work Practice II: Intervention Approaches: Study of selected social work theories, strategies, and techniques for helping people and improving system responsiveness to human needs. Spring.

SOW 5404 HPA-SOWK 3(3,0) Social Work Research: Study of group research designs in social work, quantitative analyses, and related ethical issues. Fall.

SOW 5538 HPA-SOWK 3(3,0) Full-Time MSW Generalist Field Education and Seminar I: PR: Admission to Master of Social Work program or C.I. Full-time MSW generalist students; includes seminar and supervised practice of social work in an agency for 200 clock hours. Graded S/U. Fall.
continued development of writing skills based on the newly acquired concepts. Fall, Spring.

SPN 3140 CAH-LANG 3(3,0) Business Spanish I: PR: SPN 2200 and SPN 2201 or equivalent. Basic business terminology, business culture and business topics related to the Hispanic World. Odd Fall.

SPN 3141 CAH-LANG 3(3,0) Business Spanish II: PR: C.I. Continuation of Business Spanish I. Even Spring.

SPN 3142 CAH-LANG 3(3,0) Business Spanish III: PR: C.I. Continuation of Business Spanish II. Even Fall.

SPN 3234 CAH-LANG 3(3,0) Advanced Directed Readings: PR: SPN 2201 or C.I. Use of literary and general Spanish texts to develop reading, comprehension and analysis skills. Course intended for non-natives and heritage speakers of Spanish. Fall, Spring.

SPN 3300 CAH-LANG 3(3,0) Advanced Spanish Grammar and Composition: PR: SPN 2201 or equivalent. Advanced Spanish grammatical topics, idiomatic expressions, and continued development of writing skills based on the newly acquired concepts. Fall, Spring.

SPN 3343 CAH-LANG 3(3,0) Advanced Rhetoric for Spanish Communication: PR: SPN 2201, or C.I. Designed for Spanish native speakers and advanced non-native speakers to improve their language skills. Students work on projects individually or in groups according to their own interests.

SPN 3344 CAH-LANG 3(3,0) Advanced Spanish Native Fluency I: PR: SPN 3300 or C.I. Advanced grammatical topics and composition skills for native or near-native fluency speakers. Fall.

SPN 3345 CAH-LANG 3(3,0) Advanced Spanish Native Fluency II: PR: SPN 3344. Continuation of Advanced Spanish Native Fluency I emphasizing the remaining grammatical topics and composition skills. Spring.

SPN 3420 CAH-LANG 3(3,0) Spanish Composition: PR: SPN 2201 or equivalent. Development of skills in composition. Fall, Spring.

SPN 3512 CAH-LANG 3(3,0) Contemporary Spanish Culture Abroad: PR: SPN 3300 or C.I. Focus on contemporary Spanish culture presented through classroom lectures and discussions, assigned reading and scheduled activities. Occasional.

SPN 3760 CAH-LANG 3(3,0) Spanish Civilization and Culture: PR: SPN 3760, SPN 3420 and SPN 3300 or C.I. A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish. Occasional.

SPN 4510 CAH-LANG 3(3,0) Spanish Civilization and Culture: PR: SPN 3760, SPN 3420 and SPN 3300 or C.I. A study of Spanish civilization and culture from Pre-Roman times to the present. Conducted in Spanish. Occasional.

SPN 4520 CAH-LANG 3(3,0) Latin American Civilization and Culture: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. An overview of the currents in Latin American culture and civilization from the Pre-Columbian period to the present. Conducted in Spanish. Occasional.

SPN 4780 CAH-LANG 3(3,0) Spanish Phonetics: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Students will learn the basic principles of Spanish pronunciation and perfect the correct pronunciation of Spanish through intensive practice and oral drill. Occasional.


SPN 4801 CAH-LANG 3(3,0) Spanish Morphology: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Types of roots, affixes and words resulting from applying morphological rules in Spanish. Covering the nominal, adjectival, verbal, pronominal and adverbial domains, and acronyms. Occasional.

SPN 4850 CAH-LANG 3(3,0) Structure of the Spanish Language: PR: SPN 3300, SPN 3760, SPN 3420, or C.I. Linguistic theory applied to analysis of Spanish language. Includes systematic study of sound patterns, semantics, word formations, and socializations. Occasional.


SPN 5502 CAH-LANG 3(3,0) Hispanic Culture of the United States: PR: Graduate status or senior standing or C.I. An analysis of the Hispanic culture of the United States, past and present. Occasional.

SPN 5505 CAH-LANG 3(3,0) Spanish Peninsular Culture and Civilization: PR: Graduate status or senior standing or C.I. An analysis of the salient characteristics of Spanish culture and civilization. Occasional.

SPN 5506 CAH-LANG 3(3,0) Spanish American Culture and Civilization: PR: Graduate status or senior standing or C.I. An analysis of the salient characteristics of Spanish American culture and civilization. Occasional.

SPN 5705 CAH-LANG 3(3,0) Introduction to Spanish Linguistics: PR: Graduate status or senior standing or C.I. An introduction to main concepts and methods of analyses focusing on Spanish morphology, syntax, semantics, and phonology as well as dialectology and sociolinguistics. Odd Fall.

SPN 5825 CAH-LANG 3(3,0) Spanish Dialectology: PR: Graduate status or senior standing or C.I. This course is a survey of the diversity found within the Spanish language with respect to phonological constraints, morphosyntax, second language influences, and historical development. Occasional.

SPN 5845 CAH-LANG 3(3,0) History of the Spanish Language: PR: Graduate status or senior standing or C.I. An overview of linguistic characteristics of Latin and its evolution into Spanish with historical development of phonetic, morphological, and syntactic properties. Occasional.

SPN 5920 CAH-LANG 3(3,0) AP Spanish Language: PR: Graduate status or senior standing or C.I. Participants will enhance their knowledge of the language and culture of Spanish-speaking peoples and develop further proficiency in listening, comprehension, speaking, reading, and writing. Occasional.

SPT 5177 ED-CFCS 3(3,0) Enhancing Individual and Student Writing: PR: C.I. Students will develop individual and student writing skills and understand methods of enhancing individual and student writing. Odd Spring.

SPT 5605 ED-CFCS 3(3,0) Building and Improving Relationship and Emotional Intelligence: PR: Graduate standing or C.I. Students will learn to develop and improve relational and emotional intelligence and demonstrate an understanding of social emotional learning and how it enhances psychosocial wellbeing. Odd Spring.

SPT 3414 CAH-LANG 3(3,0) Spanish for Tourism I: PR: SPN 3420. Students will learn to speak and understand Spanish specific to the tourism industry including field-specific techniques of communication, multicultural environments, an understanding of the Spanish culture, and the needs of bilingual clients. Occasional.

SPT 3800 CAH-LANG 3(3,0) Spanish Translation and Interpretation: PR: SPN 3420, or C.I. Introduction to translation and interpretation, practical applications of theory applied to professional written and audio texts from Spanish to English and from English to Spanish. Fall, Spring.

SPT 3805 CAH-LANG 3(3,0) Spanish Translation and Interpretation for Mass Communication: PR: SPN 3420. Translation and interpretation in mass communication using all forms of media. Even Spring.

SPT 3809 CAH-LANG 3(3,0) Medical Spanish Translation/Interpretation: PR: SPN 3420, or C.I. Basic Spanish terminology, techniques and ethics in the field of medical translation and interpretation. Odd Fall.

SPT 3820 CAH-LANG 3(3,0) Computer Assisted Translation Tools: PR: SPN 3420 or C.I. Provides hands-on experience with CAT (Computer Assisted Translation) tools that external translation and interpretation agencies require in their hiring profiles. Occasional.

SPT 3831 CAH-LANG 3(3,0) Spanish Legal Translation and Interpretation: PR: SPN 3420 or C.I. The terminology, procedures and ethics required to be a Spanish language court interpreter and translator in the legal field. Even Fall.


SPW 3000H CAH-LANG 3(3,0) Honors Nobel Prize Literature: Spain and Latin America: PR: Permission of Honors and Spanish language standing or C.I. Students will analyze, discuss, and research English translations of Spanish and Latin American Nobel Prize-Winning writers. Through readings, students will explore the universality of Spanish literature. Occasional.

SPW 3100 CAH-LANG 3(3,0) Survey of Spanish Literature I: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Main literary currents and works from the Middle Ages through the Eighteenth century. Fall.

SPW 3101 CAH-LANG 3(3,0) Survey of Spanish Literature II: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Main literary currents and works of the Nineteenth century to the present. Spring.
SPW 3130 CAH-LANG 3(3,0)
Survey of Latin-American Literature I: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Main literary currents and works of the Nineteenth Century Romanticism. Fall.

SPW 3131 CAH-LANG 3(3,0)
Survey of Latin-American Literature II: PR: SPN 3760, SPN 3420 and SPN 3300, or C.I. Main literary currents and works of the Nineteenth century from Realism to the present. Spring.

SPW 4272 CAH-LANG 3(3,0)
20th Century Spanish Novel: PR: SPW 3101 or SPW 3131 or C.I. Major works by the leading authors of the 20th century. Texts selected are studied not only for their aesthetic value, but also in terms of their historical and cultural significance. Occasional.

SPW 4310 CAH-LANG 3(3,0)

SPW 4322 CAH-LANG 3(3,0)
Contemporary Iberian Theatre: PR: SPW 3101 or C.I. A study of the major playwrights and tendencies in contemporary Iberian theatre. Occasional.

SPW 4364 CAH-LANG 3(3,0)
Latin-American Narrative/Essay: Essay: PR: SPW 3101 or SPW 3131 or C.I. Study of Latin-American narrative/essay (changing topics by semester) with emphasis in 20th century texts, contrasting techniques, procedures, and literary theories. May be repeated for credit only when course content is different. Occasional.

SPW 4372 CAH-LANG 3(3,0)

SPW 4381 CAH-LANG 3(3,0)
Latin-American Theatre/Poetry: PR: SPW 3101 or SPW 3101 or SPW 3131 or SPW 3370. Study of Latin-American Theatre/Poetry (changing topics by semester) with emphasis in 20th century texts, contrasting techniques, procedures, and literary theories. May be repeated for credit only when course content is different. Occasional.

SPW 4382 CAH-LANG 3(3,0)
Central American Literature: PR: SPW 3131 or C.I. This course familiarizes the student with literary works of prominent writers from Central America. It covers the different literary periods within Central America literary history. Taught in Spanish. Occasional.

SPW 4400 CAH-LANG 3(3,0)
Spanish Medieval Literature: PR: SPW 3101 or C.I. This course covers the main works of the Spanish Medieval literature and culture with emphasis on contemporary adaptations of the themes in theatre and film. Occasional.

SPW 4460 CAH-LANG 3(3,0)
Nineteenth Century Spanish Literature: PR: SPW 3101 or C.I. A study of the representative authors and works in Spanish Romanticism, Realism, and Naturalism. Occasional.

SPW 4604 CAH-LANG 3(3,0)
Cervantes: PR: SPW 3100 or C.I. Don Quixote. Occasional.

SPW 4720 CAH-LANG 3(3,0)
The Generation of 1898: PR: SPW 3101 or C.I. A study of the generation’s main authors and their works. Occasional.

SPW 4730 CAH-LANG 3(3,0)
Hispanic Literature of the United States: PR: SPW 3101 or SPW 3131 or C.I. Reading and study of outstanding works written by Hispanic writers of the United States. Occasional.

SPW 4770 CAH-LANG 3(3,0)
Caribbean Spanish Literature: PR: SPW 3101 or SPW 3131 or C.I. Major literary currents and works of the Spanish-speaking Caribbean countries from colonial times to the present. Occasional.

SPW 4773 CAH-LANG 3(3,0)

SPW 5741 CAH-LANG 3(3,0)
Contemporary Spanish American Southern Cone Literature: PR: Enrolled in Spanish M.A. Program or C.I. Regional as well as international literary cultures and disciplines in southern cone literature. Occasional.

SSE 3312 ED-TL&L 3(3,0)
Teaching Social Science in the Elementary School: PR: EDG 4410 or C.I. Selected themes, preparation of the student for the Civics End of Course Assessment. Spring.

SSE 4323 ED-TL&L 3(3,0)
Teaching Civics in Florida: PR: POS 2041 and admission to Civic Teaching Certificate. Pedagogical skills for teaching civics including state mandates for teaching middle school civics and preparing middle school students for the Civics End of Course Assessment. Semester.

SSE 4361 ED-TL&L 3(3,0)

SSE 4395 ED-TL&L 3(3,0)
Teaching with Primary Sources: PR: Minimum 2.5 overall GPA. This course focuses on the creation, teaching, and evaluation of effective instructional practices that integrate primary sources into the teaching of social studies content. Occasional.

SSE 4936 ED-TL&L 3(3,0)
Programs in Teaching Social Science: PR: Admission to the Bachelor of Science in Social Science Education program. Special programs, strategies, and materials for middle and secondary social science majors. Fall.

SSE 5391 ED-TL&L 3(3,0)
Global Education: Theory and Practice: PR: Graduate standing or C.I. Examines the theoretical underpinnings of teaching about the world along with a variety of theoretically grounded teaching strategies for engaging students in global education. Spring.

SSE 5576 ED-TL&L 3(3,0)
Democracy and Education: PR: Graduate standing or C.I. Explores the intersection of theory and practice with regard to promoting democratic life in schools. Will examine competing theories of democracy and education, investigate problem areas in schools related to democracy, and consider examples of practice. Fall.

SSE 5790 ED-TL&L 3(3,0)
Inquiry and Instructional Analysis in Social Science Education: PR: EDG 6415 or admission to Teacher Leadership MEd program or initial Teacher Professional Preparation certificate. Study of instructional programs in social science education and related scholarship; development of an inquiry about the intersection of theory and practice in social science teaching. Occasional.

STA 1063C COS-STAT 3(3,0)
Applications of Excel: manipulation data; single variable regression, analysis of variance and covariance and nonparametric methods. With honors content. Fall, Spring.

STA 4163H COS-STAT 3(3,0)
Honors Statistical Methods I: PR: MC 2132 with a grade of "C" (2.0) or better. Axioms of probability; combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimation and tests of hypotheses; engineering applications. Fall, Spring.

STA 4164H COS-STAT 3(3,0)
Honors Statistical Methods II: PR: MC 2132 with a grade of "C" (2.0) or better and honors standing. Fundamental probability concepts; techniques for implementing and interpreting them. With honors content. Fall, Spring.

STA 4166H COS-STAT 3(3,0)
Honors Probability and Statistics for Engineers: PR: MAC 2132 with a grade of "C" (2.0) or better and honors standing. Fundamental probability concepts; techniques for implementing and interpreting them. With honors content. Fall, Spring.

STA 4452 COS-STAT 3(3,0)
Honors Probability and Statistics for Engineers: PR: MAC 2132 with a grade of "C" (2.0) or better and honors standing. Fundamental probability concepts; techniques for implementing and interpreting them. With honors content. Fall, Spring.

STA 4463H COS-STAT 3(3,0)
Life Contingencies I: PR: STA 4183 or any other STA 3183, Economics of insurance, utility theory, single premiums for insurance and annuities in both discrete and continuous cases. Non annual premium and net premium reserves. Fall.

STA 4464H COS-STAT 3(3,0)

STA 4733 COS-STAT 3(3,0)
Loss Models I: PR: MAC 2313 and STA 4322, Distributional quantities, characteristics of actuarial models, continuous models, discrete distributions, frequency and severity with coverage modifications, aggregate loss models, estimation for modified data, frequentist estimation. Fall.

STA 4735 COS-STAT 3(3,0)

STA 4823 COS-STAT 3(3,0)
Statistical Methods I: PR: STA 2023 or STA 6332, Study of random variables, probability distributions, estimation, tests of hypotheses, regression and correlation, introduction to analysis of variance, chi-square, and nonparametric methods. Fall, Spring.

STA 4824H COS-STAT 3(3,0)

STA 4826H COS-STAT 3(3,0)
Honors Statistical Methods II: PR: STA 4163. A continuation of STA 4163, including further study of regression, analysis of variance and covariance and multiple comparisons. Fall, Spring.
These are some of the UCF Courses and Descriptions:

- **STA 4173** COS-STAT 3(3,0)

- **STA 4183** COS-STAT 3(3,0)

- **STA 4184** COS-STAT 3(3,0)

- **STA 4186** COS-STAT 3(3,0)

- **STA 4222** COS-STAT 3(3,0)

- **STA 4321** COS-STAT 3(3,0)
  Statistical Theory I: PR: STA 2023 or STA 3032; CR: MAC 2313. Probability axioms, discrete and continuous sample spaces, conditional probability, independence, one-dimensional random variables, moment generating functions, transformations, jointly distributed random variables. Fall.

- **STA 4502** COS-STAT 3(3,0)
  Nonparametric Statistical Methods: PR: STA 2023 or STA 3032. Distribution-free tests on location and dispersion, goodness of fit tests, tests of independence, measures of association, nonparametric analysis of variance. Occasional.

- **STA 4504** COS-STAT 3(3,0)

- **STA 4641** COS-STAT 3(3,0)

- **STA 4664** COS-STAT 3(3,0)

- **STA 4674** COS-STAT 3(3,0)

- **STA 4852** COS-STAT 3(3,0)

**UCF Courses and Descriptions**

- **SYA 3110** COS-SOC 3(3,0)
  Social Theory: PR: SYG 2000 or C.I. Examines major theoretical perspectives in sociology, from foundational theories that contributed to the development of the discipline to today. Fall/Spring.

- **SYA 3552** COS-SOC 3(3,0)
  Categorical Data Analysis: PR: STA 4163 or STA 5206. Advanced Computer Processing of Statistical Data: PR: STA 4163 and knowledge of a programming language, graduate student status or senior standing, or C.I. Use of SAS and other statistical software packages; data manipulation; graphical data presentation; data analysis; creating analytical reports. Fall.

- **SYA 5176** COS-SOC 3(3,0)
  Introduction to Biostatistics: PR: STA 4163, STA 4173, graduate status or senior standing, or C.I. Fixed-effects model, random-effects model. repeated measures design, design regression, survival analysis, Kaplan-Meier estimates, proportional hazards model. Occasional.

- **SYA 5205** COS-SOC 3(3,0)
  Experimental Design: PR: STA 4164, STA 5206 or ESI 5219, and graduate status or senior standing, or C.I. Construction and analysis of designs for experimental investigations. Blocking, randomization, replication. Incomplete block designs; factorial and fractional designs; design resolution. Spring.

- **SYA 5206** COS-SOC 3(3,0)
  Statistical Analysis: PR: STA 2023; not open to students who have completed STA 4164. Graduate status or senior standing or C.I. Data Analysis: statistical models: estimation; tests or hypotheses; analysis of variance, covariance, and multiple comparisons; regression and nonparametric methods. Occasional.

- **SYA 5505** COS-SOC 3(3,0)
  Categorical Data Analysis: PR: STA 4163 or STA 5206. Advanced Computer Processing of Statistical Data: PR: STA 4163 and knowledge of a programming language, graduate student status or senior standing, or C.I. Use of SAS and other statistical software packages; data manipulation; graphical data presentation; data analysis; creating analytical reports. Fall.

- **SYA 5703** COS-SOC 3(3,0)
  Data Mining Methodology I: PR: STA 5104 and STA 5206, graduate status or senior standing or C.I. Considers discrete probability distributions, contingency tables, measures of association, and advanced methods including loglinear modeling, logistic regression, McNemar's Test, Mantel-Haenszel test. Occasional.

- **SYA 7525** COS-SOC 3(3,0)

- **SYA 3400C** COS-SOC 3(3,0)
  Applied Social Statistics: PR: Junior standing and grade of "C" (2.0) or better in SYG 2000. Sociology or Social Sciences majors only, or C.I.; CR: SYA 3400C required. Application of statistical techniques to sociological data as conducted in the research and writing of social scientists. Focus is on the analysis and interpretation of data used by sociologists. Fall.

- **SYA 3400C** COS-SOC 4(3,1)
  Applied Social Statistics: PR: Junior standing and grade of "C" (2.0) or better in SYG 2000. Sociology or Social Sciences majors only, or C.I.; CR: SYA 3400C required. Application of statistical techniques to sociological data collected, sampling techniques, proposal development, critical evaluation of social research, and relationship between theory and social research. Fall.

- **SYA 3410C** COS-SOC 4(3,1)
  Quantitative Research Analysis in Sociology: PR: SYA 3400C. Advanced research design and analysis focusing on quantitative research methodologies in sociology. Emphasizes data collection, management, analysis, interpretation, integration, presentation, and report writing. Occasional.

- **SYA 4354** COS-SOC 3(3,0)
  Geographic Information Systems Applications: PR: SYA 3352, or CI. How to integrate geographic information models with their future research and real-world applications. Fall.

- **SYA 4450** COS-SOC 3(3,0)
  Data Analysis: Capstone: PR: Junior Standing and grade of "C" (2.0) or better in SYA 4300C and SYA 3400C. Sociology or Social Sciences majors only, or C.I. Advanced social research design and analytical skills. Emphasis on social data management, various modes of social data analysis, interpretation, integration, presentation, and report writing. Spring.

- **SYA 4650C** COS-SOC 3(2,2)

- **SYA 4900** COS-SOC 3(4,1)
  Applied Sociology: PR: SYA 4300C. How sociology is used outside academia, how to apply research methods in an applied research setting, and complete an applied research project. Odd Spring.

- **SYA 4959** COS-SOC 3(3,0)
  Participatory Geographic Information Systems in Belize: PR: None. The conceptual frameworks, methodologies, and applications of Participatory Geographic Information Systems and related geospatial technologies for use in the field. Occasional.

- **SYA 5625** COS-SOC 3(3,0)
  Participatory Geographic Information Systems in Belize: PR: Graduate standing or C.I. Survey of conceptual issues, methodological concerns, and findings in substantive sociological areas that currently dominate scholarly inquiry, including such topics as crime, deviance, community, alcoholism, education. Fall.

- **SYA 5941** COS-SOC 3(3,0)
  Participatory Geographic Information Systems in Belize: The conceptual frameworks, methodologies, and applications of Participatory Geographic Information Systems and related geospatial technologies for use in the field. Occasional.

- **SYA 3410** COS-SOC 3(3,0)

- **SYA 3700** COS-SOC 3(3,0)

- **SYA 3800** COS-SOC 3(3,0)
  Sex and Gender in Society: PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Examination of sex and gender in society, as reflected in social norms, attitudes and beliefs, public and private practices, and social institutions. Fall/Spring.

- **SYA 4020** COS-SOC 3(3,0)

- **SYA 4510** COS-SOC 3(3,0)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYD 4810</td>
<td>Women in Contemporary Society</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Examination and evaluation of the status of women in the context of the major social institutions (e.g., family, education, religion, economy and policy). Fall. Spring.</td>
</tr>
<tr>
<td>SYD 4820</td>
<td>Men, Masculinities and Society</td>
<td>PR: SYG 2000, SYG 2010 or Junior Standing. Explores the role that masculinities play in social life from a sociological perspective. Occasional.</td>
</tr>
<tr>
<td>SYD 5517</td>
<td>Environment and Society</td>
<td>PR: Graduate standing or C.I. A sociological perspective and theoretical approach to the relationships between communities, societies, and the environment. Occasional.</td>
</tr>
<tr>
<td>SYG 2000</td>
<td>Introduction to Sociology</td>
<td>SCIENTIFIC STUDY of sociological concepts, theories, processes, and methods used in understanding contemporary human behavior in group interaction. Fall. Spring.</td>
</tr>
<tr>
<td>SYG 2000H</td>
<td>Honors Introduction to Sociology</td>
<td>Permission of Honors. Extensive honors work in the field of Sociology. Expectations, requirements, and standards are greater than for standard general Sociology. Fall.</td>
</tr>
<tr>
<td>SYG 2010</td>
<td>Social Problems</td>
<td>Analysis of major social problems such as mental disorders, sexual deviance, racial discrimination, poverty, community disorganization, and violence. Fall. Spring.</td>
</tr>
<tr>
<td>SYG 3938</td>
<td>Careers in Sociology</td>
<td>PR: SYG 2000 or SYG 2010. Explores careers that sociology majors are prepared for upon graduation and tips for improving chances of obtaining a desired career. Fall.</td>
</tr>
<tr>
<td>SYG 4244</td>
<td>Food and Society</td>
<td>PR: SYG 2000, or SYG 2010, or Junior standing. Through the exploration of food in society, students will discover the significance of food in people's lives and discover ways food expresses relationships among people. Occasional.</td>
</tr>
<tr>
<td>SYO 3410H</td>
<td>Honors Patterns of Mental Health in Society</td>
<td>PR: Consent of Honors or C.I. A sociological examination of mental illness as a social problem; legal aspects of mental illness, and the mental health professions. With Honors content. Occasional.</td>
</tr>
<tr>
<td>SYO 3573</td>
<td>Social Networks: Theory &amp; Applications</td>
<td>PR: SYG 2000, ANT 2000, PSY 2012, or Junior Standing. Patterns of social relations among social actors within a defined population are demonstrated allowing students to better understand the theory and application of social networks. Occasional.</td>
</tr>
<tr>
<td>SYO 4250</td>
<td>Education and Social Achievement</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. This course examines the sociological dimensions of the educational institutions, including the impact of the social structure on learning and the role of education in social change. Occasional.</td>
</tr>
<tr>
<td>SYO 4300</td>
<td>Political Sociology</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Sociological analysis of political and parapolitical groups; socioeconomic variable of voting behavior, power elites; societies and systems of government. Occasional.</td>
</tr>
<tr>
<td>SYO 4400</td>
<td>Medical Sociology</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Analysis of patient behaviors and behavior, health practitioners, the social organization of health services, and delivery of health care. Occasional.</td>
</tr>
<tr>
<td>SYO 4400H</td>
<td>Honors Medical Sociology</td>
<td>PR: Consent of Honors or C.I. Analysis of patient behavior, health practitioners, the social organization of health services, and delivery of health care. With Honors content. Occasional.</td>
</tr>
<tr>
<td>SYO 4402</td>
<td>Sociology of Health and Illness Behavior</td>
<td>PR: One of SYG 2000, ANT 2000, or PSY 2012, or Junior standing. Social construction of health and illness, and social factors that shape health and illness behavior (e.g., subjective experience of illness, patient-doctor interaction, and coping with disability). Occasional.</td>
</tr>
<tr>
<td>SYO 4424</td>
<td>Men, Masculinities, and Health</td>
<td>PR: SYG 2000, ANT 2000, PSY 2012 or Junior Standing. Explores how masculine gendered identities at various stages during the lifespan intersect with health, illness, and disease. Odd Fall.</td>
</tr>
<tr>
<td>SYP 3303</td>
<td>Sex, Gender, and Social Action</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Explores what happens when the biological differences of sex are used in understanding contemporary human behavior such as social movements. Occasional.</td>
</tr>
<tr>
<td>SYP 3323</td>
<td>Video Games in Society</td>
<td>PR: SYG 2000, SYG 2010 or Junior Standing. Sociological perspectives on video games as interactive digital entertainment, including theoretical approaches with respect to gender, race, violence, and capitalism as they relate to gaming. Occasional.</td>
</tr>
<tr>
<td>SYP 3511</td>
<td>Sociology of Murder</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. An analytical study of murder in the U.S.; topics include different types of homicides, offenders, victims, and circumstances. Fall.</td>
</tr>
<tr>
<td>SYP 3530</td>
<td>Juvenile Delinquency</td>
<td>PR: One of SYG 2000, ANT 2000, PSY 2012, or Junior standing. Types of delinquency behavior found among juveniles; possible causes and ways society attempts to treat the various forms of delinquency. Occasional.</td>
</tr>
</tbody>
</table>
SYP 3540 COS-SOC

SYP 3551 COS-SOC

SYP 3562 COS-SOC

SYP 3602 COS-SOC

SYP 3630 COS-SOC

SYP 3650 COS-SOC

SYP 4000 COS-SOC

SYP 4004 COS-SOC

SYP 4014 COS-SOC
Sociology of Sport: PR: SYG 2000 or SYG 2010 or ANT 2000 or PSY 2012 or Junior Standing, or CI. Explores the ways in which happiness and well-being are understood from a sociological perspective and dependent upon cultural, historical, and social factors. Occasional.

SYP 4304 COS-SOC

SYP 4420 COS-SOC

SYP 4454 COS-SOC

SYP 4514 COS-SOC

SYP 4521 COS-SOC

SYP 4536 COS-SOC

SYP 4550 COS-SOC

SYP 4631 COS-SOC

SYP 4730 COS-SOC

SYP 4731 COS-SOC

SYP 4732 COS-SOC

SYP 5005 COS-SOC
Sociological Social Psychology: PR: Graduate standing or CI. An exploration of sociological social psychological theories and their application in understanding the effects of society and groups on the individual. Occasional.

SYP 5566 COS-SOC
Seminar on Domestic Violence: Theory, Research and Social Policy: PR: Graduate status or senior standing or CI. A sociological examination and evaluation of theories, empirical research and social policy related to the study of domestic violence. Occasional.

TAX 4001 BA-ACCT
Taxation of Business Entities and Transactions: PR: Junior standing, ACG 3131 with a grade of "C" (2.0) or better. Federal income tax laws affecting the taxation of business entities and transactions. Fall, Spring.

TAX 4022 BA-ACCT
Individual Federal Income Tax: PR: TAX 4001 Study of the basic theory, concepts, practices, and methods of determining the taxable income and tax liabilities of individuals. Fall, Spring.

TAX 5015 BA-ACCT
Advanced Tax Topics: PR: Graduate standing, TAX 4001 with a "C" (2.0) or better. Advanced tax issues affecting business entities and their owners, with a primary focus on corporations and partnerships. Occasional.

THE 2000 CAH-THEA
Theatre Survey: Overview of the art and craft of the theatre. Restricted to non-majors. Fall, Spring.

THE 2000H CAH-THEA

THE 2020 CAH-THEA
Survey of Theatre for Majors: PR: Theatre major or minor. Overview of the art and craft of theatre. Fall, Spring.

THE 2050 CAH-THEA
Theatre Studies in Creative Drama: Techniques and strategies for facilitating creative drama with youth, as both an art form and teaching tool. Occasional.

THE 2081C CAH-THEA
Introduction to UCF Theatre: PR: Theatre major. Specific UCF Theatre Department production protocols and operations. Fall.

THE 2090L CAH-THEA
VAR(0,VAR)
Theatre Participation: PR: Department Consent. Participation in UCF Theatre productions. May be used in the degree program a maximum of 8 times. Fall, Spring.

THE 2305 CAH-THEA
Script Analysis for Theatre: PR: Theatre major. Exploration of dramatic form with focus on playscripts for productions. Fall, Spring.

THE 2925L CAH-THEA
(1,0,VAR)
Theatre Participation - Management I: PR: Theatre Major. Theatre Minor or Dance Minor. Participation in UCF Theatre productions. May be used in the degree program a maximum of 8 times. Fall, Spring.

THE 3006 CAH-THEA

THE 3006H CAH-THEA
Honors from Greece to Grease: PR: Not open to Theatre Majors, Consent of Honors. Development of Western Theatre from Ancient Greece to today with Honors Content. Occasional.

THE 3082 CAH-THEA
Theatre Careers: PR: BA Theatre major or minor or Entertainment Management major, "C" (2.0) or better in THE 2020 or THE 2000, and Sophomore standing Techniques to secure employment in theatre and related fields. Occasional.

THE 3171 CAH-THEA

THE 3240 CAH-THEA

THE 3250 CAH-THEA
Sex, Drugs, & the Rock and Roll Musical: PR: ENC 1102. Overview of the Rock & Roll musical theatre genre including culture and development. Occasional.

THE 3254 CAH-THEA

THE 3272 CAH-THEA

THE 3311 CAH-THEA
Theatre History and Dramatic Literature I: PR: Theatre major, "C" (2.0) or better in THE 2305. Theatre history and literature from the Greeks to the Renaissance. Fall, Spring.

THE 3312 CAH-THEA
Theatre History and Dramatic Literature II: PR: Theatre major, "C" (2.0) or better in THE 3311 and THE 2305. Theatre history and literature from French neoclassicism to modern realism. Fall, Spring.

THE 3313 CAH-THEA
Theatre History and Dramatic Literature III: PR: Theatre major, "C" (2.0) or better in THE 3312. Theatre history and literature from modern realism to present. Fall, Spring.
THE 3333 CAH-THEA 3(3,0)
Shakespeare Skills: PR: Grade of "C" (2.0) or better in TPA 2210C. Course not allowed for BFA Theatre Acting Majors. Study of Shakespeare's heightened language, scansion, and text from a theatrical point of view. Occasional.

THE 3383 CAH-THEA 3(3,0)
Taboo Theatre: Sex & Violence on Stage: PR: ENC 1102. Dramatic literature with taboo topics and their impact on the storytelling and entertainments of today. Occasional.

THE 3549 CAH-THEA 3(3,0)
Topics in Theatre Studies: PR: Theatre Major or Minor. PR or CR: THE 3312 In-depth study and application of a specific theatre studies topic. Occasional.

THE 4093L CAH-THEA 10(VAR)
Theatre Practicum-Management: II: PR: Theatre major or minor; "C" (2.0) or better in THE 3295L. Participation in UCF Theatre productions. May be used in the degree program a maximum of 8 times. Fall, Spring.

THE 4212 CAH-THEA 3(3,0)
Global Theatre: PR: Grade of C (2.0) or better required in ENC 1101 or ANT 2000. Theatrical arts and traditions of various countries with an emphasis on non-western cultures. Occasional.

THE 4230 CAH-THEA 3(3,0)
Cultural Diversity in Theatre: PR: "C" (2.0) or better in ENC 1101 or ANT 2000. Commonality of human experience among various cultural groups through the study of dramatic literature. Occasional.

THE 4244 CAH-THEA 3(3,0)
Musical Theatre History I: PR: B.F.A. Musical Theatre major, "C" (2.0) or better required in THE 2051C. Origins and evolution of Musical Theatre from the Ancient Greeks through the 1950s. Fall.

THE 4245 CAH-THEA 3(3,0)
Musical Theatre History II: PR: BFA Musical Theatre major, C (2.0) or better required in THE 4244. Origins and evolution of Musical Theatre from the 1950s through the present. Spring.

THE 4284 CAH-THEA 3(3,0)
Period Costume, Architecture, and Decor: I: PR: "C" (2.0) or better in ENC 1102, Costumes, furniture and decor from antiquity to the High Renaissance. Fall.

THE 4285 CAH-THEA 3(3,0)
Period Costume, Architecture, and Decor: II: PR: "C" (2.0) or better in THE 4284. Costumes, furniture and decor from the English Renaissance to the present. Occasional.

THE 4423 CAH-THEA 3(3,0)
Women in Theatre: PR: Grade of C (2.0) or better in ENC 1101. An overview of women's contributions to theatre. Occasional.

THE 4543 CAH-THEA 3(3,0)
Theatre for Social Change: PR: Grade of "C" (2.0) or better in ENC 1101. Theatre activist's impact on theatrical art forms. Occasional.

THE 4543H CAH-THEA 3(3,0)

THE 4554 CAH-THEA 0(0,0)
Theatre Exit Critique: PR: Theatre Major; Senior Standing, Completion of departmental exit critique. Graded S/U. Fall, Spring.

THE 5205 CAH-THEA 3(3,0)

THE 5215 CAH-THEA 3(3,0)
Global Theatre: PR: Admission into the MFA/MA Theatre programs or C.I. Theatrical arts and traditions of various countries with an emphasis on non-western countries. Occasional.
TPA 3223C CAH-THEA 3(2,2)
Lighting Design for Theatre I: PR: BFA Stage Management or Design and Technology major and C (2.0) or better in THE 2305, TPA 2220C, TPA 2000C, and TPA 4250C. Projects in the fundamentals of lighting design for the stage. Spring. M&S fee $61.00

TPA 3249C CAH-THEA 2(2,2)
Advanced Makeup Techniques: PR: "C" (2.0) or better in TPA 2245C. Lecture/laboratory study of basic techniques needed for the creation of stage and film prosthetics and masks. Occasional. M&S fee $70.00

TPA 3265C CAH-THEA 3(2,2)
Sound Design for Theatre I: PR: BFA Stage Management or Design Technology major and "C" (2.0) or better in THE 2305, TPA 2220C, TPA 2000C, and TPA 4250C. Projects in the fundamentals of sound design for the stage. Spring.

TPA 3383C CAH-THEA VAR(VAR,0)
Topics in Technical Theatre: PR: Theatre Major and "C" (2.0) or better in TPA 2232C or TPA 2220C or Department Consent. Techniques used in the production of scenery or costumes for the stage, Variable Topics. May be used in the degree program a maximum of 8 times. Occasional. M&S fee $35.00

TPA 3601 CAH-THEA 3(3,0)
Stage Management Techniques: PR: "C" (2.0) or better in TPA 2600. Paperwork, structure, and tools used by Stage Manage Fall.

TPA 4066C CAH-THEA 3(2,2)
Advanced Scenography: PR: "C" (2.0) or better in TPA 3066C, TPA 3045C, TPA 3285C, or TPA 3223C. Project based work which explores the mechanics of concentration. May be used in the degree program a maximum of 4 times only when course content is different. Occasional.

TPA 4250C CAH-THEA 2(2,2)
CADD for Theatre: PR: B.F.A Design and Technology or Stage Management major and "C" (2.0) or better in THE 2020. Computer-aided drafting and design and its application for Theatre. Occasional. M&S fee $23.00

TPA 4251C CAH-THEA 2(2,2)
Advanced CADD for Theatre: PR: "C" (2.0) or better in TPA 4250C. Advanced computer-aided drafting and designing its application for Theatre. Spring. M&S fee $43.00

TPA 4288L CAH-THEA 1(0,VAR)
Theatre Participation-Production II: PR: "C" (2.0) or better in TPA 2290L. Participation in UCF Theatre Productions. May be used in the degree program a maximum of 8 times. Fall, Spring. M&S fee $47.00

TPA 4384C CAH-THEA 3(3,4)
Advanced Topics in Technical Theatre: PR: C (2.0) in TPA 2210 and TPA 2211. Variable topics which may include Technical Direction or other advanced topics. May be used in the degree program a maximum of 4 times. Occasional. M&S fee $35.00

TPA 4400 CAH-THEA 3(3,0)
Theatre Management: PR: "C" (2.0) or better in THE 2020. Theatre Major or Minor and Junior standing. Study of the development, organization, management, funding, and promotion of theatrical events. Fall.

TPA 4401C CAH-THEA 2(2,2)
Theatre Careers in Production: PR: B.F.A. Design Tech or Stage Management; Junior standing. Techniques to secure employment in technical theatre, design, and stage management. Spring.

TPA 4602 CAH-THEA 3(3,0)
Stage Management: Applications: PR: B.F.A. Stage Management major, "C" (2.0) or better required in TPA 4602. Union work rules and application of professional contracts. Fall.

TPA 4604 CAH-THEA 3(3,1)
Stage Management: Professional Practice: PR: B.F.A. Stage Management major, "C" (2.0) or better required in TPA 4602. Union work rules and application of professional contracts. Fall.
### UCF Courses and Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>TPP 3272C</td>
<td>CAH-THEA</td>
<td>Technical, emotional and psychological aspects of voice applied to musical theatre singing. Music and Lyrics as script. Spring.</td>
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<tr>
<td>TPP 3310C</td>
<td>CAH-THEA</td>
<td>Directing for Theatre I: PR: Theatre major and &quot;C&quot; (2.0) or better required in THE 3312. Principles and techniques of play direction to include script selection, directorial analysis, casting, composition/picturization, blocking, tempo, and rehearsal planning. Fall, Spring.</td>
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<tr>
<td>TPP 3510C</td>
<td>CAH-THEA</td>
<td>Movement for the Actor I: PR: BFA Acting Major. Physical exploration of relaxation, release, and strengthening exercises designed to help the actor develop a more expressive body. Fall.</td>
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<tr>
<td>TPP 3513C</td>
<td>CAH-THEA</td>
<td>Movement for the Actor II: PR: C (2.0) or better in TPP 3510C. Reinforcement of the techniques of TPP 3510C. Fall.</td>
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</tr>
<tr>
<td>TPP 3711C</td>
<td>CAH-THEA</td>
<td>Voice Production I: PR: &quot;C&quot; (2.0) or better in 2710C. An introduction to stage voice introduction in TPP 2710C, focusing on a physical approach to acting texts. Spring.</td>
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</tr>
<tr>
<td>TPP 3712C</td>
<td>CAH-THEA</td>
<td>Voice Production III: PR: &quot;C&quot; (2.0) or better in TPP 3711C. Emphasis on study of Shakespearean and heightened language. Fall.</td>
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<tr>
<td>TPP 3743C</td>
<td>CAH-THEA</td>
<td>Musical Theatre Applied/Studio Voice I: PR: &quot;C&quot; (2.0) or better in TPP 3727C. Continuation of Musical Theatre voice training with individualized instruction. Fall.</td>
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</tr>
<tr>
<td>TPP 3744C</td>
<td>CAH-THEA</td>
<td>Musical Theatre Applied/Studio Voice II: PR: &quot;C&quot; (2.0) or better in TPP 3713C. Continuation of Musical Theatre voice training with individualized instruction. Fall.</td>
<td></td>
</tr>
<tr>
<td>TPP 3952L</td>
<td>CAH-THEA</td>
<td>Summer Studio Performance: PR: Audition/ Interview or departmental consent. Participation in UCF Theatre productions. May be used in the degree program a maximum of 8 times. Occasional. M&amp;S fee $20.00.</td>
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</tr>
<tr>
<td>TPP 4140C</td>
<td>CAH-THEA</td>
<td>Acting IV: Creating the Role: PR: &quot;C&quot; (2.0) or better in 3173C. Further exploration and application of acting techniques through scene study. Fall.</td>
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<tr>
<td>TPP 4142C</td>
<td>CAH-THEA</td>
<td>Acting Verse: PR: Grade of &quot;C&quot; (2.0) or better required in TPP 3112C and TPP 4140C. Verse drama with particular emphasis placed on scansion and verse in the plays of William Shakespeare. Occasional.</td>
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</tr>
<tr>
<td>TPP 4143C</td>
<td>CAH-THEA</td>
<td>Acting Styles: PR: &quot;C&quot; (2.0) or better in TPP 3103 or TPP 4140C. An advanced and comprehensive view of acting styles. Occasional.</td>
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</tr>
<tr>
<td>TPP 4939L</td>
<td>CAH-THEA</td>
<td>Theatre Participation-Performance II: PR: Theatre major or minor and &quot;C&quot; (2.0) or better in TPP 2191L. Participation in UCF Theatre productions. May be used in the degree program a maximum of 8 times. Fall, Spring. M&amp;S fee $45.00.</td>
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<tr>
<td>TPP 4922I</td>
<td>CAH-THEA</td>
<td>Auditioning: PR: &quot;C&quot; (2.0) or better in TPP 2710C. Selecting monologues, auditioning techniques and cold readings. Spring.</td>
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<tr>
<td>TPP 4223C</td>
<td>CAH-THEA</td>
<td>Theatre Careers in Performance: PR: B.F.A. Acting or Musical Theatre major, Junior standing. Techniques needed to secure employment in performance or related fields. Even Spring.</td>
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<tr>
<td>TPP 4243C</td>
<td>CAH-THEA</td>
<td>Circus Arts: PR: Theatre major or minor; &quot;C&quot; (2.0) or better in TPP 2110C or TPP 2185. Circus history and introduction to a wide range of circus skills. Occasional.</td>
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<tr>
<td>TPP 4244</td>
<td>CAH-THEA</td>
<td>The Art of Storytelling: PR: Theatre major or minor; &quot;C&quot; (2.0) or better in TPP 2185 or TPP 2110C. Continuation of THE 2000 or THE 2020. Application of theatrical storytelling as an art form. Occasional.</td>
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<tr>
<td>TPP 4259C</td>
<td>CAH-THEA</td>
<td>MT Applied/Studio Voice III: PR: &quot;C&quot; (2.0) or better in TPP 3744C. Continuation of Musical Theatre voice training. Individualized instruction Fall.</td>
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</tr>
<tr>
<td>TPP 4265C</td>
<td>CAH-THEA</td>
<td>Camera Acting: PR: TPP 2110C or CR: &quot;C&quot; (2.0) or better in TPP 4140C. Application of previous acting training to the TV/Film medium. Occasional.</td>
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</tr>
<tr>
<td>TPP 4270C</td>
<td>CAH-THEA</td>
<td>MT Applied/Studio Voice IV: PR: &quot;C&quot; (2.0) or better in TPP 4259C. Continuation of Musical Theatre voice training. Individualized instruction Spring.</td>
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<tr>
<td>TPP 4271C</td>
<td>CAH-THEA</td>
<td>MT Applied/Studio Voice V: PR: &quot;C&quot; (2.0) or better in TPP 4270C. Continuation of Musical Theatre voice training. Individualized instruction Fall.</td>
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<tr>
<td>TPP 4311C</td>
<td>CAH-THEA</td>
<td>Advanced Directing for Theatre: PR: &quot;B&quot; (3.0) or better grade in TPP 3310C. Practical experience directing class scenes and projects. Spring.</td>
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<tr>
<td>TPP 4512C</td>
<td>CAH-THEA</td>
<td>Stage Combat: PR: B.F.A. Acting or Musical Theatre major, grade of &quot;C&quot; (2.0) or better in TPP 3711C, and Senior standing. Stage combat with emphasis on hand-to-hand combat. Occasional.</td>
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<tr>
<td>TPP 4531C</td>
<td>CAH-THEA</td>
<td>Period Movement: PR: Grade of C (2.0) or better required in TPP 4512C. Continuation of Movement/Dance work. Emphasis given to period styles. Fall.</td>
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<tr>
<td>TPP 4730C</td>
<td>CAH-THEA</td>
<td>Dialects: PR: Grade of &quot;C&quot; (2.0) or better required in TPP 3712C. Analysis of dialects and regionalisms, reinforcing the study of phonetics, placement, and vocal apparatus. Occasional.</td>
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<tr>
<td>TPP 4746C</td>
<td>CAH-THEA</td>
<td>Musical Theatre Auditioning: PR: Theatre major and grade of &quot;C&quot; (2.0) or better in DAA 2201C and TPP 3257C or TPP 2724C. Preparation for professional musical theatre auditions. Occasional.</td>
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<tr>
<td>TPP 4923C</td>
<td>CAH-THEA</td>
<td>MT Applied/Studio Voice VI: PR: &quot;C&quot; (2.0) or better in TPP 4921C. Continuation of Musical Theatre voice training. Individualized instruction. Spring.</td>
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<tr>
<td>TPP 5087C</td>
<td>CAH-THEA</td>
<td>Theatre Careers in Performance: PR: Admission to the MFA and MA programs in Theatre Techniques needed to secure employment in performance or related fields. Even Spring.</td>
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<tr>
<td>TPP 5125C</td>
<td>CAH-THEA</td>
<td>Improvisation Studio: PR: Acting for Youth Theatre. A study of spontaneous dramatic play and theatre exercises designed to develop self-discipline, creative freedom and resources for the stage and classroom. Odd Fall.</td>
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<tr>
<td>TPP 5156C</td>
<td>CAH-THEA</td>
<td>Acting Studio I: PR: Admission to the MFA Acting program. An advanced scene study course using Shakespeare's canon to explore scene analysis, character development, and application of acting techniques. Even Fall.</td>
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<tr>
<td>TPP 5157C</td>
<td>CAH-THEA</td>
<td>Acting Studio II: PR: TPP 5156C. Advanced scene study course applying acting methodologies to the works of modern playwrights. Odd Spring.</td>
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<tr>
<td>TPP 5246C</td>
<td>CAH-THEA</td>
<td>Circus Arts: PR: Admission to Theatre graduate program or C.I. Circus skills and history. Even Spring.</td>
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<tr>
<td>TPP 5248C</td>
<td>CAH-THEA</td>
<td>Storytelling as a Theatrical Art Form: PR: Admission to Theatre graduate program or C.I. Application of storytelling as an art form. Spring.</td>
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<tr>
<td>TPP 5273</td>
<td>CAH-THEA</td>
<td>Musical Theatre Acting I: PR: TPP 5157C. Integrated study in musical theatre acting, singing and movement applied to musical theatre performance, direction and choreography; emphasizing developing skills in textual and musical interpretation. Occasional.</td>
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<tr>
<td>TPP 5278C</td>
<td>CAH-THEA</td>
<td>Musical Theatre Lab: PR: TPP 5157C. Practical course in developing musical theatre skills for the actor. Spring.</td>
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<tr>
<td>TPP 5289C</td>
<td>CAH-THEA</td>
<td>Acting Methodologies: PR: Admission to the graduate program in Theatre or C.I. Approaches to acting. Even Fall.</td>
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<tr>
<td>TPP 5386C</td>
<td>CAH-THEA</td>
<td>Directing for Young Audiences: PR: TPP 5910 and THE 5385. Study of the principles, procedures, and practices of stage direction as it applies to theatre for young audiences. Odd Spring.</td>
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<tr>
<td>TPP 5515</td>
<td>CAH-THEA</td>
<td>Movement Studio II: PR: TPP 5515 or C.I. Principles and methods of movement for the stage focusing on relaxation, centering, increased physical control, and physical development of a character. Fall.</td>
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<tr>
<td>TPP 5516C</td>
<td>CAH-THEA</td>
<td>Movement Studio II: PR: TPP 5515 or C.I. Principles and methods of movement for the stage focusing on gaining specific knowledge and skills in period styles of movement and basic unarmed combat. Spring.</td>
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<tr>
<td>TPP 5555C</td>
<td>CAH-THEA</td>
<td>Musical Theatre Dance II: PR: TPP 5554C. Advanced dance study with particular emphasis on the development and expression of characterization in dance. Spring.</td>
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<tr>
<td>TPP 5715C</td>
<td>CAH-THEA</td>
<td>Stage Voice I: PR: Admission to the MFA Acting program. Fundamentals of breathing and vocal production. Combination of various voice methodologies, focusing on the relaxation of physical tension and articulation. Even Fall.</td>
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<tr>
<td>TPP 5716C</td>
<td>CAH-THEA</td>
<td>Stage Voice II: PR: Admission to MFA Acting program Continuation of Stage Voice I, including Skinner's IPA and application of physical vocal techniques to longer texts. Odd Spring.</td>
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<tr>
<td>TPP 5754</td>
<td>CAH-THEA</td>
<td>Musical Theatre Voice I: PR: Admission to MFA Musical Theatre program. Voice study devoted to the diagnosis and development of the singing voice and its application to musical theatre performance placing particular emphasis upon vocal technique. Fall.</td>
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<tr>
<td>TPP 5935C</td>
<td>CAH-THEA</td>
<td>Contemporary Practices in Youth Theatre: PR: Admission to MFA graduate program. C.I. Investigation of a particular subject in youth theatre. May be used in the degree program a maximum of 8 times. Odd Spring.</td>
<td></td>
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<tr>
<td>TSL 3346</td>
<td>CAH-LANG</td>
<td>English as an International Language: PR: Two semesters of college-level foreign language. Focus on English as it relates to native and non-native speakers. Topics include grammar, pronunciation, cross-cultural issues, and details about teaching English worldwide. Fall, Spring.</td>
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</tbody>
</table>
TSL 4080 ED-TL&L 3(3,0)
Theory and Practice of Teaching ESOL Students in Schools: PR: Junior standing or C.I. Focuses on methods of teaching English to Speakers of Other Languages (ESOL), ESOL curriculum and materials, cross-cultural understanding, applied linguistics in second language teaching, and test and evaluation of ESOL. Fall, Spring.

TSL 4240 CAH-LANG 3(3,0)

TSL 4363 CAH-LANG 3(3,0)
ESL Classroom Experiences: PR: TSL 3346 (B- or better). Practical instruction and experiences for future teachers of English conversation. Includes micro-teaching in class as well as 25 hours of experience working with non-native speakers. Spring.

TSL 4942 ED-TL&L 3(3,0)
ESOL Field Experience: PR: TSL 4080. Practical application of research and theory on teaching and assessing academic subjects to second language (L2) learners in grades Pre-K-12. Fall, Spring.

TSL 4943 ED-TL&L 3(3,0)
L2 Academic Language Instruction: PR: TSL 4044 and ESL 4044. Practical application of research and theory on teaching and assessing academic language and disciplinary literacy for second language (L2) learners in grades Pre-K-12. Spring.

TSL 4945 ED-TL&L 3(3,0)
ESOL Clinical Experience: PR: TSL 4942 and TSL 4943. Practical application of research and theory on teaching and assessing academic language and disciplinary literacy to second language (L2) learners in grades Pre-K-12. Fall, Spring.

TSL 5085 ED-TL&L 3(3,0)
Teaching Language Minority Students in Pre-K-12 Classrooms: PR: Admission to College of Education Master of Arts Program or C.I. Teaching K-12 limited English proficient (LEP) students. Florida standards regarding cross-cultural communication, ESL curriculum, and materials, ESOL methodology, testing and evaluation of ESOL students, applied linguistics. Fall, Spring.

TSL 5325 CAH-LANG 3(3,0)
ESOL Strategies: PR: Graduate status or senior standing or C.I. This course will survey cross-cultural communication and understanding, testing and evaluation, curriculum and methods of teaching ESOL to meet the needs of limited English proficient students. Occasional.

TSL 5345 ED-TL&L 3(3,0)
Methods of ESOL Teaching: This course is designed to develop understanding, knowledge and skills of the current methods used in the teaching of ESOL. Fall, Spring.

TSL 5376 CAH-LANG 3(3,0)
Reading and Writing in a Second Language: PR: Graduate standing or C.I. Theoretical and pedagogical approaches to ESOL reading and writing. Occasional.

TSL 5380 CAH-LANG 3(3,0)
Computers and Technology for ESOL: PR: Graduate standing or C.I. Emphasizes research in computer assisted language learning, as well as design and evaluation of software and websites for learning English as a second language. Occasional.

TSL 5525 ED-TL&L 3(3,0)
ESOL Cultural Diversity: This course is designed to identify major cultural groups represented by the LEP population in Florida schools and to understand their special needs. Occasional.

TSL 5601 CAH-LANG 3(3,0)
Second Language Vocabulary Learning: PR: Graduate standing or C.I. Considers lexical issues encountered by second language learners; explores best practices for learners and their teachers and examines current research for pedagogical application. Occasional.

TSL 5940 CAH-LANG 3(3,0)
Issues in TELF: PR: Graduate status or senior standing or C.I. Focuses on topics specifically related to TELF, such as materials adaptation, teaching in multi-level classrooms, learning styles, cultural issues, and curriculum syllabus design. Spring.

TTE 3810 ECS-CECE 3(3,0)
Highway Engineering: PR: STA 3022 with a grade of "C" (2.0) or better and CR: CEG 3070C. Three functional classifications are covered: planning, design and operation of transportation facilities. Emphasis is on the highway transportation mode. Fall, Spring.

TTE 4274 ECS-CECE 3(3,0)
Transportation Engineering Systems: PR: TTE 3810 with a grade of "C" (2.0) or better. Topics such as safety. Intelligent Transportation Systems, and airport transportation will be covered. Fall, Spring.

TTE 4300 ECS-CECE 3(3,0)
Transportation Analytics: PR: TTE 3810 with a grade of "C" (2.0) or better and department consent. Project design course covering principles/techniques of planning, traffic, and highway design. Including projecting traffic volumes, laying out alternative routes, designing of alignments/intersections. Spring. M&S fee $25.00.

TTE 5204 ECS-CECE 3(3,0)
Traffic Engineering: PR: TTE 3810 or C.I. Study of operator and vehicle characteristics, and design for street capacity, signals, signs, and markings. Occasional.

TTE 5805 ECS-CECE 3(3,0)

TTE 5835 ECS-CECE 3(3,0)
Pavement Engineering: PR: EGN 3315C, CON 3501C, CEG 4011C Materials, analysis, evaluation, and management of pavement and pavement systems. Even Fall.

VIC 3001 COS-COMM 3(3,0)
Visual Communication: PR: ENC 1102 and C.I. Introduction to visual communication principles and their application to consumer behavior, marketing, and contemporary culture. Pre-requisite: ENC 1102. Fall, Spring.

VIC 4312 COS-COMM 3(3,0)
Power Branding: PR: AdPR majors only; MMC 3420 and PR: or CR: ADV 4101, or C.I. The importance of brand equity as well as how to build, measure, and manage brand equity. Fall.

WOH 4208 CAH-HIST 3(3,0)
History of the Global Drug Trade: PR: WOH 3015. The global history of struggles over the production, circulation, and consumption of illicit drugs from the early modern period to the present. Occasional.

WOH 4272 CAH-HIST 3(3,0)
Age of Atlantic Revolutions 1763-1826: PR: AMH 2022 or C.I. Compares origins, development, and outcomes of the American, French, Latin American, and Haitian Revolutions. Occasional.

WST 3015 CAH-WOM 3(3,0)

WST 3020 CAH-WOM 3(3,0)

WST 3051H CAH-WOM 3(3,0)

WST 3060 CAH-WOM 3(3,0)
Women, Race and Struggle: PR: ENC 1102 or C.I. Interdisciplinary study of issues, perspectives, and scholarship by and about women of color. WST 3060H.

WST 4240 WST 4240 3(3,0)
Women, Race and Struggle: PR: Consent of Honors. Interdisciplinary study of issues, perspectives, and scholarship by and about women of color. WST 4240H.

WST 3500 CAH-WOM 3(3,0)
Gender Issues and Community Activism: PR: WST 3015 or C.I. Feminist perspectives applied to current community issues. Interdisciplinary analysis through service learning and field research. Issues will be based upon community need. Occasional.

WST 3522 CAH-WOM 3(3,0)
First and Second Wave Feminisms: PR: ENC 1102. History of Western feminist thought, from the late eighteenth century to the 1980s, through texts by First and Second Wave Feminists. Occasional.

WST 3561 CAH-WOM 3(3,0)
Third Wave Feminisms: PR: WST 3015. Third wave feminist theories and practices with an activist focus. Even Spring.

WST 3603 CAH-WOM 3(3,0)
Introduction to Gender Studies: PR: ENC 1101. Historical and cultural foundations of gender, sexuality, and intersectional theories with attention to fluidity of identities and diversity of experiences. Even Fall.

WST 3610 CAH-WOM 3(3,0)
Gender and Technology: PR: ENC 1102 and Junior Standing. Examines the role of gender, race, class, and sexuality in the development, employment, and dissemination of technology in its various forms, including technologies of/around gender, such as domestic, sexual and reproductive, beauty, body, and body technologies. Occasional.

WST 3621 CAH-WOM 3(3,0)
Theories of Masculinity: PR: ENC 1102. Masculinity from feminist perspectives, examining issues of race, class, sexuality, and violence, as well as constructions of masculinity in sports, family, and other institutions. Occasional.
WST 4023 CAH-WOM 3(3,0)

WST 4312 CAH-WOM 3(3,0)
Representations in Motherhood: PR: ENC 1102 and Senior standing Students will engage with memoirs, historical accounts, social science studies, poetry and literary fiction to explore topics of motherhood in relation to personal experience, identity, public policy and agency. Occasional.

WST 4349 CAH-WOM 3(3,0)

WST 4415 CAH-WOM 3(3,0)

WST 5347 CAH-WOM 3(3,0)
Research in Women and Gender Studies: PR: Graduate standing or senior standing, or C.I. To explore feminist research methodologies and investigate relationships among feminist theory, research, social change, and gender equality as experienced at the workforce in private, public and non-profit spheres. Even Fall.

WST 5601 CAH-WOM 3(3,0)
Theories in Gender Studies: PR: Graduate standing, Gender Studies graduate certificate standing, or C.I. Foundational scholarship in gender studies, with emphasis on theoretical and interdisciplinary approaches to gender and sexuality. Even Fall.

WST 5619 CAH-WOM 3(3,0)
Applied Gender Studies: PR: Graduate standing or C.I. Emphasize practical applications of gender theories and research in private and public sectors (i.e., the workforce, government agencies, global contexts) to strengthen leadership skills and enable effective policy and planning. Even Fall.

WST 5937 CAH-WOM 3(3,0)
Global Women in Crisis: PR: Graduate standing or C.I. How crisis shapes women’s lives around the world using Feminist Theory from a global, multi-cultural perspective, and combined with global feminist activism. Occasional.

ZOO 3733C COM-BSBS 4(3,3)
Honors Human Anatomy: PR: BSC 2010C or equivalent. The study of Honors. Basic and functional anatomy in clinically oriented way to study systems within the human body. The lab component of this honors course provides enrichment and an opportunity to view cadaver specimens. W/ Honors Content. Spring. M&S fee $6.00

ZOO 3733C COM-BSBS 4(3,3)
Human Anatomy: PR: BSC 2010C or equivalent. Structure of the human body. Fall,Spring. M&S fee $6.00

ZOO 3736C COM-BSBS 4(3,2)
Exercise Physiology Anatomy: PR: BSC 2010C, C.I. Gross anatomy for exercise physiology majors. Fall,Spring. M&S fee $6.00

ZOO 3744H COM-BSBS 3(3,0)
Honors Neurobiology: PR: BSC 2010C and Honors Consent. Comprehensive discussion of cellular and molecular composition of the nervous system and functions of each cell type, electrical and chemical communication; including neuroanatomy, neurophysiology, neurochemistry, and nervous system development. Occasional.

ZOO 3755C COM-BSBS 4(3,1)
Introductory Histology: PR: PCB 3030C or ZOO 3733C or equivalent. Basic principles of tissue staining, techniques, microscopy, cellular structure and other basic concepts. An introduction to the formation and structure of the four basic human tissues: Epithelium, Connective, Muscle & Nervous. Familiarizes students with normal cells, tissues structure and ultrastructure imaging. Odd Fall,Odd Spring.

ZOO 4205C COS-BIOL 4(3,3)
Biological and Ecology of Metazoan Invertebrates: PR: A “C” (2.0) or better in all the following: BSC 2010C, BSC 2011C, and PCB 3044, or C.I. Anatomical, physiological, behavior, evolution, and historical accounts, social science studies, poetry and literary fiction to explore topics of motherhood in relation to personal experience, identity, public policy and agency. Occasional.

ZOO 4310C COS-BIOL 4(2,6)
Vertebrate Evolution & Ecology: PR: A “C” (2.0) or better in all the following: BSC 2010C, BSC 2011C, and PCB 3044, and PCB 3063, or C.I. Vertebrate evolution and ecology, based on the paleontological and ecological literature. The laboratory places heavy emphasis on classification/identification and field work. Occasional. M&S fee $65.00

ZOO 4462C COS-BIOL 4(2,4)

ZOO 4480 COS-BIOL 4(4,0)
Mammalogy: PR: A “C” (2.0) or better in both BSC 2010C and BSC 2011C, or C.I. Diversity and biology of mammals from an evolutionary perspective. Even Spring.

ZOO 4480L COS-BIOL 1(0,3)
Mammalogy Lab: CR: ZOO 4480. This lab will enhance topics covered in the lecture further exploring the anatomy and identification of mammals with hands-on experience. Fall.

ZOO 4513 COS-BIOL 3(3,0)
Animal Behavior: PR: A “C” (2.0) or better in PCB 3044. Study of the current ideas in animal behavior, including the mechanisms of behavior and evolutionary explanations. Odd Fall.

ZOO 4603C COS-BIOL 5(3,4)
Embryology/Development: PR: A “C” (2.0) or better in both PCB 3063 and PCB 3023, or PCB 3522, or C.I. Concepts of developmental processes. Emphasis on mechanisms underlying vertebrate development. Spring. M&S fee $22.00

ZOO 4605 COS-BIOL 3(3,0)

ZOO 4742 COS-BIOL 3(3,0)
Advanced Neurobiology: PR: ZOO 3744. Advanced topics in movement, vision, motivation, sex and gender, learning, behavior, sleep, language, attention, mental illness, development, learning, memory, degeneration, regeneration. Spring.

ZOO 4743C COS-BBBS 4(3,1)
Clinical Neuroanatomy and Neuroscience: PR: ZOO 3733C with a B (3.0) or better. Basic and applied neuroscience with attention to normal function and pathologic states of the nervous system relevant to practice of general medicine and/or neuroscience. Fall.

ZOO 4743C COS-BBBS 4(3,2)
Honors Clinical Neuroanatomy and Neuroscience: PR: ZOO 3733C and Honors consent. Basic and applied neurosciences with attention to normal function and pathologic states of the nervous system relevant to practice of general medicine and neuroscience. Occasional.

ZOO 4747C COS-BBBS 4(3,1)
Honors Clinical Neuroscience: PR: ZOO 3744 or ZOO 4743C and consent. Honors consent. Advanced oriented teachings of neuroscience areas including selected topics in neuropathology, neuro-oncology, neuromyelitis, neuropharmacology and neuropsychiatric with Honors content. Spring.

ZOO 4747C COS-BBBS 4(3,1)
Clinical Neuroscience: PR: ZOO 3744 or ZOO 4743C. Clinically oriented teachings in major neuroscience areas including selected topics in neuropathology, neuro-oncology, neuromyelitis, and neuropsychiatric. Fall.

ZOO 4753C COS-BBBS 4(3,3)
Vertebrate Histology: PR: ZOO 3733C. Microanatomical detail plus appropriate developmental and functional considerations of major cell types, primary tissues, organs, and organ systems. Survey of modern animal-tissue microtechnique. Spring. M&S fee $70.00

ZOO 4756 COS-BIOL 4(3,1)
Comparative Vertebrate Histology: PR: A minimum grade of “C” (2.0) in ZOO 3713 or similar course. A comparison of vertebrate anatomy at the tissue level and its evolutionary and phylogenetic significance. Fall.

ZOO 4910L COS-BIOL 3(0,3)
Research Experience in Animal Behavior in a Zoo Environment: PR: A minimum grade of a “B” (3.0) in ZOO 4513. An advanced course where students will be observing, documenting, and analyzing animal behavior in a zooological setting. Fall,Spring.

ZOO 5456C COS-BIOL 4(2,6)
Ichthyology: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Introduction to the biology of the fishes, their classification, evolution, and life histories. Even Fall.

ZOO 5463C COS-BIOL 4(2,4)
Herpetology: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Introduction to the biology of the amphibia and reptiles, their classification, evolution, and life histories. Odd Spring. M&S fee $65.00

ZOO 5475L COS-BIOL 3(0,6)
Field Ornithology: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, Certificate in Conservation Biology, PSM in Conservation Biology, or C.I. Introduction to the identification, taxonomy, natural history, and biology of birds, with emphasis on survey techniques and systematics. Odd Fall. M&S fee $30.00
ZOO 5486  COS-BIOL  4(4,0)
Mammalogy: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, PSM in Conservation Biology, or Certificate in Conservation Biology, or C.I. Study of the diversity and biology of mammals from an evolutionary perspective. Even Spring.

ZOO 5745C  COM-BSBS  4(3,3)
Essentials of Neuroanatomy: PR: Human/Comparative Anatomy, or Human/Animal Physiology or C.I. Fundamental concepts of both morphological and functional organization of the nervous system. Primary emphasis on human structure. Occasional. M&S fee $15.00

ZOO 5486  COS-BIOL  4(4,0)
Mammalogy: PR: Admission to the M.S. in Biology, Ph.D. in Conservation Biology, PSM in Conservation Biology, or Certificate in Conservation Biology, or C.I. Study of the diversity and biology of mammals from an evolutionary perspective. Even Spring.

ZOO 5748C  COM-BSBS  5(3,2)
Clinical Neuroanatomy: PR: ZOO 3733C Human Anatomy. Provides the necessary knowledge to understanding the complexities of human nervous system, its normal and pathologic functions, relevant to practice of general medicine and/or neuroscientists. Fall.

ZOO 5749C  COM-BSBS  5(3,2)
Clinical Neuroscience: PR: ZOO 3733C and ZOO 3744, or ZOO 3733C and ZOO 4743C or ZOO 5748C, or equivalents. Clinically oriented teachings of neuroscience areas including selected topics in neuropathology, neuro-oncology, neuroimmunology, neuropharmacology, and neurodiagnostics. Spring.

ZOO 5758C  COM-BSBS  4(3,3)
Vertebrate Histology: PR: Graduate standing and college-level Human Anatomy, Human Physiology or Introduction to Histology. Microanatomical detail plus appropriate developmental and functional considerations of major cell types, primary tissues, organs, and organ systems. Survey of modern animal-tissue microtechnique. Spring.