

USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

ACG 2021 Principles of Financial Accounting (3) BA ACC

Study of basic accounting principles including the recording and reporting of financial activity. The preparation and interpretation of financial statements.

ACG 2071 Principles of Managerial Accounting (3) BA ACC

PR: ACG 2021 with a grade of "C-" or better. A study of the accountant's role in assisting management in the planning and controlling of business activities.

ACG 3074 Managerial Accounting for Non-Business Majors (3) BA ACC

Does not count towards major or CPA requirements. Not available for credit for Business majors. The study of the uses of accounting data internally by managers in planning and controlling the affairs of organizations.

ACG 3103 Intermediate Financial Accounting I (3) BA ACC

PR: ACG 2021. Theory and methodology underlying financial reporting, including the FASB's conceptual framework, the accounting process, financial statements, accounting changes, present value applications, and current assets.

ACG 3113 Intermediate Financial Accounting II (3) BA ACC

PR: ACG 3103 with a grade of "C" or better (not C-). Continuation of ACG 3103. Topics covered include property, plant and equipment, intangibles, current liabilities, long-term debt, stockholders' equity, earnings per share computations, and investments.

ACG 3341 Cost Accounting and Control I (3) BA ACC

PR: ACG 2071 or ACG 3103. Deals with cost accounting systems for different entities, cost behavior patterns, cost-volume-profit analysis, relevant information for decision making, and budgets and standard costs for planning and control.

ACG 3401 Accounting Information Systems (3) BA ACC

PR: ACG 2021 and CGS 2100. Students who complete this course will not receive credit for ACG 4621. This course provides students with a basic understanding of well-controlled information systems in a variety of technological environments with added emphasis on the collection, processing, and reporting of accounting information.

ACG 4123 Intermediate Financial Accounting III (3) BA ACC

PR: ACG 3113 with a grade of "C" or better (not C-). Theory and practice underlying revenue recognition, income tax allocation, leases, post-retirement benefits, error analysis, statement of cash flows, full disclosure, and other current accounting topics.

ACG 4351 Cost Accounting And Control II (3) BA ACC

PR: ACG 3341 with a grade of "C" or better (not C-). Application of the material covered in ACG 3341 with specific emphasis on cost allocations, performance measurements, analysis of current cost accounting systems and accounting in today's environment (giving consideration to the influences of the international environment).

ACG 4632 Auditing I (3) BA ACC

PR: ACG 3113 and ACG 3401. This course provides a sound conceptual foundation of basic auditing process from the perspective of the public accounting profession. Professional standards, ethics, legal responsibilities, and the utilization of technology are addressed.

ACG 4642 Auditing II (3) BA ACC

PR: ACG 4632 with a grade of "C" or better (not C-). Further development of material covered in ACG 4632, with special emphasis on additional reporting topics and audit techniques not previously addressed.

ACG 4901 Independent Study (1-3) BA ACC

PR: Consent of Director. S/U only. Specialized independent study determined by the students' needs and interests.

ACG 4911 Independent Research (1-4) BA ACC

PR: Consent of Director. Individual study contract with instructor and director required. The research project will be mutually determined by the student and instructor.

ACG 4931 Selected Topics In Accounting (1-4) BA ACC

The course content will depend on student demand and instructor's interest.

ACG 5201 Advanced Financial Accounting IV (3) BA ACC

PR: ACG 4123 Accounting for business combinations, preparation of consolidated financial statements, home office/branch relationships, foreign operations and transactions, partnerships.

ACG 5501 Governmental/Not-For-Profit Accounting (3) BA ACC

PR: ACG 4123. CR: ACG 4632. Application of financial and managerial accounting, and auditing, principles and theory to both governmental and not-for-profit entities.

ACG 5675 Internal and Operational Auditing (3) BA ACC

PR: ACG 3113 and ACG 3401. CR: ACG 4632. The objective of Internal and Operational Auditing is to provide students with an opportunity to learn about the theory and practice of internal and operational auditing and to apply relevant audit principles and techniques to selected audit problems.

ADE 4384 Working With the Adult Learner (3) ED EDV

An investigation of the needs of the adult learner. Identification of principles of adult learning; physiological, psychological, and social characteristics of adult learners, and corresponding implications are explored.

ADV 3000 Introduction to Advertising (3) AS COM

PR: MMC 2100 and MMC 3602. A study of the structures, functions, and persuasive language of advertising in mass media with attention to social, political, economic, and legal aspects.

ADV 3101 Advertising Copywriting (3) AS COM

PR: ADV 3000 and ECO 1000. Study of laboratory experience in preparation of advertising copy for newspapers, magazines, radio, television, direct mail, outdoor displays, specialty items, and interactive electronic media.

ADV 3103 Radio-Television Advertising (3) AS COM

PR: ADV 3000. An intensive study and analysis of radio and television for advertising purposes, including copywriting, script and storyboard preparation, time buying and selling techniques, audience research methods, and basic production concepts.

ADV 3200 Advertising Design (3) AS COM

PR: ADV 3000 (for advertising sequence majors) or VIC 3001 (for other Mass Comm majors). Application of graphic design principles to various areas of advertising. Combining visual and verbal elements effectively.

ADV 3300 Advertising Media Strategy (3) AS COM

PR: ADV 3000 and ECO 1000. Problems, techniques, strategy of media research, planning, budgeting and effective utilization in advertising.

ADV 3501 Advertising Research (3) AS COM

PR: ADV 3000. Overview of scientific research methods as used in advertising. Emphasis on the acquisition, analysis, and evaluation of primary and secondary data, and the principles of survey and experimental research.

ADV 3700 Retail Advertising Planning and Execution (3) AS COM

PR: ADV 3000 and ADV 3101. A study of retail advertising, including management decisions, processes, procedures, media planning, production techniques, and problems affecting the development of advertising to fulfill retail objectives.

ADV 4600 Advertising Management (3) AS COM

PR: ADV 3000, ADV 3101, ADV 3300. Application of analytical planning concepts to advertising planning and decision-making. Case study method used to explore advertising and promotional programs; media and creative strategies; consumer, retail, industrial, and public service applications.

ADV 4800 Advertising Campaigns (3) AS COM

PR: ADV 3101, ADV 3300, ADV 3501, ECO 1000, and MAR 3023. Advanced advertising course requiring planning and production of complete general advertising campaign, including research, production methods, budgeting, and media schedules.

ADV 4940 Advertising Practicum (1) AS COM

PR: CI. For advertising sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.

AFA 2000 Introduction to the Black Experience [In Africa and Its Diaspora] 6A AF(3) AS AFA

Fundamental perspectives on the nature and significance of the Black Experience in Africa and black communities in the Americas.

AFA 4150 Africa and the United States 6A SS HP AF(3) AS INT

An examination of the historical and current political, economic, and cultural relations between the United States and Africa.

AFA 4313 Black English MW(3) AS AFA

PR: Junior or Senior standing. This course focuses on linguistic patterns among African Americans in the U.S., South and Central America, and the Caribbean. It examines language in relation to issues of domination, social stratification, economics and political empowerment.

AFA 4331 Social Institutions and the African American Community (3) AS AFA

A study of social institutions as they relate to the African American community, with emphasis on social systems operating within and on the African American community.

AFA 4333 The African Diaspora: Blacks in the Construction of the Americas MW(3) AS AFA

PR: Junior or Senior standing. This course will examine the historical and geographical distribution of Africans in the diaspora and the political economic roles they have played in the development of the Western world, with a focus on the Americans. The course takes an interdisciplinary approach. The course is not restricted to majors and is not repeatable for credit.

304 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

AFA 4335 Black Women in America 6A MW (3) AS AFA

An interdisciplinary survey of the contemporary experience of black women in America, including the African roots, myths, and realities surrounding that experience.

AFA 4350 African American Community Research MW (3) AS AFA

This interactive, field experience course introduces students to active and applied research methodologies and the uses of this research in Black urban communities.

AFA 4400 Middle Passage MW AF HP (3) AS AFA

The Middle Passage focuses on the trafficking of African peoples from Africa to destinations in the Americas and Europe. Emphasis is placed on the capture, detention, and transport of Africans, and their response to the experience.

AFA 4500 Slavery in the Americas and the Caribbean MW (3) AS AFA

This course examines the institution of enslavement in North, South, and Central America, and the Caribbean. It takes an interdisciplinary approach in exploring the social, political, and economic underpinnings of slavery.

AFA 4900 Directed Readings (1-3) AS AFA

PR: CI. Independent readings in a particular area of African and African American Studies, selected by student and instructor.

AFA 4931 Selected Topics in Africana Studies (3) AS AFA

Topics offered are selected to reflect student needs and faculty interests. In depth study in such areas as the Black Student and the American Educational Process; the Black Experience in the Americas; European Expansion in Africa to 19th century; Contemporary Economic Problems in Africa.

AFA 5935 Issues in Africana Studies (1-4) AS AFA

Variable topics course focusing on the history, culture, and lived experiences of Africans, African American, and/or other peoples of African descent worldwide. Rpt. Up to 12 hours as topics vary.

AFH 3100 African History to 1850 HP AF (3) AS HTY

An outline survey of pre-colonial African history including a prefatory introduction to the use of primary sources (such as archaeology, oral tradition, cultural anthropology, comparative linguistics, documents) in reconstructing the African past.

AFH 3200 African History since 1850 HP AF (3) AS HTY

Survey of the Colonial and post-colonial history of Africa. Emphasis on the impact of European and other alien influences on the continent, emergence of independent African states, and post-independence problems of nation building and economic development.

AFR 1101 The Air Force Today: Organization And Doctrine (1) US AFR

Introduction to the Air Force in the contemporary world through a study of its total force structure and mission.

AFR 1120 The Air Force Today: Structure And Roles (1) US AFR

A study of the strategic offensive and defensive forces, general purpose forces, and aerospace support forces that make up the Air Force of today.

AFR 2000 Enhanced Physical Fitness Training (0) US AFR

Required of all students in AFR 2000-, 3000-, and 4000-level classes. It meets once per week for 1 and 1/2 hours. Concentrates on motivational physical fitness, healthy lifestyle and cadet esprit.

AFR 2001 Air Force ROTC Leadership Laboratory (0) US AFR

Leadership Laboratory is required for each of the Aerospace Studies courses. It meets one hour and 45 minutes per week. Instruction is conducted within the framework of an organized cadet corps with a progression of experiences designed to develop each student's leadership potential. Leadership Laboratory involves a study of Air Force customs and courtesies; drill and ceremonies; career opportunities in the Air Force; and the life and work of an Air Force junior officer. Students develop their leadership potential in a practical laboratory, which typically includes field trips to Air Force installations.

AFR 2130 The Evolution of USAF Aerospace Power Part I (1) US AFR

CR: AFR 2000, AFR 2001. A study of air power from balloons and dirigibles through the jet age. Emphasis is on the employment of air power in WWI and WWII and how it affected the evolution of air power concepts and doctrine.

AFR 2140 The Evolution of USAF Aerospace Power Part 2 (1) US AFR

CR: AFR 2000, AFR 2001. A historical review of air power employment in military and nonmilitary operations in support of national objectives. Emphasis is on the period from post WWII to present.

AFR 3220 Air Force Leadership and Management - I (3) US AFR

CR: AFR 2000, AFR 2001. An integrated management course emphasizing the individual as a manager in an Air Force milieu.

The individual motivational and behavioral processes, leadership, communication, and group dynamics are covered to provide a foundation for the development of the junior officer's professional skills as an Air Force officer (officership). The basic managerial processes involving decision making, utilization of analytic aids in planning, organizing, and controlling in a changing environment are emphasized as necessary professional concepts.

AFR 3231 Air Force Leadership and Management - II (3) US AFR

CR: AFR 2000, AFR 2001. A continuation of the study of Air Force advancement and leadership. Concentration is on organizational and personal values, management of forces in change, organizational power, politics, and managerial strategy and tactics are discussed within the context of the military organization. Actual Air Force cases are used to enhance the learning and communication processes.

AFR 4201 National Security Affairs & Preparation for Active Duty Part 1 (3) US AFR

CR: AFR 2000, AFR 2001. A study of the Armed Forces as an integral element of society, with an emphasis on American civil-military relations and context in which U.S. defense policy is formulated and implemented. Special themes include: societal attitudes toward the military and the role of the professional military leader-manager in a democratic society.

AFR 4211 National Security Affairs & Preparation for Active Duty Part 2 (3) US AFR

CR: AFR 2000, AFR 2001. A continuation of the study of the Armed Forces in contemporary American society. Concentration is on the requisites for maintaining adequate national security forces; political, economic, and social constraints on the national defense structure; the impact of technological and international developments on strategic preparedness; the variables involved in the formulation and implementation of national security policy; and military justice and its relationship to civilian law.

AFS 2250 Culture and Society in Africa 6A AF (3) AS AFA

Topics include: African religion, value systems, art and the aesthetics, family and life-cycle, impact of Islam and Christianity and conflict of cultures.

AFS 3153 African Literature Survey 6A LW (3) AS AFA

PR: Junior or Senior standing. Explore the socio-historical, philosophical and political dynamics of African cultures through the study of African oral literature and the reading of African literary texts of various genres.

AFS 3251 Environmental - Cultural Study in Africa SS FA AF (3) AS AFA

PR: AFS 2250 or CI. Study tour. A study of traditional African society and culture, the relationship between life and the environment, and the impact of modernization on the culture and the environment.

AFS 4910 Individual Research (1-3) AS AFA

PR: CI, Department approval. 2000 level introductory course. Course consists of advanced undergraduate research on Africana Studies topic selected by student and professor. Topics vary. The course allows students to develop research skills and independent work discipline.

AMH 2010 American History I HP (3) AS HTY

A history of the United States with attention given to relevant developments in the Western Hemisphere from European origins to 1877.

AMH 2020 American History II HP (3) AS HTY

A history of the United States with attention given to relevant developments in the Western Hemisphere from 1877 to present.

AMH 3110 American Colonial History to 1750 (4) AS HTY

A study of the evolution of American society from the Age of Reconnaissance to 1750. Attention is given to the transformation from colonies to provinces with emphasis on ethnocultural conflict, religion, labor systems, and political culture.

AMH 3130 The American Revolutionary Era (4) AS HTY

Emphasis on the causes of the American revolution, the nature of Constitution-making, and the establishment of the federal system. Also examines the significance of loyalism, violence, and slavery in American society from 1750-1789.

AMH 3140 The Age of Jefferson (4) AS HTY

A comprehensive study of American society and political culture from 1789-1828. Focuses on demographic trends, party systems, expansionism, Indian policy, labor, and ethno-cultural conflicts.

AMH 3160 The Age of Jackson (4) AS HTY

The United States from 1828-1850, with emphasis on social and political conflict. Consideration of evangelicalism, reform, labor movements, urbanization, and political activity in the antebellum era.

AMH 3170 The Civil War and Reconstruction (4) AS HTY

- An examination of political, social, and economic climate of the 1850's that led to the American Civil War. The course does focus upon the war itself in its military, diplomatic, and political consequences through the end of the Reconstruction (1877).
- AMH 3201 The United States, 1877-1914 (4) AS HTY**
A study of America from the end of Reconstruction to World War I. Ranging over political, social, and international developments, the course covers industrialization, immigration, unions, reform, feminism, race relations and imperialism.
- AMH 3231 The United States, 1914-1945 (4) AS HTY**
The United States from World War I to the end of World War II. Covering political, social and international developments, the course examines the lives of Americans, including minorities and women, during war, prosperity, and the Great Depression.
- AMH 3270 The United States since 1945 (4) AS HTY**
A study of America's role in the Cold War, in Vietnam, and in the post-Cold War era. Also examines domestic developments, such as the consumer culture, protest movements, and abuses of political power.
- AMH 3403 The South since 1865 (4) AS HTY**
Southern history since the surrender at Appomattox. Topics covered include Reconstruction, the Populist revolt, race relations, demagoguery and disfranchisement, Southern women, and the Civil Rights Movement.
- AMH 3421 Early Florida (4) AS HTY**
A history of colonial Florida under the Spanish and English. Florida as an area of discovery, colonization, and imperial conflict; the emergence of Florida within the regional setting.
- AMH 3423 Modern Florida (4) AS HTY**
An historical survey of Florida from the territorial period to the modern era. An examination of the social, political, and economic changes occurring in Florida between 1821 and the 1980s.
- AMH 3500 American Labor History (4) AS HTY**
A study of American workers from the colonial period to the present. Examines the changing nature of work, its effects on workers (including minorities and women), and their responses as expressed in strikes, unions, and political action.
- AMH 3510 U.S. Diplomatic History to 1898 6A (4) AS HTY**
The development of American Foreign Relations in the Agricultural era.
- AMH 3511 U.S. Diplomatic History in the 20th Century (4) AS HTY**
A history of American Foreign Relations in the Industrial era.
- AMH 3530 Immigration History (4) AS HTY**
A study of the composition and character of the "American" people with emphasis on the period from 1840s to the 1920s. Examines old world backgrounds of immigrants and their responses to the new world's social, economic and political conditions.
- AMH 3540 United States Military History (4) AS HTY**
A study of American military policy and practices from colonial days to the present. Attention is given both to tactics and to strategy in the unfolding formulation and development of American armed might.
- AMH 3545 War and American Empire (4) AS HTY**
The U.S. evolved in 200 years from 13 colonies to the number one power in the world. To achieve this goal we utilized war to achieve empire. This course will examine the link between American War and empire from the Revolution through Viet Nam.
- AMH 3561 American Women I (4) AS HTY**
A study of women in the evolution of American society from European origins to 1877. Women's roles in the family, economy, politics, wars, and reform movements will be examined.
- AMH 3562 American Women II (4) AS HTY**
A study of women in the evolution of American society from 1877 to the present. Women's roles in the family, economy, politics, immigration, wars, religion and reform movements will be examined.
- AMH 3571 African American History to 1865 HP (3) AS AFA**
A survey of African American history, with an emphasis on North Americas to 1865. Topics include pre-colonial Africa, transatlantic slave trade, slavery, and the Civil War.
- AMH 3572 African American History since 1865 HP (3) AS AFA**
A survey of African American history, with an emphasis on North America, from 1865 to the present. Topics include reconstruction, World War I, World War II, and the Civil Right Movement.
- AML 3031 American Literature From the Beginnings to 1860 (3) AS ENG**
A study of representative works from the period of early settlement through American Romanticism, with emphasis on such writers as Cooper, Irving, Bryant, Hawthorne, Emerson, Melville, Thoreau, and Poe, among others.
- AML 3032 American Literature From 1860 to 1912 (3) AS ENG**
A study of representative works of selected American Realists and early Naturalists, among them Whitman, Dickinson, Twain, James, Howells, Crane, Dreiser, Wharton, Robinson, Dunbar, and Johnson.
- AML 3051 American Literature From 1912-1945 (3) AS ENG**
A study of poetry, drama, and fiction by such writers as Pound, Stein, Fitzgerald, Hemingway, Faulkner, Porter, Toomer, Cummings, Williams, Anderson, Steinbeck, Wright, West, Stevens, Henry Miller, and others.
- AML 3453 Historical Perspectives in Early American Literature HP (3) AS ENG**
Examines American literature from the Colonial Period to the Civil War as a manifestation of geographical, political, social, and intellectual forces. Will not be counted toward the English major.
- AML 3604 African American Literature 6A LW (3) AS ENG**
A study of African American literature from the nineteenth century to the present, including the works of such writers as W.E.B. Dubois, Jean Toomer, Langston Hughes, Richard Wright, Ralph Ellison, LeRoi Jones, and Nikki Giovanni.
- AML 4111 Nineteenth-Century American Novel (3) AS ENG**
A study of the American novel from its beginnings through 1900, including such novelists as Cooper, Hawthorne, Melville, James, Twain, Crane, and Dreiser, among others.
- AML 4121 Twentieth-Century American Novel (3) AS ENG**
A study of major trends and influences in American prose fiction from 1900 to the present. Includes works by such writers as Hemingway, London, Wharton, Fitzgerald, Faulkner, West, Mailer, Bellow, Ellison, Donleavy, Updike, Vonnegut, and others.
- AML 4261 Literature of the South (3) AS ENG**
A study of the major writers of the Southern Renaissance, including writers such as Faulkner, Wolfe, Caldwell, Hellman, McCullers, O'Connor, Warren, Styron, Tate, Davidson, and Dickey.
- AML 4303 Zora Neale Hurston: Major Works 6A MW LW (3) AS AFA PR: Junior or Senior standing.** The course focuses on the life, works, and times of Zora Neale Hurston as a major Harlem Renaissance figure and a renown Florida writer.
- AML 4330 Selected American Authors (3) AS ENG**
The study of two or three related major authors in American literature. The course may include such writers as Melville and Hawthorne, Hemingway and Faulkner, James and Twain, Pound and Eliot, Stevens and Lowell, etc. Specific topics will vary. May be taken twice for credit with different topics.
- AML 4624 Black Women Writers 6A LW (3) AS AFA**
Black women writers focuses on the literature of women of Africa and the African Diaspora. It examines the social, historical, artistic, political, economic, and spiritual lives of African women in context of a global community.
- AMS 2030 Introduction to American Studies SS HP (3) AS AMS**
An overview of American Studies, the interdisciplinary study of American culture. Analysis of the arts and literature, including music; social issues; popular culture; material culture; cultural diversity; and social change. These approaches will be applied to a specific cultural era.
- AMS 2201 Colonial American Culture HP (3) AS AMS**
An examination of cultural patterns in America as they developed between 1600 and 1780 with an emphasis on the texture of everyday life.
- AMS 2212 Nineteenth-century American Culture HP (3) AS AMS**
An examination of cultural patterns in America from 1776 to 1900 with an emphasis on the texture of everyday life.
- AMS 2270 Twentieth-century American Culture HP (3) AS AMS**
An examination of cultural patterns in America from 1900 to the present with emphasis on the texture of everyday life.
- AMS 2363 Issues in American Civilization (1-4) AS AMS**
An examination of selected topics such as natural environment and the quality of life, sports and American society, popular music, American communities, vigilante tradition, jazz music, role of the family, American success myth, youth in America. Topic varies.
- AMS 3001 American Culture 1880-1915 6A HP (4) AS AMS**
Integration of major aspects of American life between the 1880s and World War I.
- AMS 3210 Regions of America HP (4) AS AMS**
The pattern of American culture as revealed through an examination of selected writings and other pertinent materials dealing with selected American regions. Topic varies.
- AMS 3230 America During the 20s and 30s (4) AS AMS**
Selected interdisciplinary materials are used to examine the relationships among regionalism, nationalism and internationalism during the twenties and thirties. Emphasis is placed on the measure of cultural nationalism attained by the United States during this period.
- AMS 3260 American Culture, 1830-1860 6A HP (4) AS AMS**
Examines the patterns of American culture in the years leading up to the Civil War. Topics include religion and social reform, race

306 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- relations, and the impact of industrialization.
- AMS 3370 Southern Women: Myth and Reality 6A HP (3) AS AMS**
This course will identify the myths surrounding Southern Women, discern their sources and purposes, and contrast them with history.
- AMS 3601 Material Culture and American Society SSHP(3)AS AMS**
By means of slides, lectures and student projects, examines connections between artifacts and American cultural attitudes from 17th century to present. Topics include: architecture, furniture, gravestones, toys, and the material subcultures of women, African-Americans and communal societies.
- AMS 3700 Racism in American Society SS HP (3) AS AMS**
An introduction into the causes and effects of racism in American history, literature, art, the media, and folklore. Related concepts of ethnocentrism and class conflict will also be studied.
- AMS 3930 Selected Topics in American Studies (1-4) AS AMS**
Offerings include Cultural Darwinism in America, America Through Foreign Eyes, and The Female Hero in American Culture.
- AMS 4152 Film in American Culture (3) AS AMS**
Surveys the contributions to American culture of major films, studios, directors, stars, theaters, and controversies from the perspectives of genres and styles, critical methodologies and theories. Variable topics such as: series on a region, director, performer, subject, or period of time.
- AMS 4804 Major Ideas in America MW (3) AS AMS**
Investigates the role of one or more influential ideas in American culture, for example: individualism, identity, community, dissent, reform, utopianism, democracy. Emphasizes the critical analysis of a variety of primary texts. Topic varies.
- AMS 4910 Individual Research (1-4) AS AMS**
The content of the course will be governed by student demand and instructor interest. Instructor approval required prior to registration.
- AMS 4930 Selected Topics in American Studies (1-4) AS AMS**
PR: Senior in American Studies or CI. Offerings include the social implications of American painting, Technology in Twentieth Century America, American Environmental Problems, Popular Culture in America, American Military Experience, and Labor in America.
- AMS 4935 Senior Seminar in American Studies (4) AS AMS**
PR: Senior in American Studies or CI.
- AMS 4940 Internship in American Studies (1-2) AS AMS**
A structured, out-of-class learning experience designed to provide first-hand, practical training in careers related to American Studies. Restricted to American Studies majors. Repeatable up to 4 credit hours.
- ANG 5901 Directed Reading (1-4) AS ANT**
PR: DPR. S/U. Individual guidance in concentrated reading on a selected topic in Anthropology. Contract required prior to registration.
- ANG 5910 Individual Research (2-4) AS ANT**
PR: DPR. Contract required prior to registration. S/U. Individual guidance in selected research project.
- ANG 5937 Seminar In Anthropology (2-4) AS ANT**
PR: Senior or GS. Topics to be chosen by students and instructor.
- ANT 2000 Introduction to Anthropology SS AF(4) AS ANT**
The cross-cultural study of the human species in biological and social perspective. Surveys the four major branches of anthropology: physical anthropology (human biology), archaeology (the analysis of the prehistoric and historic remains of human cultures), anthropological linguistics (the analysis of language in its cultural context), and cultural anthropology (the cross-cultural study of peoples living in the world today, be they in tribal, peasant, or urban societies).
- ANT 2410 Cultural Anthropology SS AF(3) AS ANT**
PR: ANT 2000 or DPR. Discussion of major methods of and orientations to the cross-cultural study of the world's peoples. Representative case studies are used to demonstrate variations in human adaptations and to encourage an appreciation of diverse values and lifestyles.
- ANT 2511 Biological Anthropology NS (3) AS ANT**
PR: ANT 2000 or DPR. Non-human primates, the fossil record and the biology of races are surveyed in order to understand the human animal as a product of biosocial phenomena. Anatomy, genetics, culture and evolution are emphasized.
- ANT 3005 The Anthropological Perspective AF(3) AS ANT**
For non-anthropology majors only. May not be counted for credit toward an anthropology major. Presents the basic concepts of anthropology as they are relevant to contemporary life. Aims at enabling the student to understand the anthropologist's cross-cultural view of the human species as adapting through biosocial means to life on this planet.
- ANT 3101 Archaeology SS (3) AS ANT**
PR: ANT 2000 or DPR. The cross-cultural study of humankind from its beginnings up to and including the historic period through the recovery, description, and analysis of the remains of past cultures and societies.
- ANT 3610 Anthropological Linguistics SS (3) AS ANT**
PR: ANT 2000 or DPR. The comparative study of language in its cultural context, especially emphasizing the role of language in the cultural interpretation of physical and social reality.
- ANT 4034 Theories of Culture (3) AS ANT**
PR: DPR. Senior standing with major in anthropology or equivalent. The major concepts that form the anthropological view of humanity are viewed in historical perspective. Basic ideas of the western philosophical tradition are analyzed from the Greeks to the 19th century when they became incorporated into the new discipline of anthropology. 20th century anthropological developments on these themes are considered.
- ANT 4142 Old World Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. The archaeology of Europe, Asia and Africa, from the earliest humans through the emergence of state-level societies in many parts of the Old World. The course will focus on comparative aspects of economic, social, political, and religious organization in the prehistoric Near East, Egypt, China, the Aegean, Europe and Africa.
- ANT 4143 European Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. The archaeology of Europe, from the first Palaeolithic inhabitants to the fall of Roman civilization. The course will focus on ancient material culture while emphasizing social and economic questions such as the emergence of modern humans, the adoption of agriculture, the development of complex societies, and the rise of civilization.
- ANT 4147 Environmental Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. This course examines environmental constraints on ancient human societies, and how human activities have impacted the environment in the last several thousand years. Presentation of the methods used to reconstruct prehistoric environments will be followed by case studies from Florida, Central and South America, Easter Island, the Mediterranean and the Near East.
- ANT 4153 North American Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. An examination of the evidence regarding the human settlement of North America from its beginnings through the development of aboriginal culture to the period of European conquest. Emphasis on the comparative study of material culture at selected sites from all time periods. No field work is involved.
- ANT 4158 Florida Archaeology (4) AS ANT**
PR: ANT 3101, DPR. Culture history and culture process over 10,000 years from the time of the first people in Florida (Paleo-Indians) through the elaborate Weeden Island and Safety Harbor burial and temple mound cultures to the Spanish entrada and consequences of European conquest. Review of temporal and spatial relationships within the entire eastern U.S. and elsewhere. May be part of a summer (or other semester) field school, combined with Field Methods in Archaeology and Laboratory Methods in Archaeology.
- ANT 4163 Mesoamerican Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. The chronological sequence from its beginnings through Protohistoric development is described and analyzed. Cultures such as the Maya, Aztec, Mixtec, Zapotec, Olmec, and Toltec are included, with emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.
- ANT 4165 South American Archaeology (3) AS ANT**
PR: ANT 3101 or DPR. Describes and analyzes the sequence of cultural development in prehistoric South America. Cultures such as the Inca, Chavin, Mochica, Wari, Chimu are included. Emphasis on the environmental setting and the relationship between cultural ecology and the growth of civilization.
- ANT 4172 Historical Archaeology 6A (3) AS ANT**
PR: ANT 3101 or DPR. A survey and analysis of archaeology focused on the historic period. Laboratory research with data recovered from historic sites in addition to classwork.
- ANT 4180 Laboratory Methods in Archaeology (2-4) AS ANT**
PR: ANT 3101, DPR. Data and materials recovered from archaeological survey and excavation are processed in the laboratory; includes artifact cleaning, cataloguing, identification, and analysis; soil flotation; reconstruction and conservation of artifacts, mapmaking, etc. May be offered as part of a summer (or other semester) field session. May be combined with Florida Archaeology and Field Methods in Archaeology.
- ANT 4181 Museum Methods (4) AS ANT**
PR: ANT 3101 and DPR. Design, preparation and installation of exhibits in the Department of Anthropology Teaching Exhibit Gallery. Emphasis on theory, research, design, and construction. Discussion of museum-related issues such as administration and

- curation.
- ANT 4183C Archaeological Science (4) AS ANT**
 PR: ANT 3101 or DPR. This course focuses on the application of scientific methods of analysis to archaeological materials including bone, stone, pottery, and metal. Methods include absolute dating, remote sensing, optical and SEM microscopy, elemental and isotope analysis. Laboratory sections provide hands-on experience with a variety of archaeological materials and analytical methods.
- ANT 4195 Fantastic Archaeology MW (3) AS ANT**
 PR: Junior standing or above. Mysteries including the Lost Continent of Atlantis, Ancient Astronauts, Piltdown Man, Psychic Archaeology, Noah's Ark, and the Shroud of Turin will be examined, while emphasizing skills in critical thinking that have much wider practical applications.
- ANT 4231 Folklore 6A (3) AS ANT**
 PR: ANT 2410 or DPR. Focuses on cross-cultural methods and techniques regarding the collection, classification, and analysis of such materials as myths, jokes, games, and items of material culture. African (or African-derived), Oceanic and Native American societies are surveyed.
- ANT 4241 Magic and Religion 6A MW (3) AS ANT**
 PR: ANT 2410 or DPR. The cross-cultural study of the social and cultural aspects of religion. Religious activities in traditional and modern societies will be discussed. Ritual behavior, religious practitioners and symbols of belief will be considered in light of their impact on the social, political or economic aspects of peoples' lives.
- ANT 4285 Oral History (3) AS ANT**
 PR: ANT 2410 or DPR. A survey of the history, methods, and current applications of oral history research, primarily in the anthropological study of culture, but with reference to allied disciplines. Students will become familiar with oral history through intensive analysis of selected case studies as well as guided field projects.
- ANT 4302 Gender in Cross-Cultural Perspective MW (3) AS ANT**
 PR: ANT 2410 or DPR. Focuses on various theories, models and beliefs about male-female behaviors and interactions in human cultures throughout history and in various societies in the world today.
- ANT 4312 North American Indians (3) AS ANT**
 PR: ANT 2410 or DPR. An examination of the evidence for the origin and antiquity of human beings in North America and of patterns of regional development until the period of contact with European colonists. Emphasis on varieties of ecological adaptation, social, political and religious systems, enculturation and worldview, folklore and visual art.
- ANT 4316 Ethnic Diversity in the United States MW (3) AS ANT**
 PR: ANT 2410 or DPR. Special concerns include ethnic diversity in American society, historical and contemporary diversity in values, experiences, and lifestyles, and an examination of policies and problems affecting ethnic groups in the United States.
- ANT 4323 Mexico and Central America (3) AS ANT**
 PR: ANT 2410 or DPR. Focuses on the history, contemporary values and interpersonal relationships, and patterns of rural and urban life in Mesoamerica. Guatemala and Mexico are emphasized.
- ANT 4340 The Caribbean 6A MW (3) AS ANT**
 PR: ANT 2410 or DPR. Main themes include: the depopulation of the aboriginal population and the resettlement of the area via slavery, indenture, and migration; contemporary ethnic heterogeneity; economic problems of Third World microstates; development of a modern social and political consciousness. Religious diversity, music, the graphic arts, and the literature of the contemporary Caribbean will also be surveyed.
- ANT 4390 Visual Anthropology (3) AS ANT**
 PR: ANT 2410 or DPR. The use of photographic techniques for the crosscultural recording and analysis of human activities. The study of ethnographic photography as both art and science, and the production of an anthropological study that expresses the goal of "visual literacy." Review and evaluation of the uses of visual techniques and the evidence they provide to the social scientist.
- ANT 4401 Exploring Cross-Cultural Diversity MW (3) AS ANT**
 For non-Anthropology majors only. This course will introduce students to anthropological perspectives which are useful in understanding the implications of cultural diversity related to changing demographic patterns within our country as well as to increasing globalization.
- ANT 4432 The Individual and Culture 6A MW (3) AS ANT**
 PR: ANT 2410 or DPR. The relationship between the individual and society is studied cross-culturally. Main themes include child-rearing practices, psychosomatic illness and curing. Discussion of theories and models of personality development with special reference to their applicability to the emerging field of cross-cultural mental health planning.
- ANT 4442 Urban Life and Culture (3) AS ANT**
 PR: ANT 2410 or DPR. The cross-cultural study of urbanization, urbanism and human problems associated with metropolitan environments. Emphasis on the ethnography of city life and its relationship to the practical applications of urban research.
- ANT 4462 Health, Illness, and Culture (3) AS ANT**
 PR: ANT 2410 or DPR. The study of health and human behavior in cross-cultural perspective. Main themes include: the impact of disease on the development of human culture; comparative studies of curing practices; medical systems in their relationship to ideology. Emphasis on understanding the role of medicine, and the behavior of both practitioners and patients in modern societies.
- ANT 4495 Methods in Cultural Research (3) AS ANT**
 PR: DPR. The stages in the development and execution of ethnological research are discussed and practiced. Literature search, hypothesis formation, selection of data collection techniques, elicitation of information, data analysis, and report presentation are stressed. Research design models from the case literature are studied and supervised research in the local community is designed and carried out.
- ANT 4520 Forensic Anthropology (3) AS ANT**
 PR: ANT 2511 or DPR. A detailed overview of forensic anthropology, skeletal variation, techniques of determining sex, age, population affiliation, aspects of osteological individuality and identification, methods of osteological analysis. Open to majors/minors only.
- ANT 4586 Prehistoric Human Evolution NS (3) AS ANT**
 PR: ANT 2511 or DPR. A survey of the fossil record from the early primates through the ascent of Homo sapiens sapiens, focusing on the human lineage. Biosocial patterns and cultures of the past are also covered.
- ANT 4587 Human Variation (3) AS ANT**
 PR: ANT 2511 or DPR. An overview of evolution and biological variations of human races. Anatomical, morphological, and physiological patterns are surveyed geographically. Cultural influences on racial biology are explored.
- ANT 4620 Language and Culture 6A (3) AS ANT**
 PR: ANT 3610 or DPR. Examines the relationships between language and culture in cross-cultural perspective. Explores the extent to which languages shape the world views of their speakers. Emphasis on the nature and degree of fit between linguistics and other cultural systems of knowledge.
- ANT 4701 Applied Anthropology (3) AS ANT**
 PR: ANT 2410 or DPR. A review of approaches applying the anthropological perspective to contemporary human problems. Particular emphasis placed on public policy issues in United States society. Discussion of the historical development of applied anthropology, problems of economic development of the Third World, and the ethics of applied research and intervention.
- ANT 4750 Language and Social Interaction 6A (3) AS ANT**
 PR: ANT 3610 or DPR. Examines the role of language and other modes of communication in the social settings of speech communities. Student field projects focus on the cross-cultural description and analysis of patterns of communication in ethnographic contexts.
- ANT 4824 Archaeological Field Methods (4-12) AS ANT**
 PR: ANT 3101, DPR. Offered as all or part of a summer (or other semester) field session. May or may not be combined with Florida Archaeology and Laboratory Methods in Archaeology. Students learn appropriate methods of archaeological survey, excavation, data and materials recovery, recording, and processing.
- ANT 4901 Directed Reading (1-4) AS ANT**
 PR: DPR. S/U only. Individual guidance in concentrated reading on a selected topic in anthropology. Contract required prior to registration.
- ANT 4905 Individual Research (2-4) AS ANT**
 PR: DPR. S/U only. Individual guidance in a selected research project. Contract required prior to registration.
- ANT 4930 Special Topics in Anthropology (3) AS ANT**
 PR: DPR. Topics to be chosen by students and instructor permitting newly developing interdisciplinary special interests to be explored.
- ANT 4932 Honors Seminar (4) AS ANT**
 PR: Admission to the honors program in anthropology and DPR. Seminar designed to provide the honors student with an opportunity to present, discuss and defend his/her own research and to explore in-depth topics in several areas of anthropology.
- ANT 4935 Rethinking Anthropology 6A (3) AS ANT**
 PR: Senior standing with major in anthropology. Through discussion of readings and student papers, students rethink and reevaluate anthropology as a discipline and the integration of its branches and specialty fields. Students develop and articulate their current images of anthropology.

ANT 4970 Honors Thesis (3) AS ANT

PR: Admission to the honors program, completion of the honors seminar and DPR. S/U only. The student under the supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in anthropology.

ARA 1120 Modern Arabic I (4) AS WLE

CR: ARA 1120L. An intensive study of basic skills: pronunciation, listening comprehension, speaking and some composition.

ARA 1120L Modern Arabic I Laboratory (1) AS WLE

CR: ARA 1120. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously.

ARA 1121 Modern Arabic II (4) AS WLE

PR: ARA 1120 or its equivalent. CR: ARA 1120L. A continuation of ARA 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.

ARA 1121L Modern Arabic II Laboratory (1) AS WLE

CR: ARA 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.

ARA 2200 Modern Arabic III (4) AS WLE

PR: ARA 1121 or the equivalent. For language students who intend to attain basic proficiency.

ARA 2201 Modern Arabic IV (4) AS WLE

PR: ARA 2200 or the equivalent. Continuation of ARA 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.

ARA 4905 Directed Study (1-5) AS WLE

Departmental approval required. S/U only. Permits study options in Arabic not available in regularly scheduled curriculum at departmental discretion.

ARA 4930 Selected Topics (1-5) AS WLE

Departmental approval required. Course permits classes in Arabic not available in the regularly scheduled curriculum at departmental discretion.

ARC 2001 Introduction to Architecture HP FA (3) AR ARC

An introduction to the analysis and interpretation of the architecture and urban design of various cultures.

ARC 2131 Introduction to Architectural Design and Graphics FA (4) AR ARC

An introduction to fundamental "critical thinking" and graphic communication skills in architecture.

ARC 4784 The City 6A MW (3) AR ARC

This course examines the history of the city, as both idea and reality, with a particular focus on Western cities, and the 20th century. The course is open to undergraduates and students in the Graduate Architecture Program.

ARC 4931 Selected Topics in Architecture and Community Design (2-4) AR ARC

Variable topics will be offered for pre-professional studies for students in the Liberal Studies Major/ALA Degree Program and as electives for other undergraduates.

ARC 5175 Computer Technology (3) AR ARC

PR: CC. Introduction to the application of computer technology in current architectural practice. The exploration of available software, programs, and computer services for word processing, information handling, specification writing, feasibility analysis, cost estimating, economic performance and life cycle cost analysis, project management (network programming and analysis), computer graphics, computer aided design and drafting.

ARC 5216 The Building Arts (3) AR ARC

PR: CC. Introduction to the man-made environment. The study and profession of architecture. The various facets of the process of shaping the built environment as it manifests itself in the different roles and specialization of the experts involved the process, and in the various academic courses that prepare the architect for practice.

ARC 5256 Design Theory (3) AR ARC

PR: DPR. Survey of major schools of thought in design theory, methods of design and problem-solving, and design research. The nature of the design activity and its recurring difficulties. The nature and different types of problems. Traditional approaches to problem-solving and design in architecture; recent systematic as well as intuitive approaches to problem-solving based on developments in other fields. Scientific method; the systems approach and design.

ARC 5361 Core Design I (9) AR ARC

PR: CC. First of two semester Design Fundamentals/Design Graphics sequence focusing on design abstractions and analysis of the factors influencing conceptual design. Emphasis is placed

on ordering principles, pattern recognition and utilization, and figure-ground relationships. Development of craftsmanship, drawing as a means to design, and perceptual acuity are stressed.

ARC 5362 Core Design II (9) AR ARC

PR: ARC 5361, CC. Second of a two semester Design Fundamentals/Design Graphics sequence focusing on synthesis of design concepts and application of ordering principles in architectural design. Emphasis is placed on developing an understanding and awareness of architectural elements and compositions. Students examine the work of significant architects and use it as a basis for design exploration. Graphic documentation, diagramming, and model studies are stressed.

ARC 5363 Core Design III (6) AR ARC

PR: ARC 5362, ARC 5467, ARC 5587, ARC 5731. CO: ARC 5689. Study of the various phases of the building delivery and design process, and of different approaches to ordering that process in a systematic fashion. The student will use one such systematic approach in the investigation and development of design solutions for a project of moderate scale and complexity. Studies of built form ordering principles, mass/void relationships, scale and proportion, color, texture, contextual relationships, meaning/imagery, and building technology (awareness of structural organization, services networks, construction processes and materials). Aspects of human behavior as design determinants.

ARC 5467 Materials and Methods of Construction (4) AR ARC

PR: ARC 5470, CC. Overview of properties of primary materials and construction systems which comprise building structure and enclosure. Emphasis on interface and connection of elements and assemblies, relative to climate, assembly processes, costs, codes, and craftsmanship. Lab sessions include field trips to manufacturing facilities, construction sites, and preparation of drawings and models of assemblies.

ARC 5470 Introduction to Technology (3) AR ARC

Introduction to architectural technology, including structures, materials and methods of construction, and environmental controls. Overview of building systems and components and their integration into architectural design projects.

ARC 5587 Structures I (3) AR ARC

PR: Calculus, Physics, and ARC 5470, CC. Review of static and mechanical principles of materials. Analysis and evaluation for appropriate selection of structural systems and elements. Analysis and design of timber and steel structures, based on moment, shear, and deflection. Fundamentals of wind and seismic design as they apply to wood and steel construction. Truss analysis, beam and column behavior.

ARC 5588 Structures II (3) AR ARC

PR: ARC 5587, CC. Introduction to the concepts and theories of structural analysis and design of reinforced concrete systems and elements, including practical application in building construction. Prestressing, post-tensioning, hybrid assemblies. Fundamentals of wind and seismic design. Formwork, placement, and assembly techniques.

ARC 5689 Environmental Technology (4) AR ARC

PR: Physics, ARC 5470, CC. Comprehensive review of mechanical, electrical, and plumbing systems for buildings. Energy utilization, heating and cooling, water delivery and waste removal, fire protection, illumination, transportation systems, and acoustics. Lab exercises include computer simulations, illumination studies, thermal performance studies.

ARC 5731 Architectural History I (3) AR ARC

Overview of the built environment from prehistory through the Middle Ages. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological and economic context. Varieties of methodological approaches to the analysis of historical architecture. The focus will be on the built environment of Europe and the Mediterranean basin.

ARC 5732 Architectural History II (3) AR ARC

Overview of the built environment from the Renaissance to the present. Buildings and cities in their geographical, topographical, political, aesthetic, social, technological, and economic context. Study of various methodological approaches to the analysis of historic architecture, and development of student's own approach. Emphasis will be on the built environment of Europe and America.

ARC 5789 Modern Architecture History (3) AR ARC

PR: CC, CI. Exploration of the philosophic, economic, aesthetic, social, historical and moral imperatives used by modern architects and historians in their attempt to design the appropriate physical environment for a new social order. The course will investigate the writings and works of the proponents of the modern style of architecture and study the "New Architecture" as defined by those who broke tradition and expressed the new era using modern construction materials and techniques.

- ARC 5793 History Abroad (3) AR ARC**
PR: CC. Summer study abroad. Location and description varies from year to year.
- ARC 5920 Architectural Design Studio Abroad (5) AR ARC**
PR: CC. Summer study abroad. Location and description varies from year to year.
- ARC 5931 Special Studies in Architecture (1-5) AR ARC**
PR: CC. Variable titles offered on topics of special interest.
- ARE 3044 Experiential Basis of Artistic Mind (3) VP ART**
Designed to awaken the language of image and metaphor, with emphasis on the internal and expressive aspects of art as well as their application in the schools and the community.
- ARE 3354 Art Teaching Strategies I (3) VP ART**
PR: ARE 3044. A combination of theory, philosophy and practice in both public and private learning centers to provide the student with a variety of teaching concepts and media exploration in art education and to further enable the student to understand stages of young people, three to eighteen.
- ARE 4313 Art For the Child and You (2) VP ART**
Art and the intellectual, creative, emotional, and aesthetic growth of children.
- ARE 4440 Art Teaching Strategies II (3) VP ART**
Media and the learning process will be explored through photographic arts, cinematography and video systems. Teaching strategies and media criticism for application at elementary and secondary levels.
- ARE 4443 Crafts Workshop in Art Education (3) VP ART**
PR: ARE 3044. The study and practice of processes and media involved with the exploration and expression of cultural traditions and individual ideas through crafts.
- ARE 4642 Community Arts (3) VP ART**
PR: ARE 3044. Explores the arts as infrastructure through identification, Exploration and experimentation of/with unique community spaces, populations and new environments for and learning in the arts.
- ARE 4909 Directed Study: Art Education (1-3) VP ART**
PR: Senior standing. Directed study contract required. Designed to extend teaching competencies in the field of art education.
- ARE 4936 Senior Seminar in Art Education (2) VP ART**
PR: Senior standing. CR: ARE 4940. Synthesis of teacher candidate's courses in complete college program.
- ARE 4940 Internship: Art Education (1-12) VP ART**
CR: ARE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.
- ARH 2050 History of Visual Arts I HP FA (3) VP ART**
PR: DPR. A survey of World Art to AD 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.
- ARH 2051 History of Visual Arts II HP FA (3) VP ART**
PR: DPR. A survey of World Art since 1300. Students are introduced to problems of analyzing and interpreting the art of various cultures without making the Western perspective a privileged one. Open to non-majors.
- ARH 3001 Introduction To Art HP FA (4) VP ART**
An expanded introductory treatment of basic concepts. For non-art majors.
- ARH 3475C Contemporary Issues in Art HP FA MW (4) VP ART**
PR: DPR. Focuses upon the productions, themes and processes of artists working in the present time. This course will investigate the relationship of materials and media used by contemporary artists to the subject and content of artists' productions/products as well as conceptual processes.
- ARH 4115 Ancient Egyptian and Near Eastern Art (4) VP ART**
PR: ARH 2050 recommended but not required. A study of the art and cultures of ancient Egypt and the Near East, from the prehistoric period through the conquests of Alexander the Great.
- ARH 4130 Greek Art (4) VP ART**
PR: ARH 2050 or EUH 2011 recommended but not required. A comprehensive study of ancient Greek sculpture, painting, architecture, and other artistic media from the Bronze Age through the Hellenistic period.
- ARH 4151 Roman Art (4) VP ART**
PR: ARH 2050 or EUH 2011 recommended but not required. A comprehensive study of ancient Roman sculpture, painting, architecture, and other artistic media from the founding of Rome through the reign of Constantine.
- ARH 4200 Medieval Art (4) VP ART**
PR: DPR. A comprehensive study of early Christian, Byzantine and Medieval painting, sculpture, architecture and manuscript illumination.
- ARH 4301 Renaissance Art (4) VP ART**
PR: DPR. A comprehensive study of Renaissance and Mannerist painting, sculpture and architecture in Italy and Northern Europe.
- ARH 4318 Venetian Art (4) VP ART**
PR: DPR. Major monuments of Venetian art are examined to elucidate the importance of Venice as the crossroads of cultural exchange between Islam, Byzantium, and the West, and the importance of Venetian art to the history of art and art criticism.
- ARH 4350 Baroque and Rococo Art (4) VP ART**
PR: DPR. A comprehensive study of the painting, sculpture and architecture in France, Italy, Spain and the Netherlands in the seventeenth and early eighteenth centuries.
- ARH 4430 Nineteenth Century Art (4) VP ART**
PR: DPR. A comprehensive study of nineteenth century painting, sculpture and architecture in America and Europe. Gender/multicultural issues and methodologies in 19th century art are emphasized.
- ARH 4450 Twentieth Century Art (4) VP ART**
PR: DPR. A comprehensive study of painting, sculpture and architecture from Cezanne to the present in Europe and the United States. Required of all art majors.
- ARH 4455 Modern Political Iconography MW (4) VP ART**
PR: DPR. The course explores art in which political themes are considered to be the source and determinant of aesthetic decisions. The dominant iconographic theme is the iconography of revolution, rebellion, and other forms of political struggle in 20th Century art and film.
- ARH 4520 African Art (4) VP ART**
PR: DPR. A combination of survey, comparative study and in-depth analysis of African sculpture, mainly from West and Central Africa. Emphasis on diversity of forms and contexts, functions, symbolism and meanings.
- ARH 4547 Buddhist Art (4) VP ART**
PR: DPR. This course examines one important aspect of Asian artistic production. Buddhist Art begins in India and travels via the Himalayas and Southeast Asia to East Asia, touching on artistic expression of major principles and practices, changes in art as the religion comes in contact with pre-existing cultures, and modern artistic practice.
- ARH 4557 Chinese Art (4) VP ART**
PR: DPR. Chinese Art proceeds chronologically, from the Neolithic era up to the contemporary art world. The course considers cultural, linguistic, technical, philosophic, political and religious influences on the art works produced by this ancient society.
- ARH 4710 History of Photography 6A MW (4) VP ART**
PR: DPR. Comprehensive overview of the history of photography from its inception to the present day with an emphasis on the relationship of photography to the visual arts and popular culture.
- ARH 4721C History of Printmaking 6A (3) VP ART**
The history of Western printmaking from the Middle Ages to contemporary times, with an emphasis on artmaking technology and research, cultural perspectives and theoretical/critical analytical capabilities. The course is open to majors and non-majors. It is not repeatable for credit.
- ARH 4724 History of Graphic Design 6A (4) VP ART**
This course surveys the design profession and the graphic design discipline. Students will explore graphic styles from the turn of the century to contemporary works, highlighting the innovations of influential designers throughout history.
- ARH 4790 Selected Topics In The History of Film (4) VP ART**
In-depth investigation of a selected period, development, or school in the history of film as art.
- ARH 4792 Critical Studies In Art History 6A (4) VP ART**
PR: DPR. Specialized intensive studies in art history. Specific subject matter varies. To be announced at each course offering.
- ARH 4890 Paris Art History (4) VP ART**
PR: Minimum 8 hours of art history at the undergraduate level or equivalent. Cl. This course will explore issues central to the history and criticism of art through the rich visual culture of Paris. Themes will include art and national identity, orientalism, the avant-garde and the role of the museum in the evolution of modern art.
- ARH 4930 Art History: Selected Topics (2-4) VP ART**
Lecture/discussion course designed to offer areas of expertise of visiting scholars or specific interests of resident faculty.
- ARH 4937 Seminar In The History Of Art History (4) VP ART**
PR: Four courses in Art History at the 4000 level, DPR. An examination of the origins of Art History as a discipline and

- changing nature of Art History from Vasari to the present.
- ARH 5451 Cultural and Intellectual History of Modern Art (4) VP ART**
PR: CI. A course in which theories of modern artists and of critics and historians of Modernism are treated as a part of general cultural and intellectual history.
- ARH 5795 Methods of Art History (4) VP ART**
Must be taken during the student's first two semesters in the M.A. program This course introduces students to various methods which art historians have used to analyze the form and content of individual works of art, and to various modes of historical explanation.
- ARH 5797 Gallery and Museum Internship (2-6) VP ART**
Students are eligible after completing one semester in the program. S/U only. Registration by contract only. By working in Bay Area museums or galleries, students will become familiar with various museological operations. Internships vary owing to the work at hand in particular museums, but possible areas of work include registration, installation, conversation, writing of grants, or museum education.
- ARH 5833 The Atelier, Its Management and History (3) VP ART**
This class will consider the history of printmaking and other forms of collaborative art production through the prism of the atelier and its management.
- ARH 5835 Collection and Exhibition Management (3) VP ART**
PR: Art Advisor's Approval This class will introduce students to the basic principles of collections care and management and to the intellectual and practical tasks of preparing an exhibition. Sessions will include art handling, registration and condition reporting, preparing works of art for transit, environmental standards for collections storage and exhibition, and the professional responsibilities of the curator.
- ARH 5839 Problems in Museum Studies (3) VP ART**
PR: Art Advisor's Approval This class is designed as both an academic and theoretical course to introduce students to the museum profession and develop critical thinking skills required to solve problems in the rapidly changing typography of museums. Students will develop managerial and administrative skills as they meet with and discuss the job descriptions of curators, educators, collection managers, marketing professionals, exhibit designers, registrars, and fundraisers.
- ART 2201C Fabrications I FA (3) VP ART**
An introduction to basic visual art studio concepts. Topics include the nature of art, the visual language of its form, modes of representation, and visual art theory. Studio problems supplemented by lecture and discussion. Emphasis on images of implied time and space.
- ART 2203C Fabrications II FA (3) VP ART**
PR: ART 2201C (for majors). No prerequisites for non-majors. This course will synthesize and expand on the groundwork laid in Fabrications I, which is pre-requisite for majors, but not for non-majors. Fabrications II will focus on the significance of meaning and how it is constructed visually by researching 3 phases; I - the personal in images, We - images of cultural ideas, and They - images produced through collaboration.
- ART 2301C Beginning Drawing (3) VP ART**
Projects exploring the methods, media, and concepts of drawing.
- ART 2400C Beginning Printmaking (3) VP ART**
PR: ART 2201C, ART 2203C, ART 2301C, ARH 2050 or ARH 2051 This course is designed as an introduction to the medium of printmaking. It concentrates on the technical production of various print media including: intaglio, relief, monoprint and serigraphy (screen printing).
- ART 2500C Beginning Painting (3) VP ART**
PR: ART 2201C, ART 2203C, ART 2301C, ARH 2050 or ARH 2051 Projects in painting with emphasis on the exploration of methods and media and the development of individual concepts.
- ART 2701C Beginning Sculpture (3) VP ART**
PR: ART 2201C, ART 2203C, ART 2301C, ARH 2050 or ARH 2051 Projects in sculpture with emphasis on contemporary theory and issues, the development of individual concepts and the exploration of materials, tools and processes.
- ART 2750C Beginning Ceramics (3) VP ART**
PR: ART 2201C, ART 2203C, ART 2301C, ARH 2050 or ARH 2051 An introduction to the use of ceramic materials as a means of self expression and critical exploration.
- ART 2930 Selected Topics in Art (2-4) VP ART**
The content of this course will be determined by student demand and instructor interest. Open University offerings under this number may not be counted for degree credit for art majors.
- ART 3222C Intermediate Electronic Media (3) VP ART**
PR: Respective beginning level course. Majors only. An intermediate exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an interdisciplinary approach to electronic media while developing individual creative growth. Repeatable up to 15 hours.
- ART 3310C Intermediate Drawing (3) VP ART**
PR: Respective beginning level course. An extension of the skills and concepts introduced in Beginning Drawing with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. Repeatable up to 15 hours.
- ART 3380 Selected Topics in Drawing (3) VP ART**
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C Selected Topics in Drawing is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.
- ART 3401C Intermediate Printmaking (3) VP ART**
PR: Respective beginning level course. This course concentrates on developing intermediate skills in printmaking with particular emphasis on conceptual topics The course is intended for majors. Repeatable up to 15 hours.
- ART 3460 Selected Topics in Printmaking (3) VP ART**
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2400C, ART 3401C Selected Topics in Printmaking is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.
- ART 3465 Digital Printmaking (4) VP ART**
PR: ART 2301C. Investigation of Printmaking Media including: monoprinting, collograph, relief printing and the dimensional print with emphasis on the development of individual concepts.
- ART 3530C Intermediate Painting (3) VP ART**
PR: Respective beginning level course. An extension of the skills and concepts introduced in Beginning Painting with an emphasis on individual experimentation and the development of advanced critical and technical skills in the discipline. Repeatable up to 15 hours.
- ART 3560 Selected Topics in Painting (3) VP ART**
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2500C, ART 3530C Selected Topics in Painting is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.
- ART 3610 Beginning Electronic Media (3) VP ART**
PR: ART 2201C, ART 2203C, ART 2301C, ARH 2050 or ARH 2051 An Introductory exploration of the issues and practices involved in the creation of experimental computer art. The course focuses on an interdisciplinary approach to electronic media. Available to majors and non-majors.
- ART 3660 Selected Topics in Electronic Media (3) VP ART**
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 3610, ART3222C Selected Topics in Electronic Media is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.
- ART 3704C Intermediate Sculpture (3) VP ART**
PR: Respective beginning level course. This course expands upon the principles and processes introduced in Beginning Sculpture, developing a higher level of technical competence and critical sophistication. Intermediate Sculpture is prerequisite to Multiples, Molds and Bronzecasting and to Site, Installation, Performance. Repeatable up to 15 hours.
- ART 3712C Multiples, Molds, and Bronzecasting (3) VP ART**
PR: ART 2701C and PR: ART 3704C. Continued studies and projects in sculpture with an emphasis on the nature of multiples explored through advanced mold making and bronzecasting. This course may not be repeated for credit. The conceptual implications of the multiple will be taught through reading, lecture, discussion and demonstration.
- ART 3730 Selected Topics in Sculpture (3) VP ART**
PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2701C, ART 3704C Selected Topics in Printmaking is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.
- ART 3758C Site, Installation, and Performance (3) VP ART**
PR: ART 2701C and PR: ART 3704C. Continued studies and projects in sculpture with an emphasis on site-specific sculpture,

installation and performance. A critical and cultural awareness of contemporary issues and media in sculpture will be developed through studio projects assigned readings, discussions, critiques and demonstrations. The course may not be repeated for credit.

ART 3761C Intermediate Ceramics (3) VP ART

PR: Respective beginning level course. Intermediate problems in ceramics and emphasis on the exploration of methods and media and the development of individual concepts. Repeatable up to 15 hours.

ART 3780 Selected Topics in Ceramics (3) VP ART

PR: ART2203C, ARH 2050, ARH 2051, ART 2301C, ART 3310C, ART 2750C, ART 3761C. Selected Topics in Printmaking is an intermediate course providing focused exploration of content specific to the discipline. It furthers the development of skills and critical discourse in the field. Majors only. Repeatable up to 15 hours.

ART 3935 Studio Techniques: Selected Projects (2) VP ART

PR: DPR. Concentration in specialized technical data and process. Repeatable.

ART 3939 The Real World (3) VP ART

Restricted to studio majors. Offers studio students the opportunity to analyze their experiences as art majors and explore options available to visual artists upon completion of their degree.

ART 4320C Advanced Drawing (3) VP ART

PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Continued projects in drawing. Repeatable.

ART 4402C Advanced Printmaking (3) VP ART

PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. This course is designed as an advanced printmaking studio and emphasizes content and meaning in visual imagery. The student is encouraged to work in a specific printmaking medium (intaglio, relief, lithography or screen printing) and develop a cohesive series of images. Repeatable.

ART 4504C Advanced Painting (3) VP ART

PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Continued projects in painting. Repeatable.

ART 4611 Advanced Electronic Media (3) VP ART

PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Advanced exploration of issues and practices involved in the creation of experimental computer art. The course continues as interdisciplinary approach to electronic media with a focus on individual and group projects. Repeatable.

ART 4616 Computer Animation (4) VP ART

Exploration of issues and practices involved in the creation of computer animations, focused on individual creative growth.

ART 4684C Visual Design for the Internet (3) VP ART

Restricted to majors. This upper level course builds upon the concepts students encountered in the introductory level graphic design courses and focuses upon web content creation and animation techniques.

ART 4710C Sculpture II (4) VP ART

PR: ART 2701C. Continued problems in sculpture. Repeatable.

ART 4711 Sculpture III (4) VP ART

PR: ART 2702C or ART 4710C. Study of current 3-D issues in art with advanced self directed project to explore the development of a personal vocabulary in 3-D media.

ART 4782C Advanced Ceramics (3) VP ART

PR: 9 hours of Intermediate courses in the discipline and a 3.25 major GPA or DPR. Continued problems in ceramics. Repeatable.

ART 4806 Theme Studio (3) VP ART

PR: All preparation courses plus course in Studio Workshop I.

ART 4814 Paris Art Studio (3) VP ART

PR: ART 2201 or equivalent. This course will explore contemporary and historic Paris as a subject and source for artmaking, drawing upon a range of concepts and strategies that emphasize imaginative encounters with its space, streets, museums, architecture and people.

ART 4900 Directed Reading (4) VP ART

PR: CI. Registration by contract only. A course of reading and study in an area of special concern governed by student demand, instructor interest and/or department requirements. Registration is by contract only. Repeatable.

ART 4905 Directed Study (1-4) VP ART

PR: CI, DPR. Registration by contract only. Independent studies in the various areas of Visual Arts. Course of study and credits must be assigned prior to registration. Repeatable.

ART 4925 Media Workshop: Design Production (3) VP ART

Restricted to majors. This upper level technology course will develop in-depth understanding of graphic software and print production techniques. Students will review software programs, file preparation requirements, and print production standards.

ART 4930 Selected Topics in Art (2-4) VP ART

PR: DPR. The content of this course will be determined by student demand and instructor interest. Open University offerings under this number may not be counted for degree credit for art majors. Repeatable.

ART 4940 Extended Studies (1-4) VP ART

Extended Studies requires students to engage in art-related activities that expand upon their traditional academic experience. It is by contract and may involve internship and/or foreign studies. The course is restricted to majors. Not repeatable.

ART 4970C Senior Thesis (2) VP ART

PR: DPR, CI. The creation of a coherent body of advanced level artwork that is supported by a written document describing processes working procedures, research, context and content of the artwork itself. The course is restricted to majors, and is required of all B.F.A. candidates.

ART 5390C Drawing (4) VP ART

PR: ART 4320C, CI, DPR. Advanced problems in various drawing techniques. Emphasis on individual creative expression. Repeatable.

ART 5422C Lithography (4) VP ART

PR: ART 4402C, CI, DPR. Advanced problems in various lithographic techniques. Emphasis on individual creative expression. Repeatable.

ART 5448C Intaglio (4) VP ART

PR: CI. Registration by contract only. Investigations into more complex intaglio processes including photoengraving and color printing procedures. Emphasis on personal conceptual development in graphic media.

ART 5580C Painting (4) VP ART

PR: CI. Registration by contract only.

ART 5740C Sculpture (4) VP ART

PR: ART 2701C, DPR. Advanced problems in the various techniques of sculpture. Emphasis on individual creative expression. Repeatable.

ART 5790C Ceramics (4) VP ART

PR: ART 2750C, DPR. Advanced problems in the various ceramic techniques, including throwing and glaze calculation. Repeatable.

ART 5910 Research (1-4) VP ART

PR: CI, DPR. Registration by contract only. Repeatable.

ART 5936 Studio Techniques: Selected Projects (2) VP ART

PR: DPR. Concentration in specialized media or processes. Repeatable.

ASH 3404 Modern China SS HP AF (4) AS HTY

Political, economic, and social history of China from the time of the first major Western contacts (17th-18th Centuries) through the consolidation of socialism in the late 1950's, and the Great Leap Forward.

ASN 3012 Japan Today SS (3) AS INT

Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

ASN 3014 China Today AF (3) AS INT

Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

ASN 3030 The Middle East AF (3) AS INT

Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

AST 2005 Astronomy of the Solar System NS (4) AS AST

Introduction to the Astronomy of the Solar System. No Physics background assumed. Topics covered include properties of light, stellar coordinates, timekeeping, eclipses, formation and dynamics of the solar system, properties of the sun and planets, space exploration of planets and the moon, life on other worlds. This course is complementary to but independent of AST 2006. Either may be taken before the other or taken by itself.

AST 2006 Stellar Astronomy and Cosmology NS (4) AS AST

An introduction to Astrophysics and the structure of the universe. No Physics background assumed. Topics covered include properties of light, stellar coordinates, measurement of the physical properties of stars, formation, structure and evolution of stars, normal and peculiar galaxies, cosmology. This course is complementary to but independent of AST 2005. Either may be taken before the other or taken by itself.

AST 2032C Illustrative Astronomy (3) AS AST

Constellations, use of small telescopes, etc., apparent motions of celestial objects, comets and meteors, seasons, weather. Current events in the space program. Planetarium and open sky demonstrations.

- AST 3033 Contemporary Thinking in Astronomy NS (3) AS AST**
PR: Junior or Senior Standing or CI. Seminar designed to assist the layman, with no scientific background, in comprehending contemporary developments in Astronomy. Necessary background material is provided by the instructor and a text. Topics covered in recent years include the space program, pulsars, x-ray astronomy, black holes, extra-terrestrial life, interacting galaxies, cosmology.
- AST 3044 Archaeoastronomy (3) AS AST**
PR: Jr. or Sr. Standing or CI. Astronomical concepts and observational techniques used by prehistoric/ancient peoples for detecting change of seasons, constructing calendars, predicting eclipses, etc. Particular attention is given to Stonehenge, and to works of N.A. Indians, the Maya and Aztecs, and the Egyptians. Lec.-Lab.
- AST 3652 Navigation (3) AS AST**
PR: Some knowledge of geometry, algebra, and trigonometry. Timekeeping, use of sextant, constellations, celestial navigation with minimum equipment, spherical astronomy.
- AST 3930 Selected Topics in Astronomy (1-4) AS AST**
PR: CI. Course content will depend upon the interest of the faculty member and student demand.
- AST 5506 Introduction to Celestial Mechanics (3) AS AST**
PR: MAC 2313 or MAC 2283 and some knowledge of differential equations, or CI. The two-body problem, introduction to Hamiltonian systems and canonical variables, equilibrium solutions and stability, elements of perturbation theory.
- AST 5932 Selected Topics in Astronomy (1-5) AS AST**
PR: Senior or advanced junior standing or CI. Intensive coverage of special topics to suit needs of advanced students.
- BCH 3023 Introductory Biochemistry (3) AS CHM**
PR: CHM 2200 or CHM 2211 and BSC 2010. Introduction to the chemistry and intermediary metabolism of biologically important substances. Lec.
- BCH 3023L Basic Biochemistry Laboratory (2) AS CHM**
CR: BCH 3023. Practical work in determination and characterization of important biomolecules. Lec.-lab.
- BCH 4034 Advanced Biochemistry (3) AS CHM**
PR: BCH 3023. An advanced undergraduate course emphasizing such topics as metabolic regulation, DNA and RNA structure and function, receptors, channels, antibodies, and contraction.
- BCH 5045 Biochemistry Core Course (3) AS CHM**
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. A one-semester survey course in biochemistry for graduate students in chemistry, biology, and other appropriate fields and for particularly well-qualified undergraduates. Lec.
- BCH 5105 Biochemistry Laboratory Rotations (1-3) AS CHM**
A course in which first year graduate students rotate through selected professor's laboratories to learn techniques, become familiar with ongoing research in the Department and facilitate the selection of a mentor.
- BME 5000 Introduction to Biomedical Engineering (3) EN ECH**
PR: Senior or GS standing in engineering or CI. Open to non-engineering students with CI. Introduction to biomedical engineering, including human subject material and energy balances, biomaterials, biocompatibility, cell level and organ level modeling, prosthetic devices, and clinical engineering.
- BME 5006 Theory and Design of Bioprocesses (3) EN ECH**
PR: Senior standing in engineering or CI. Open to majors and non-majors with CI. Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.
- BME 5040 Pharmaceutical Engineering (2) EN ECH**
PR: Senior or graduate standing in engineering or CI. Introduction to pharmaceutical engineering, including dosage forms (tablets, capsules, powders, liquids, topical forms, and aerosols), excipients, regulatory issues, clinical studies, and good manufacturing practices.
- BME 5910 Directed Research in Bioengineering (1-3) EN ECH**
PR: CI. Directed research in an area of biomedical engineering or engineering biotechnology.
- BME 5937 Selected Topics in Biomedical Engineering (1-3) EN ECH**
PR: Senior or GS standing in Engineering or CI. Open to non-engineering students with CI. Selected topics in biomedical engineering, including biomedical engineering, biomedical materials, biodynamics of circulation, separation processes in biomedical systems, and artificial organ systems. May be taken

by non-engineering students with CI. Repeatable as subjects vary.

- BMS 4402 Principles Of Human Pharmacology NS (3) MD MSG**
Not available on S/U basis. Pharmacodynamics (effects), pharmacokinetics (absorption, distribution, metabolism, excretion) and side effects/toxicity of drugs. Designed to provide basic understanding of mechanism of drug action resulting from modifying biologic processes.
- BMS 5190 Anatomy by Diagnostic Testing (1-20) MD MSG**
Describing normal human anatomy in three dimensions (frontal, coronal, and axial), using contrast medical and imaging modalities available for diagnostic radiologists. Course will be oriented to organ systems describing anatomy of the organ and its vasculature and topographic anatomy. It will include didactic lecture series and a standing display of images for self-studies. Plain radiographs, contrast studies of gastrointestinal and urinary tract, arteriograms, computed tomograms, magnetic resonance, and ultrasound scans of body organs will be displayed.
- BOT 3373C Vascular Plants: Form and Function (4) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. Introduction to morphology, physiology and evolution of vascular plants, integrating form and function to understand diversity. Lec.-lab.
- BOT 3850C Medical Botany (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2210. Study of agents that are produced by plants and that are toxic or psychoactive in human beings or are useful as remedies.
- BOT 4152C Field Botany (3) AS BIO**
PR: BOT 3373C. Identification and classification of native and naturalized flowering plants of Florida including historical, climatic and floristic aspects of plant communities. Conducted largely in the field.
- BOT 4223C Plant Anatomy (3) AS BIO**
PR: BOT 3373C. Comparative studies of tissue and organ systems of fossil and present-day vascular plants. Functional and phylogenetic aspects stressed. Lec.-lab.
- BOT 4434C Mycology (3) AS BIO**
PR: BOT 3373C or MCB 3020C. A survey of the fungi with emphasis on their taxonomy, morphology, physiology and economic importance. Lec.-lab.
- BOT 4503 Plant Physiology (3) AS BIO**
PR: BOT 3373C, PCB 3023, PCB 3043, or PCB 3063. Fundamental activities of plants; absorption, translocation, transpiration, metabolism, growth, and related phenomena.
- BOT 4503L Plant Physiology Laboratory (1) AS BIO**
CP: BOT 4503. Laboratory portion of Plant Physiology.
- BOT 4810C Economic Botany (3) AS BIO**
PR: BOT 3373C. Study of the uses of plants by man for food, chemicals, fibers, and medicines.
- BOT 5185C Marine Botany (4) AS BIO**
PR: BOT 3373C, PCB 3043 or CI. A field course in marine plants with emphasis on ecology and functional morphology. Field work will stress the ecological aspects of plants in a subtropical marine environment in Florida. Lec/Lab.
- BOT 5725C Evolution of Flowering Plants (3) AS BIO**
PR: BOT 3373C and either BOT 4152C or BOT 4713C or CI. A study of the evolution and phylogeny of the Angiosperms; the origin and nature of early angiosperms, "primitive" angiosperms today; evolutionary processes leading to the origin of genera, families and orders, trends of specialization in the angiosperms; phylogenetic analysis, cladistics, traditional approaches, new approaches; readings from the current and historical literature. Lec/Lab.
- BSC 1005 Principles of Biology For Non-Majors NS (3) AS BIO**
No credit for Biology majors. Lectures and demonstrations of selected biological principles, usually taught by television.
- BSC 2010 Biology I - Cellular Processes NS (3) AS BIO**
CP: BSC 2010L and CHM 2045. The course is designed for majors and has a laboratory associated with the lecture. An analysis of biological systems at the cellular and subcellular levels: cell structure and function, respiration, photosynthesis, mitosis and meiosis, genetics and gene expression.
- BSC 2010L Biology I Cellular Processes Laboratory (1) AS BIO**
CR: BSC 2010. Laboratory portion of Biology I Cellular Processes relating to cellular and subcellular structure and function. Mitosis, meiosis, and Mendelian genetics will be stressed.
- BSC 2011 Biology II - Diversity NS (3) AS BIO**
PR: BSC 2010 and BSC 2010L. An analysis of biological systems at the organismal level: evolution, speciation, history of life, and ecology.
- BSC 2011L Biology II Diversity Laboratory (1) AS BIO**
CR: BSC 2011. Laboratory portion of Biology II Diversity relating

- to organismal structure and function. Microscopy, as well as, plant and animal development will be stressed.
- BSC 2022 Biology of Aging NS (3) AS BIO**
An introduction to the basic biology of aging. Emphasis will be placed on understanding basic principles of biology relevant to time and the aging process which begins at birth. May be taken by majors for free elective credit.
- BSC 2025 Food: Personal and Global Perspectives NS (3) AS BIO**
May be taken by biology majors for free elective credit. The application of basic biological principles to human nutritional problems; to learn how various cultures achieve adequate nutrition and how environmental changes impact both personal and global nutrition.
- BSC 2030 Save The Planet: Environmental Sciences NS (3) AS BIO**
Credit will be given for BSC 2030 or BSC 2050, but not both. An introduction to environmental sciences using mass communications and independent study. Emphasis will be placed on understanding basic principles of ecology relevant to problems and topics of the earth's environment. May be taken by majors for free elective credit.
- BSC 2035 Sex and Today's World NS (3) AS BIO**
The application of basic biological principles to female and male sexual behavior and reproduction; current social problems are treated from a biological perspective. May be taken by majors for free elective credit.
- BSC 2050 Environment NS (3) AS BIO**
Credit will be given for BSC 2030 or BSC 2050, but not both. The application of basic scientific principles to global environmental problems; how human activities impact the environment. May be taken by majors for free elective credit.
- BSC 2093C Human Anatomy and Physiology I (4) AS BIO**
PR: BSC 2010, BSC 2010L and BSC 2011, BSC 2011L. This course is the first half of a two-semester series introducing the structure and function of the human body's major organ systems. Cellular and cardiac physiology, nervous, endocrine, skeletal, and muscular systems will be covered. May be taken by Departmental majors for free elective credit only.
- BSC 2094C Human Anatomy and Physiology II (4) AS BIO**
PR: BSC 2093C. This course is the second half of a two-semester series introducing the structure and function of the human body's major organ systems. The following body systems will be covered: circulatory, lymphatic, immune, respiratory, digestive, urinary, and reproductive. May be taken by Departmental majors for free elective credit only.
- BSC 2932 Selected Topics in Biology (1-4) AS BIO**
- BSC 3263C Marine Biology (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. A survey of the marine environment, the types of organisms found inhabiting a variety of marine habitats, and the adaptations of the organisms to those habitats. Emphasis is placed on shallow water Florida environments.
- BSC 4057 Environmental Issues MW (3) AS BIO**
Not for major's credit. Study of biological, economic, ethical, legal, political and social issues relating to current environmental problems.
- BSC 4313C Advanced Marine Biology (4) AS BIO**
PR: BSC 3263C A detailed analysis of marine environment in the Tampa Bay or surrounding area. Field and laboratory work will provide direct experience with the system.
- BSC 4402L Biological Research Methods (3) AS BIO**
PR: BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A course to prepare Biology Honors student to work on their Honors theses.
- BSC 4905 Independent Study (1-3) AS BIO**
PR: CI. S/U only. May be taken by majors for free elective credit. Specialized independent study determined by the student's needs and interests. The written contract required by the Department of Biology specifies the regulations governing independent study.
- BSC 4910 Undergraduate Research (1-4) AS BIO**
PR: CI. S/U only. Individual investigation with faculty supervision. Written contract by Department is necessary prior to registration.
- BSC 4931 Honors Seminar I (2) AS BIO**
Enrollment is limited to Biology Department Honors students. A course linked to the Biology Departmental Seminar in which students read publications related to the seminars, discuss the presentations and write critiques.
- BSC 4932 Honors Seminar II (3) AS BIO**
Enrollment is limited to Biology Department Honors students. A reading and discussion course involving areas of general interest in biology.
- BSC 4933 Selected Topics In Biology (1-3) AS BIO**
- BSC 4937 Seminar in Marine Biology (2) AS BIO**
PR: BSC 3263 and ONE of the following: PCB 3023 or PCB 3043 or PCB 3063. Course focuses on developing the student's understanding of contemporary research in the field of Marine Biology. Background information presented and assigned readings will vary according to instructor.
- BSC 4970 Biology Honors Thesis (1-3) AS BIO**
PR: BSC 4402L and either BSC 4931 or BSC 4932. Enrollment is limited to Biology Department Honors students. S/U only. A thesis based on independent research carried out by the student.
- BSC 5931 Selected Topics in Biology (1-3) AS BIO**
PR: CI.
- BTE 4401 Special Teaching Methods: Business Education (4) ED EDV**
PR: Successful completion of BE competencies. Methods, techniques, and materials for skill development.
- BTE 4909 Directed Study: Business Education (1-3) ED EDV**
PR: Senior standing. To extend competency in teaching field.
- BTE 4936 Senior Seminar in Business and Office Education (2) ED EDV**
PR: Senior standing; CR: BTE 4940. Synthesis of teacher candidate's courses in complete college program.
- BTE 4940 Internship: Business Education (1-12) ED EDV**
CR: BTE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.
- BTE 4948 Field-Based Seminar in Business Education (3) ED EDV**
S/U only. Supervised field experience and orientation to broad field business education. Specifically designed to be preparatory for the internship.
- BTE 5171 Curriculum Construction: Business Education (3) ED EDV**
Curriculum scope, the process of planning and organizing instructional programs with emphasis on task analysis and process evaluation.
- BUL 3320 Law And Business I (3) BA GBA**
This course covers the nature of legal and societal institutions and environments, and major aspects of public, private, UCC and related business law.
- BUL 3321 Law And Business II (3) BA GBA**
PR: BUL 3320. Legal problems in marketing of goods, nature of property, sales of personal property, securing of credit granted, nature and use of negotiable instruments.
- BUL 5332 Law and the Accountant (3) BA GBA**
PR: BUL 3320 or CI. A comprehensive study of commercial law as it affects the practice of accounting.
- CAP 5400 Digital Image Processing (3) EN ESB**
PR: EEL 4851C or GS. Image formation, sources of image degradation, image enhancement techniques, edge detection operators and threshold selection, low-level processing algorithms for vision, image data compression.
- CAP 5625 Introduction to Artificial Intelligence (3) EN ESB**
PR: EEL 4851C or GS. Basic concepts, tools, and techniques used to produce and study intelligent behavior. Organizing knowledge, exploiting constraints, searching spaces, understanding natural languages, and problem solving strategies.
- CAP 5682 Expert And Intelligent Systems (3) EN ESB**
PR: EEL 4851C or GS. Basic concepts, techniques and tools for the design and implementation of expert and intelligent systems. Knowledge representation, inference methods, knowledge acquisition methods, and some advanced concepts. Tools to facilitate construction of expert and intelligent systems.
- CBH 4004 Comparative Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. The study of the evolution of behavior, similarities, and differences in capacities for environmental adjustment and for behavioral organization among important types of living beings.
- CCE 4034 Construction Management (3) EN EGX**
PR: EGN 3613C. Fundamentals of construction management. Topics include: general definitions, organizational roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow analysis, planning and scheduling, project control, construction administration, quality and safety management, and use of computer software in construction management.
- CCE 5035 Construction Management & Planning (3) EN EGX**
PR: EGN 3613C. Fundamentals of construction management. Topics include: general definitions, organizational roles, types of contracts, analysis of labor and equipment, cost estimating, contractor cash flow analysis, planning and scheduling, project control, construction administration, quality and safety management, and use of computer software in construction

- management.
- CCJ 3003 Crime and Justice in America SS (4) AS CJP**
May be taken by both majors and non-majors for credit. This course is a non-technical survey of the nature of crime in the United States and the ways in which our society seeks to deal with criminal offenders and victims of crime.
- CCJ 3024 Survey of the Criminal Justice System SS (3) AS CJP**
An introduction to the structure and operation of law enforcement, prosecution, the courts, and corrections. Also includes brief coverage of major reported crimes.
- CCJ 3610 Theories of Criminal Behavior (3) AS CJP**
PR: Junior standing, CCJ 3024 or CI. Provides a basic understanding of the complex factors related to crime, with concentration on principal theoretical approaches to the explanation of crime.
- CCJ 3621 Patterns of Criminal Behavior (3) AS CJP**
PR: Junior standing. Reviews the nature and extent of the crime problem. The course will concentrate on major patterns of offender behavior including crimes against the person, property crimes, violent crimes, economic/white collar offense, syndicated (organized) crimes, consensual crimes, female crime, political crime, and will examine criminal career data.
- CCJ 3701 Research Methods in Criminal Justice I (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Introduces the student to some of the fundamentals of knowledge-generating processes in criminal justice.
- CCJ 4450 Criminal Justice Administration (3) AS CJP**
PR: Junior standing, CJE 4114 or CJT 4100 or CI. This course is designed to provide an in-depth examination of both the practical and theoretical aspects of the administration of criminal justice agencies. The major focus will be on law enforcement and correctional agencies.
- CCJ 4604 Abnormal Behavior and Criminality (3) AS CJP**
PR: Junior standing, CCJ 3610 or CI. A systematic introduction to the relationship between mental illness and criminality, with focus on psychiatric labeling of deviant behavior and its implications for the handling of the criminal offender.
- CCJ 4700 Statistical Research Methods in Criminal Justice II (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Beginning with the scientific method, the tools commonly used to analyze criminal justice data will be emphasized. Recommended for students who intend to continue their education beyond the B.A. Required of students attending the MA program in CCJ at USF.
- CCJ 4900 Directed Readings (1-3) AS CJP**
PR: Junior standing, CCJ 3024, CCJ 3610, CCJ 3621, CI. S/U only. (a) Students wishing to enroll must make arrangements with a faculty member during the semester prior to actually taking the course. (b) a minimum of four 4 CCJ courses must have been completed satisfactorily prior to enrollment. (c) first consideration will be given to Criminology majors. (d) individual faculty members may add additional requirements at their discretion. No more than six hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major. This course is specifically designed to enable advanced students the opportunity to do in-depth independent work in the area of criminal justice. Each student will be under the loose supervision of a faculty member of the program.
- CCJ 4910 Directed Research (1-3) AS CJP**
PR: Junior standing, CCJ 3024, CCJ 3610, CCJ 3621, CI. S/U only. (a) Students wishing to enroll must make arrangements with a faculty member during the semester prior to actually taking the course. (b) a minimum of four 4 CCJ courses must have been completed satisfactorily prior to enrollment. (c) first consideration will be given to Criminology majors. (d) individual faculty members may add additional requirements at their discretion. No more than six hours of CCJ 4900, CCJ 4910 or any combination of the two will be accepted toward the minimum number of hours required for the major. This course is designed to provide students with a research experience in which they will work closely with faculty on the development and implementation of research projects in the area of criminal justice.
- CCJ 4930 Critical Issues in Policing (3) AS CJP**
PR: Junior standing, CCJ 3024 or CJE 4114 or CI. Focuses on some of the most critical issues in law enforcement today including: understanding and controlling police use of deadly force; police deviance; police prejudice and discrimination; violence-prone police officers; substance abuse by police officers; and administrative review of alleged police brutality.
- CCJ 4933 Selected Topics in Criminology (3) AS CJP**
PR: Junior standing, CCJ 3024, CCJ 3621, CCJ 3610 or CI.
- Lecture course. Topic varies and is designed to address a wide variety of issues in criminology and criminal justice. Open to non-majors with CI.
- CCJ 4934 Seminar in Criminology 6A MW (3) AS CJP**
PR: Senior standing, CCJ 3024, CCJ 3621, CCJ 3610 and CI. These variable topic seminars are used for the in-depth study and discussion of the relationships among culture, gender, ethics, age, society, and criminal behavior. Such examinations may include the options the criminal justice does (or does not) have to deal with these interactions, and the ethics and efficacy of the system's response. Open to non-majors with CI.
- CCJ 4940 Internship For Criminal Justice Majors (3) AS CJP**
PR: Senior standing, CCJ 3024, CCJ 3610, CCJ 3621. S/U only. No more than 9 hours of CCJ 4940 will be accepted toward the elective hours required for the major. The internship will consist of placement with one or more of the agencies comprising the criminal justice system. This course will enable the students to gain meaningful field experience related to their future careers. The three-hour block of credit will require a minimum of ten hours of work per week during a fall or spring term, fifteen hours per week in summer, within the host agencies in addition to any written work or reading assignments. See requirements for the B.A. degree in Criminology for the number of hours required.
- CDA 3101 Computer Organization for Information Technology (3) US EIT**
PR: Any Physics course or CI. Elements of the computer are discussed in terms of the physical and conceptual design of memory, processors, busses and I/O elements. Organization of the system is cast in a meta-language that captures the logical and physical nature of the computer.
- CDA 3103 Computer Organization (3) EN ESB**
PR: PHY 2049 or PHY 2054 and DPR. Introduction to computer hardware, logic elements and Boolean algebra, computer arithmetic, the central processing unit, assembly language programming, input/output, and memory.
- CDA 3201 Computer Logic and Design (3) EN ESB**
PR: CDA 3103, COP 3514; CR: CDA 3201L. Advanced coverage of Boolean Algebra, introduction to minimization of combinational logic circuits, analysis and synthesis of sequential circuits, testing of logic circuits, and programmable logic devices.
- CDA 3201L Computer Logic Design Lab (1) EN ESB**
CR: CDA 3201.
- CDA 4100 Computer Organization and Architecture (3) EN ESB**
PR: EEL 4705. Elements of computer systems; processors, memories and switches. Register transfer representation of a computer. ALUs and their implementation. The control unit. Memory and I/O. Hardware support of operation system functions.
- CDA 4203 Computer System Design (3) EN ESB**
PR: CDA 3201, CDA 3201L. Design Methods, Top-Down design, Building Blocks, Instruction and addressing models, minicomputer design, interfacing.
- CDA 4203L Computer System Design Lab (1) EN ESB**
CR: CDA 4203. This lab introduces the student to the concept of system design. Several projects are given including building timing circuits, memory-based and communication circuits, and microcomputer-based designs.
- CDA 4205 Computer Architecture (3) EN ESB**
PR: CDA 3201, CDA 3201L. Principles of the design of computer systems, processors, memories, and switches. Consideration of the register transfer representation of a computer, ALU's and their implementation, control units, memory and I/O, and the hardware support of operation systems.
- CEG 4011 Geotechnical Engineering I (3) EN EGX**
PR: EGN 3353, EGN 3331. Fundamental and experimental concepts in soil mechanics with emphasis on soil properties, soil moisture, soil structure, and shearing strength.
- CEG 4011L Geotechnical Laboratory (1) EN EGX**
CR: CEG 4011. Demonstrates and experiments verifying theoretical bases of Geotechnical Engineering. One hour lecture and two laboratory hours per week.
- CEG 4012 Geotechnical Engineering II (3) EN EGX**
PR: CEG 4011. Design of retaining walls, earth slopes, foundations to control settlement, soil stabilization and foundations subjected to dynamic loads. Computer applications to soil mechanics will be covered.
- CEG 4850 Capstone Geotechnical/Transportation Design MW (3) EN EGX**
PR: CEG 4011, TTE 4004. A capstone geotechnical/transportation design experience for seniors in Civil and Environmental Engineering. Design of embankment and pavement bases. Comprehensive surface streets, open highway intersection and

- site design involving functional design, facility sizing, complete alignments and coordination, plan preparation, site layout and design, quantity summarization, bid tab planning and specification preparation.
- CEG 5115 Foundation Engineering (3) EN EGX**
PR: CEG 4011 or CI. Design of shallow foundations, cantilevered and anchored retaining walls, piling, drilled piers and special foundations. Computer applications to geotechnical engineering are covered.
- CEG 5205 Laboratory Testing for Geotechnical Engineers (3) EN EGX**
PR: CEG 4011 or CI. Both routine and advanced forms of soil testing are covered. Emphasis is placed on procedures and application of results to design.
- CEN 3722 Human Computer Interfaces for Information Technology (3) US EIT**
Human-Computer Interface is the study of people, computer technology and the ways these influence each other. The basic foundations of HCI in terms of psychology, computer systems and their integration into design practice are discussed in the course.
- CEN 4012 Software System Development (3) EN ESB**
PR: EEL 4851C. Consideration of object methodology and object oriented programming. Team analysis, design, and development of complex software systems using software development tools.
- CEN 4020 Software Engineering (3) EN ESB**
PR: EEL 4851C. An overview of software engineering techniques for producing high quality software. Student will participate in a software development team.
- CEN 4031 Software Engineering Concepts for Information Technology (3) US EIT**
PR: EEL 4854 or CI. Concepts associated with production of high quality software through the use of software engineering concepts and practices are covered. In addition to conceptual presentations, students are required to participate in software development team projects.
- CEN 4721 User Interface Design (3) EN ESB**
PR: EEL 4851C. An examination of factors influencing the usability of a computer system. Topics include input and output devices, graphic and multi-media interfaces, formats for interaction/communication between computer and user, and the evaluation of usability.
- CES 3102 Structures I (3) EN EGX**
PR: EGN 3331. Analysis of simple structural systems, both determinate and indeterminate. Moment area theorems; influence lines; introduction to steel design.
- CES 4141 Finite Element Analysis I (3) EN EGX**
PR: CES 3102. Introduction to the finite element method. Application of the method to one-dimensional structural problems. Virtual work principles. Analysis of trusses and frames using the displacement method and the force method. Energy principles. Matrix methods for computer analysis. Programming methods for finite elements implementation.
- CES 4561 Computer Aided Structural Design (3) EN EGX**
PR: CES 4141. Computer aided structural analysis and design using existing finite element program, static dynamic loading.
- CES 4605 Concepts of Steel Design (3) EN EGX**
PR: CES 3102. Introduction to steel design and AISC Manual of Steel Construction: Design of tension members; compression members; beams; beam columns; and bolted, welded, and riveted connections.
- CES 4702 Concepts of Concrete Design (3) EN EGX**
PR: CES 3102. Introduction to concrete design and the ACI Building Code Requirements for reinforced concrete: Design of flexural reinforcement in beams and slabs, design of shear reinforcement, design of concrete columns.
- CES 4720 Capstone Structural/Materials Design (3) EN EGX**
PR: EGN 3365, CES 4605, CES 4702. A Capstone Materials design experience for seniors in Civil and Environmental Engineering. This course will provide students with a focused design experience aimed to design for durability and reliability.
- CES 4740 Capstone Structural/ Geotechnical/ Material Design MW (3) EN EGX**
PR: EGN 3365, CES 4605, CES 4702, CEG 4011. A capstone structural/ geotechnical/ materials design experience for seniors in Civil and Environmental Engineering. Design of structures and foundations made of steel and reinforced concrete.
- CES 4742 Concepts of Structural Design (3) EN EGX**
PR: CES 3102. Introduction to concrete design and the ACI Building Code Requirements for reinforced concrete; design of flexural reinforcement in beams and slabs, design of shear reinforcement, design of concrete columns, and design of steel beams.
- CES 4820C Timber and Masonry Design (3) EN EGX**
PR: CES 3102, CES 4702. Fundamentals of timber design including beams, columns, connections and formwork. Introduction to masonry design including design of beams, walls, columns, and pilasters.
- CES 5105C Advanced Mechanics of Materials I (3) EN EGX**
PR: EGN 3331, MAP 2302 Analytical study of the mechanical behavior of deformable solids. Basic concepts, stress and strain transformations, special topics in beams, theory of elasticity, criteria of failure, beams on elastic foundation.
- CES 5209 Structural Dynamics (3) EN EGX**
PR: CES 3102, EGN 3321. Behavior of structural components and systems when subjected to periodic dynamic loads.
- CES 5715C Prestressed Concrete (3) EN EGX**
PR: CI, majors only. Fundamental principles of prestressing; calculation of losses; stress analysis and design of simple beams for flexure and shear. Examples of pressures applications.
- CGN 3021L Civil Engineering Laboratory (2) EN EGX**
PR: CES 3102, EGN 3353, EGN 3365. A laboratory experience in departmental facilities including the subject areas of materials, fluids, environmental engineering, and computer assisted data acquisition.
- CGN 4122 Professional and Ethical Issues in Engineering MW (3) EN EGX**
The professional and ethical responsibility of engineers. The legal and ethical responsibilities of engineers in the preparation of contracts and specification. The ethics of engineer-client agreements.
- CGN 4851 Concrete Construction Materials (3) EN EGX**
PR: EGN 3365. Classifications and production of cements. Design and testing of concrete mixes to produce desired properties.
- CGN 4905 Independent Study (1-5) EN EGX**
PR: CC. S/U only. Specialized independent study determined by the students' needs and interests.
- CGN 4911 Research in Civil Engineering and Environmental Engineering (1-4) EN EGX**
PR: CC.
- CGN 4914 Senior Project (2-5) EN EGX**
PR: CI. Problem-solving experience and training for seniors in research and/or design projects. Written final reports are required.
- CGN 4933 Special Topics in Civil and Environmental Engineering (1-5) EN EGX**
PR: CI. New technical topics of interest to civil engineering students.
- CGN 5933 Special Topics in Civil Engineering and Mechanics (1-5) EN EGX**
PR: CI. New technical topics of interest to civil engineering students.
- CGS 2060 SC Introduction to Computers and Programming in Basic 6A (3) EN ESB**
No credit for Engineering Majors. An overview of computer systems and their role in society. Survey of the evolution of computer software and hardware technology with emphasis on current applications. Introduction to programming using the BASIC language.
- CGS 2062 Computers And Society (3) EN ESB**
No credit for Engineering Majors. For non-engineering majors only. This computer literacy course covers the fundamentals of hardware, software, and programming languages, presents a broad overview of data processing concepts, problems and applications for students with little or no computing background.
- CGS 2100 Computers In Business (3) BA QMB**
A study of the use and impact of computers in all areas of business organizations. Course includes hands-on experience and the use of software packages for business analysis.
- CGS 3414 Problem Solving Using Pascal or C 6A (3) AS MTH**
CP: MAS 3105. Introduction to Pascal or C with special emphasis on its applications to mathematics.
- CGS 5765 Introduction to Unix and C (3) EN ESB**
No credit for Department of Computer Science & Engineering majors. Unix operating system. Internet resources. Netscape, WWW and HTML. ANSI C language, syntax. Arrays and pointers. Iterations and recursions. Header files and macros. C libraries. Structuring data. File I/O.
- CHI 1120 Modern Chinese I (4) AS WLE**
CR: CHI 1120L. Mandarin. An intensive study of basic skills: pronunciation, listening, comprehension, speaking, and some composition.

- CHI 1120L Modern Chinese I Laboratory (1) AS WLE**
CR: CHI 1120. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.
- CHI 1121 Modern Chinese II (4) AS WLE**
CR: CHI 1121L. Mandarin. PR: CHI 1120 or equivalent. A continuation of CHI 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.
- CHI 1121L Modern Chinese II Laboratory (1) AS WLE**
CR: CHI 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.
- CHI 2200 Modern Chinese III (4) AS WLE**
PR: CHI 1121 or the equivalent. For language students who intend to attain basic proficiency.
- CHI 2201 Modern Chinese IV (4) AS WLE**
PR: CHI 2200 or the equivalent. Continuation of CHI 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.
- CHI 4905 Directed Study (1-5) AS WLE**
Departmental approval required. S/U only. Permits study options in Modern Chinese not available in the regularly scheduled curriculum at departmental discretion.
- CHM 2021 Chemistry For Today NS (4) AS CHM**
PR: High school chemistry and mathematics including algebra are recommended. No credit for science majors. An introduction to the principles and applications of modern chemistry including the properties of matter, structural view of matter and reactions, quantitative relations in chemical reactions, technological aspects and societal impact.
- CHM 2030 Introduction to General, Organic and Biochemistry I (4) AS CHM**
No credit for science majors. Fundamental concepts of general, organic, and biological chemistry.
- CHM 2045 General Chemistry I NS (3) AS CHM**
PR: One year of high school chemistry and two years of high school mathematics including algebra; or, completion of CHM 2040 with grade of C or better. Principles and applications of chemistry including properties of substances and reactions, thermochemistry, atomic-molecular structure and bonding, periodic properties of elements and compounds.
- CHM 2045L General Chemistry I Laboratory (1) AS CHM**
CP: CHM 2045. Laboratory portion of General Chemistry I. Introduction to laboratory techniques; study of properties of elements and compounds; synthesis and analysis of natural and commercial materials.
- CHM 2046 General Chemistry II NS (3) AS CHM**
PR: CHM 2045 or CHM 2045L or equivalent. Continuation of General Chemistry. Lec.-dis.
- CHM 2046L General Chemistry II Laboratory (1) AS CHM**
PR: CHM 2045L. Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.
- CHM 2200 Organic Chemistry (4) AS CHM**
PR: CHM 2046 or equivalent. Fundamental organic chemistry principles. Structure, nomenclature, properties, preparation, reactions of hydrocarbons, alkyl halides, alcohol, phenols, ethers, sulfur analogs and other compounds. A one-semester course.
- CHM 2210 Organic Chemistry I (3) AS CHM**
PR: CHM 2046, CHM 2046L. Fundamental principles of organic chemistry. Lecture.
- CHM 2210L Organic Chemistry Laboratory I (2) AS CHM**
CP: CHM 2200 or CHM 2210. Laboratory portion of Organic Chemistry I. Introduction of organic laboratory principles and techniques.
- CHM 2211 Organic Chemistry II (3) AS CHM**
PR: CHM 2210 or equivalent. Continuation of organic chemistry. Lecture.
- CHM 2211L Organic Chemistry Laboratory II (2) AS CHM**
PR: CHM 2210L, CR: CHM 2211. Continuation of organic chemistry laboratory.
- CHM 2932 Selected Topics in Chemistry (3) AS CHM**
Topics of interest to students relating to chemistry and other sciences.
- CHM 3120C Elementary Analytical Chemistry (4) AS CHM**
PR: CHM 2046, CHM 2046L. Fundamentals of gravimetric, volumetric, spectrophotometric analysis. Lec.-lab.
- CHM 3400 Elementary Physical Chemistry I (3) AS CHM**
PR: CHM 2046, CHM 2046L, MAC 2281 or MAC 2311, PHY 2054, PHY 2054L. Introduction to thermodynamics. Properties of solutions with emphasis on biological applications.
- CHM 3401 Elementary Physical Chemistry II (3) AS CHM**
PR: CHM 3400. Reaction kinetics, enzyme kinetics, macromolecular systems, radiochemistry, molecular spectroscopy, and chemical bonding.
- CHM 3402L Elementary Physical Chemistry Laboratory (1) AS CHM**
PR: CHM 3120C. CR: CHM 3400 and/or CHM 3401. A physical chemistry laboratory with emphasis on modern techniques and instruments. Lab.
- CHM 3610 Intermediate Inorganic Chemistry (3) AS CHM**
PR: CHM 2046, CHM 2046L. Fundamental principles of inorganic chemistry including atomic structure, bonding theories and structural consequences, transition metal chemistry and illustrative laboratory work. Lec.-lab.
- CHM 3610L Intermediate Inorganic Chemistry Laboratory (1) AS CHM**
PR: Two semesters of general chemistry lecture and lab. CR: CHM 3610. Illustrative laboratory work concerning the fundamental principles of inorganic chemistry including atomic structure, bonding, transition metal chemistry, structural consequences and spectroscopic methods.
- CHM 4060 Use of the Chemical Literature (1) AS CHM**
Discussions and assignments using abstracts, bibliographies, indices, encyclopedias, journals, patent files, electronic databases, and other information sources to obtain chemical and technical material and including written and oral presentations. Career information and opportunities also discussed.
- CHM 4070 Historical Perspectives in Chemistry 6A MW(3) AS CHM**
PR: One year of college chemistry; or senior standing and CI. A study in depth of the historical and philosophical aspects of outstanding chemical discoveries and theories. Lec.-dis.
- CHM 4130C Methods of Chemical Investigation I (4) AS CHM**
PR: CHM 3120C, CHM 2211, CHM 2211L, CHM 4060, CHM 4410. Theory and applications of instrumental methods in chemical research, chemical synthesis and analysis; electrochemical and calorimetric techniques, separation methods, spectroscopy, statistical analysis of data, computer data handling, and individual projects.
- CHM 4131C Methods of Chemical Investigation II (4) AS CHM**
PR: CHM 4130C. Continuation of CHM 4130C.
- CHM 4300 Biomolecules I (3) AS CHM**
PR: CHM 2211. Nature, structure, elucidation, synthesis and (in selected cases) organic chemical mechanisms of biochemical involvement of the major classes of organic compounds found in living systems. Lec.
- CHM 4410 Physical Chemistry I (3) AS CHM**
PR: CHM 3120C and MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. Thermodynamics, the states of matter, solutions. Lec.
- CHM 4411 Physical Chemistry II (3) AS CHM**
PR: CHM 3120C, and MAC 2282 or MAC 2312, and PHY 2054 or PHY 2049. Introduction to quantum mechanics and molecular spectroscopy. Lec.
- CHM 4412 Physical Chemistry III (3) AS CHM**
PR: CHM 4410. Electrochemistry, kinetic theory of gases, chemical kinetics, surface and nuclear chemistry. Lec.
- CHM 4611 Advanced Inorganic Chemistry (3) AS CHM**
PR: CHM 3610C and CHM 4410 or CI. An advanced descriptive and theoretical treatment of inorganic compounds. Lec.
- CHM 4905 Independent Study (1-3) AS CHM**
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.
- CHM 4932 Selected Topics in Chemistry (1-3) AS CHM**
PR: CI. The course content will depend on the interest of faculty members and student demand.
- CHM 4970 Undergraduate Research (1-3) AS CHM**
PR: CI. S/U only.
- CHM 5225 Intermediate Organic Chemistry I (3) AS CHM**
PR: CHM 2211, CHM 2211L, or equivalent or CI or GS. This course will extend organic chemistry beyond the undergraduate level and will emphasize concepts of stereochemistry and reaction mechanisms.
- CHM 5226 Intermediate Organic Chemistry II (3) AS CHM**
PR: CHM 5225 or CI. An introduction to synthetic organic chemistry for graduate students and advanced undergraduates. Lec. Semester II.
- CHM 5425 Applications in Physical Chemistry (3) AS CHM**
PR: CHM 4412 and CHM 4410 or CI or GS. Applications of chemical theory to chemical systems.
- CHM 5452 Polymer Chemistry (3) AS CHM**
PR: Either CHM 2211, CHM 2211L, and CHM 3400 or CHM 4410 or graduate standing. Fundamentals of polymer synthesis,

- structure, properties, and characterization.
- CHM 5621 Principles of Inorganic Chemistry (3) AS CHM**
PR: CHM 4411, CHM 4610 or CI or GS. Chemical forces, reactivity, periodicity, and literature in organic chemistry; basic core course. Lec.
- CHM 5931 Selected Topics in Chemistry (1-3) AS CHM**
PR: CI. The following courses are representative of those that are taught under this title: Natural Products, Stereochemistry, Reactive Intermediates, Photochemistry, Instrumental Electronics, Advanced Lab Techniques, Heterocyclic Chemistry, etc.
- CHS 4300 Fundamentals of Clinical Chemistry (3) AS CHM**
PR: BCH 3023. Theoretical and practical aspects of the analysis of various body fluids, with emphasis on the medical significance. Lec.
- CHS 4301L Clinical Laboratory (2) AS CHM**
PR: BCH 3023 and CI, CHM 3120C. Laboratory experience in some of the most important clinical determinations. Lec.-Lab.
- CIS 4250 Ethical Issues And Professional Conduct 6A MW(3) EN ESB**
PR: Senior standing in the Department of Computer Science and Engineering. An introduction to ethical issues arising in the computer sciences, through written analysis and oral presentations of technical situations which involve ethical conflicts.
- CIS 4253 Ethical Issues for Information Technology MW(3) US EIT**
Human values and laws as applied to the "gray area" of technological phenomena. The goal is to develop an understanding of what technology introduces to our culture and how we, as individuals, envision the future of society.
- CIS 4361 Information Technology Security Management (3) US EIT**
PR: Junior standing or above. An overview of information security management techniques and concerns is presented. Topics include: Access control systems, telecommunications and network security, security management practices, application and systems development security, cryptography, disaster recovery planning, legal and ethical issues, and physical security.
- CIS 4412 Information Technology Resource Management (3) US EIT**
PR: Junior standing or above. An overview of the information resource management function, with emphasis on information systems management, is covered. Topics include planning, organizing and controlling user services, managing information system development process, and the fundamentals of EDP auditing.
- CIS 4703 Database Systems for Information Technology (3) US EIT**
CR: EEL 4854 or CI. Fundamentals of database management systems are presented, covering relational, CODASYL, network, hierarchical, and object-oriented models. Topics include basic design concepts, analysis of efficiency as well as actual implementations of such systems.
- CIS 4900 Independent Study In Computer Science (1-5) EN ESB**
PR: EEL 4851C or CDA 3201 and CI. S/U only. Specialized independent study determined by the needs and interests of the student.
- CIS 4910 Computer Science Project (2) EN ESB**
PR: EEL 4851C. Projects intended to develop individual interests and abilities in computer science involving either computer hardware or software aspects of a well defined proposal.
- CIS 4930 Special Topics in Computer Science I (1-4) EN ESB**
PR: EEL 4851C or CDA 3201 and CI.
- CIS 4935 Senior Project in Information Technology (3) US EIT**
PR: Senior Standing in Information Technology. Graduates of the IT program must complete a major project dealing with a sub-domain of IT. Projects are supervised by a faculty member, or an approved industrial mentor. Projects range from design to programming, to implementations associated with IT.
- CJC 4010 American Correctional Systems (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Analysis of the different treatment philosophies and techniques currently in use in the field, with special attention to experimental and demonstration programs.
- CJC 4166 Alternatives to Incarceration (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. This course explores a variety of alternatives to imprisoning the offender, including probation, parole, diversion, and other community-based intervention and treatment approaches.
- CJC 4310 Correctional Administration (3) AS CJP**
PR: Junior standing, CCJ 3024 or CI. The course provides students with an introduction to issues in correctional administration in both institutional and community corrections.
- CJC 4410 Intervention Techniques and Strategies (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Introduces the student to theories and methods underlying treatment modalities currently employed in corrections.
- CJE 4010 Juvenile Justice System (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Provides coverage of the juvenile and family courts, their clientele, and the complex of human services agencies and facilities that contribute to efforts at juvenile correctional intervention.
- CJE 4044 Police and Juvenile Delinquency (3) AS CJP**
PR: Junior standing, CCJ 3024 or CI. Focuses on the unique aspects of law enforcement interaction with juveniles and their families. Issues which emerge when working with multi-cultural populations will be discussed. Police efforts at early detection, intervention, and diversion. Interaction with status offenders and children in-need-of-assistance will be a topic of concern.
- CJE 4114 American Law Enforcement Systems (3) AS CJP**
PR: Junior standing, CCJ 3024 or CCJ 3610 or CI. Provides a comprehensive examination of the American law enforcement system at the federal, state, and local levels and an assessment of career opportunities within the community.
- CJE 4144 Private Security Systems (3) AS CJP**
PR: Junior standing plus CJE 4114, CCJ 3024, CCJ 3610, CCJ 3621 or CI. Examines some of the principal methods and techniques currently used to reduce or prevent losses due to theft and casualty.
- CJJ 4210 Developmental Aspects of Juvenile Delinquency (3) AS CJP**
PR: CCJ 3610 and CJE 4010 or CI. Provides the student with a developmental/life course perspective of the processes, events, and factors which occur during childhood and adolescence and cause juvenile delinquency. This course focuses on the conditions which are critical in shaping the delinquent's behavior during their formative years.
- CJJ 4211 Juvenile Substance Abuse (3) AS CJP**
PR: Junior standing, CJE 4010 or CI. Focuses on youth and drugs. It will cover such topics as the rates and patterns of the use of different drugs by youths with varying sociodemographic characteristics, the context and effects of use of various drugs, the drugs-crime connection, prevention, early intervention and treatment efforts, and drug use policy.
- CJJ 4564 Juvenile Correctional Alternatives (3) AS CJP**
PR: Junior standing, CJE 4010 or CI. Focuses on juvenile correctional responses from diversion to the use of secure facilities. How the system attempts to handle status offenders and children in need of supervision will be covered. Diversion, detention, probation, and community-based non-secure facilities will be discussed.
- CJL 3110 Substantive Criminal Law (3) AS CJP**
PR: Junior standing, CCJ 3024, CCJ 3610, or CI. Examines the historical basis of the American criminal law system, the substantive elements of the crime, and court procedures.
- CJL 4074 Correctional Law (3) AS CJP**
The course provides students with an introduction to legal issues in the area of corrections, with an emphasis on civil and criminal liability for correctional staff and administrators and on convict's rights.
- CJL 4115 Environmental Law and Crime (3) AS CJP**
PR: Junior standing, CCJ 3024 or CI. The course provides students with an introduction to issues in the area of environmental crime and environmental law.
- CJL 4410 Criminal Rights and Procedures (3) AS CJP**
PR: Junior standing, CCJ 3024 or CI. Emphasizes the Constitutional issues and rules that are applied and enforced by the courts while processing criminal cases.
- CJL 4454 Juveniles' Rights and Procedures (3) AS CJP**
PR: CJE 4010 or CI. The course provides students with an introduction to the Juvenile Justice system, particularly with the issues on juveniles' rights as they relate to the juveniles in trouble who are processed through the juvenile justice system or probably transferred to the adult criminal justice system.
- CJT 4100 Criminal Investigation (3) AS CJP**
PR: CCJ 3024 or CCJ 3610 or CI. Covers the major components of criminal investigation, with special attention to the scientific aspects of criminal investigation and the management of major cases.
- CLA 2800 Wordpower from Latin and Greek (3) AS WLE**
Study of Greek/Latin elements as a means of building English vocabulary. Examination of Greek/Latin-based terminology from various scientific fields, its adoption into English and current usage. Attention given to Greek/Latin stems, prefixes, suffixes.
- CLA 3103 Greek Civilization HP (3) AS WLE**
Study of Greek Civilization from its beginning to the Roman period, with emphasis on social customs, political institutions, and daily

- life.
- CLA 3123 Roman Civilization HP (3) AS WLE**
Study of Ancient Roman Civilization with emphasis on social customs, political institutions, and daily life.
- CLA 3501 Women in Antiquity 6A LW (3) AS WLE**
The life of women in the ancient Greek and Roman world, through lecture, video, and slide presentations. The course is not restricted to majors and cannot be repeated for credit.
- CLA 3930 Selected Topics (3) AS WLE**
An examination of various aspects of Greek and Roman Culture, based on ancient sources, literary and archaeological. Repeatable as topics vary.
- CLA 4930 Selected Topics (1-4) AS WLE**
Course content depends on student demand and instructor's interest and may range over the whole field of ancient languages, literatures and civilizations. Offerings on a semi-regular basis include Tongues of the Bible and the Bible as History.
- CLP 3003 Psychology of Adjustment SS (3) AS PSY**
Genetic, organic, and learned factors involved in the processes of personal adjustment; applications of mental health principles to everyday living.
- CLP 4143 Abnormal Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Descriptions, theoretical explanations, research evidence, and treatment of maladaptive behavior.
- CLP 4414 Behavior Modification (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Introduction to behavior analysis, and application of learning principles, behavioral measurement, research designs, and interventions in treatment settings.
- CLP 4433 Psychological Tests and Measurement (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Students may not receive credit for both CLP 4433 and EDF 4430. A consideration of the instruments for intellectual and personality assessment including their applications, development, and potential abuses.
- CLT 3040 Scientific and Medical Terminology (3) AS WLE**
A course in the Greek and Latin word elements used in science and technology.
- CLT 3101 Greek Literature in Translation 6A MW (3) AS WLE**
Reading and discussion of major works in Greek literature. Special emphasis on the Iliad, the dramatists Aeschylus, Sophocles, Euripides and Aristophanes. Some attention is given to the social and political background of the works. All readings are in English.
- CLT 3102 Roman Literature in Translation 6A MW (3) AS WLE**
Reading and discussion of major works in Roman literature. Special emphasis is placed on the Aeneid, comedy and satire. Some attention is given to the political background of the works. All readings are in English.
- CLT 3370 Classical Mythology HP (3) AS WLE**
Study of Greek and Roman myths embodied in classical literature and of their impact on Western civilization. All readings are in English.
- COM 2000 Introduction to Communication SS (3) AS SPE**
Introduction to the roles, contexts, and issues in contemporary human communication. Required of Communication majors.
- COM 3014 Communication, Gender and Identity (3) AS SPE**
Examines the communicative origins and implications of gender roles.
- COM 3110 Communication For Business and the Professions (3) AS SPE**
For non-majors only. Identification of communication situations specific to business and the professions. Analysis of variables related to communication objectives and preparation of oral presentations in the form of informational reports, conference management, persuasive communications, interviews, and public hearing.
- COM 3120 Introduction to Communication Theory in Organizations (3) AS SPE**
PR: majors, COM 2000 or CI; non-majors, COM 3122 or COM 3110 or CI. A survey of communication concepts which impact upon organizational effectiveness.
- COM 3122 Interview Communication (3) AS SPE**
Student must sign up for a one-hour lab if registering for day-time mass lecture class. A study of communication theory relative to interview situations with emphasis on the employment interview, appraisal interview, and persuasive interview. Student must sign up for a one-hour lab unless registering for night section of 3122.
- COM 3122L Interview Communication Lab (0) AS SPE**
Students must take this course in conjunction with the mass lecture COM 3122 offered during day. Interview laboratory for practice and individual consultation. Open to majors and non-majors.
- COM 4020 Communicating Illness, Grief, and Loss 6A (3) AS SPE**
PR: Junior/Senior standing or CI. Focus on stories of illness, grief, and loss to make sense of these experiences; to understand the cultural and rhetorical influences on how stories are told; and to explore the context of everyday life, romantic relationship, families, institutions, and culture in which they occur.
- COM 4022 Health Communication (3) AS SPE**
PR: GS. Application of communication theory and research to the health context including provider-patient communication, health information campaigns, and health beliefs and behavior. Special attention to the value issues in health communication.
- COM 4030 Women and Communication 6A MW (3) AS SPE**
Examines women's patterns of communication in a variety of contexts. Also offered under Women's Studies.
- COM 4124 Communication and Organizational Change (3) AS SPE**
PR: COM 3120 or CI. An advanced course covering current issues in organizational transformation (e.g., organizational dialogue, learning organizations, reengineering, work teams), and the role communication processes play in such changes.
- COM 4710 Writing Lives 6A (3) AS SPE**
PR: Junior/Senior standing or CI. Emphasizes writing stories about our lives and the lives of others as a way to understand, cope with and communicate social experiences.
- COM 4942 Communication Intern Seminar (3) AS SPE**
PR: Communication major, minimum GPA 3.0, 75 hours completed, 15 hours of core requirements and 9 elective hours completed, and CI. Seminar provides students with an opportunity to put into practice concepts and skills acquired in their study of communication. Weekly seminar sessions augment intern experience. Application for seminar must be submitted one semester prior to seminar offering.
- COM 5930 Topics in Communication Studies (3) AS SPE**
Topical issues in communication.
- COP 2120 SC Cobol Programming I (3) EN ESB**
Analysis of ANSI Standard COBOL language elements. Development of file structures and commercially oriented applications.
- COP 2121 SC Cobol Programming II (3) EN ESB**
PR: COP 2120. Advanced applications of ANSI Standard COBOL. Development of subroutines, relative I-O and data base applications as used in a comprehensive data processing environment.
- COP 2510 Programming Concepts (3) EN ESB**
PR: MAC 2281 or equivalent. An examination of a modern programming language emphasizing programming concepts and design methodology.
- COP 3451 IT Concepts (3) US EIT**
PR: Any PHY course. A lecture and problem solving course which deals with subjects related to computers and information technology. A broad range of conceptual and practical topics in IT are covered.
- COP 3514 Program Design (3) EN ESB**
PR: COP 2510 or comparable introductory programming course and DPR. The class extends students' programming knowledge by systematically considering the concepts involved in program design and creation. Students will also build upon their previous programming experience by learning to use the C programming language in a networked environment.
- COP 3515 Program Design for Information Technology (3) US EIT**
PR: COP 2510 or CI. Concepts associated with the design and implementation of computer programs are studied, with emphasis on creation of programs to be developed and maintained in a variety of environments from small to large information technology organizations.
- COP 4020 Programming Languages (3) EN ESB**
PR: EEL 4851C. An introduction to programming languages, survey of language types and design of translators and interpreters.
- COP 4313 Symbolic Computations in Mathematics 6A (3) AS MTH**
PR: MAS 3105 and MAP 2302. Students will write programs to solve problems in various areas of mathematics including calculus and linear algebra with symbolic programming systems such as Maple, Mathematica, or Macsyma.
- COP 4600 Operating Systems (3) EN ESB**
PR: EEL 4851C. Introduction to systems programming. Design of operating systems. Concurrent processing, synchronization, and storage management policies.
- COP 4610 Operating Systems for Information Technology (3) US EIT**
PR: EEL 4854 or CI. Introduction to concepts and practices of modern operating systems. Topics include process, parallelism, memory management, resource allocation and file systems. Algorithms are used to understand many of the concepts associated

- with operating systems.
- COP 4610L Operating Systems Laboratory for Information Technology (1) US EIT**
PR: EEL 4854 or CI. Implementation and evaluation of models discussed in the lecture part of the course. Students implement operating system algorithms in stand-alone mode, and modify real operating system code. Students implement and test algorithms in a lab environment.
- COP 4930 Information Technology Seminar (1-3) US EIT**
PR: Senior standing in Information Technology. A survey of current Information Technology topics are covered to keep the IT student abreast of the variety of domains associated with their major. Speakers with a wide variety of IT experience will give seminars to senior IT students.
- COT 3100 Introduction to Discrete Structures (3) EN ESB**
PR: MAC 2281 or equivalent. Introduction to set algebra, propositional calculus and finite algebraic structures as they apply to computer systems.
- COT 4210 Automata Theory and Formal Languages (3) EN ESB**
PR: COT 3100, EEL 4851C. Introduction to the theory and application of various types of computing devices and the languages they recognize.
- COT 4400 Analysis Of Algorithms (3) EN ESB**
PR: COT 3100, EEL 4851C. Design principles and analysis techniques applicable to various classes of computer algorithms frequently used in practice.
- CPO 2002 Introduction to Comparative Politics SS (3) AS POL**
Comparison and analysis of representative European and non-Western political systems.
- CPO 4034 Politics of the Developing Areas SS AF (3) AS POL**
An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.
- CPO 4204 Government and Politics of Africa SS AF (3) AS AFA**
Designed to provide the information and analytical tools necessary to interpret current Sub-Saharan African politics. Survey of political organization in traditional African societies; politics under colonial rule; the struggle for independence, and post-independence politics.
- CPO 4930 Comparative Government and Politics of Selected Countries or Areas (3) AS POL**
Studies political systems with common elements. Structure, process, domestic and foreign politics, and regional roles are considered.
- CPO 5934 Selected Topics in Comparative Politics (3) AS POL**
Sr./GS. Studies specific substantive areas in Comparative Politics, such as political economy or the politics of specific countries or regions.
- CRW 2100 Narration and Description 6A (3) AS ENG**
A study of narrative and descriptive techniques in prose. By making the student sensitive to language usage, it is designed to bridge the gap between expository writing and imaginative writing.
- CRW 3111 Form and Technique of Fiction 6A (3) AS ENG**
A study of short narrative forms such as the anecdote, tale, character sketch, incident, monologue, epistolary story, and short story as they have been used in the development of fiction and as they exist today.
- CRW 3112 Fiction I 6A (3) AS ENG**
PR: CRW 2100 or CRW 3111. An introduction to fiction writing, beginning with a practical study of the various elements of fiction and proceeding through the many processes of revision to arrive at a completed work of art.
- CRW 3121 Fiction II 6A (3) AS ENG**
PR: CRW 2100 or CRW 3111, CRW 3112. A fiction workshop which provides individual and peer guidance for the student's writing and which encourages the development of critical skills.
- CRW 3311 Form and Technique of Poetry (3) AS ENG**
An examination of the techniques employed in fixed forms from the couplet through the sonnet to such various forms as the rondel, ballad, villanelle, sestina, etc. Principles in the narrative, dramatic, and lyric modes are also explored.
- CRW 3312 Poetry I (3) AS ENG**
PR: CRW 3311. An introduction to poetry writing utilizing writing exercises employing poetic language and devices; the exercises progress to the writing of both rhymed and unrhymed metrical and non-metrical forms.
- CRW 3321 Poetry II (3) AS ENG**
PR: CRW 3311, CRW 3312. A poetry workshop which provides individual and peer guidance for the student's writing and which encourages the development of critical skills.
- CRW 4120 Fiction III (3) AS ENG**
PR: CRW 2100 or CRW 3111, CRW 3112, CRW 3121. An advanced fiction workshop in which works may be carried over from CRW 3121 or longer forms such as the novel may be begun.
- CRW 4320 Poetry III (3) AS ENG**
PR: CRW 3311, CRW 3312, CRW 3321. An advanced poetry workshop in which students are expected to create works exhibiting a firm knowledge of the principles explored in the preceding courses.
- CRW 4930 Selected Topics in Creative Writing (3) AS ENG**
PR: 12 hours of CRW courses or CI. The focus of the course will be governed by student demand and instructor interest. Topics to be covered may include writing the literary essay, writing in mixed genres, and utilizing popular conventions in serious works. May be taken twice for credit with different topics.
- CWR 4103 Water Resources Engineering I (3) EN EGX**
PR: CWR 4202. A study of the engineering principles involved in sustaining and managing the quantity and quality of water available for human activities with particular emphasis on surface water and ground water hydrology.
- CWR 4202 Hydraulics (3) EN EGX**
PR: EGN 3353. Fundamental and applied aspects of pipe flow, free surface flow, and unsteady flow for hydraulic systems.
- CWR 4541 Water Resources Engineering II (3) EN EGX**
PR: EGN 3353, CWR 4202. The course is intended to be a technical elective for students specializing in water resources or environmental engineering. Material in the course covers subsurface hydrology including both soil vadose zone processes and the ground water flow.
- CWR 4812 Capstone Water Resources/Environmental Design MW (3) EN EGX**
PR: CWR 4103, ENV 4001. A capstone water resources design experience for seniors in Civil and Environmental Engineering. A design oriented course to design both industrial and domestic water treatment, and water transport systems and hydraulic systems, including drainage, water supply, and flood control.
- DAA 2100 Fundamentals Of Modern Dance (2) VP DAN**
A studio class for students with a serious interest in concert modern dance. Emphasis on correct alignment, development of strength, rhythmic and dynamic activity as well as spatial and locomotor patterns that underlie the work in more advanced contemporary dance. May be repeated.
- DAA 2105 Modern Dance I (2) VP DAN**
PR: Admission by placement audition. A studio class for students with a serious interest in concert modern dance. Further emphasis on correct alignment, development of strength, rhythmic and dynamic activity as well as spatial and locomotor patterns that underlie the work in more advanced contemporary dance. May be repeated.
- DAA 2200 Fundamentals Of Ballet (2) VP DAN**
A studio class for students with a serious interest in Ballet. Emphasis on correct alignment of the body and a progressive development of positions and barre exercises as well as the application of combinations in center work using classical Ballet vocabulary (French terms). May be repeated.
- DAA 2205 Ballet I (2) VP DAN**
PR: Admission by placement audition. A studio class for students with a serious interest in Ballet. Further emphasis on correct alignment of the body and a progressive development of positions and barre exercises as well as the application of combinations in center work using classical Ballet vocabulary (French terms). May be repeated.
- DAA 2500 Fundamentals Of Jazz Dance (2) VP DAN**
A basic movement course in Jazz Dance involving dance vocabulary, alignment, styles and simple rhythmic movement patterns. May be repeated.
- DAA 2504 Jazz Dance (2) VP DAN**
PR: Admission by placement audition and DAA 2500. A technique class for the intermediate level dancer to become acquainted with the dance styles and forms of musical theatre and concert jazz dance. Emphasis is on highly stylized movement with a strong rhythmic base. May be repeated.
- DAA 2540 Theatre Dance Styles (2) VP DAN**
PR: DAA 2500 or DAA 2504 or CI. Development of technical skills in social and historical dance forms frequently stylized for use by dance choreographers. Forms to be studied will include polka, clogging, waltz, folk, tap dancing, etc.
- DAA 2570 Jazz Theatre Dance (3) VP DAN**
PR: Admission by placement audition and DAA 2504. Further emphasis on projection, phrasing, rhythmic patterns and dynamics. Solo and ensemble studies leading to performance.
- DAA 2760 Tai Chi (2) VP DAN**
This course is an introduction to the study of Tai Chi focusing on the philosophy and postures of this martial art. May be repeated.
- DAA 2761 Introduction to Yoga (2) VP DAN**
This course is designed to provide students with an understanding of basic Yoga philosophy and practice which includes postures,

320 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- meditation and breath techniques. May be repeated.
- DAA 3108 Modern Dance II (3) VP DAN**
PR: Admission by placement audition. Study of principles of modern dance technique. Practical work in exercises and movement phrases, utilizing changing rhythms and dynamics. Concert and performance attendance required. May be repeated.
- DAA 3109 Modern Dance III (2-3) VP DAN**
PR: Admission by placement audition. Continuation of DAA 3108. Further emphasis on style and phrasing. Work on projecting mood and quality by dancing and rehearsing in more advanced choreography, leading to performance. May be repeated.
- DAA 3208 Ballet II (3) VP DAN**
PR: Admission by placement audition. Positions and barre exercises. Emphasis on correct alignment of the body and the application of simple step combinations in centre work. The use of ballet vocabulary (French terms). Material is covered almost totally as practical work in class with a few outside projects. Concert and performance attendance required. May be repeated.
- DAA 3209 Ballet III (2-3) VP DAN**
PR: Admission by placement audition. Continuation of DAA 3208. Intensification of barre exercises for the development of strength and form. Application of phrasing and movement. Material covered as practical work in class for concerts and performances. May be repeated.
- DAA 3294 Ballet Variations (1) VP DAN**
PR: DAA 3209. This course provides instruction in various forms of ballet. Semester courses include: Pointe technique, Men's Class, Character Dance, Spanish Dance and Partnering. BFA Ballet concentration students are required to complete two semester hours. May be repeated.
- DAA 3394 World Dance Topics (1) VP DAN**
Students will experience fundamental knowledge of dance representing various world cultures. In addition to a dance/movement component, a connection will be made to historical, spiritual/religious, ethnological and environmental indigenous aspects of people involved in dance as a cultural experience. May be repeated.
- DAA 3614 Choreography I (2) VP DAN**
PR: DAN 3615. CR: DAA 3108 or above or CI. BFA students must be concurrently enrolled in Modern III/IV and Ballet III. Study and execution of basic principles of composition. Preparation of studies in theme and variations, breath phrases and metric phrases.
- DAA 3615 Choreography II (2) VP DAN**
PR: DAA 3614. Preparation of studies in rhythm, dynamics, form and motivation.
- DAA 3624 Dance Improvisation (2) VP DAN**
For majors and non-majors. Exploring various methods of spontaneously creating dance movement in individual and group situations. Structured and unstructured approaches will be explored. May be repeated.
- DAA 3654 Repertory (1) VP DAN**
PR: Admission by audition. The development and performance of solo and/or group dances.
- DAA 3686 Performance (1) VP DAN**
PR: Admission by audition. Open to all university students proficient in dance techniques and concurrently enrolled in Technique. Involves rehearsal and performance of works presented by the department. May be repeated.
- DAA 4111 Modern Dance IV (3-4) VP DAN**
PR: Admission by placement audition. Intense work on the growth of personal performance styles. Equal emphasis will be given to training the body in the development of technical excellence. May be repeated.
- DAA 4211 Ballet IV (3-4) VP DAN**
PR: Admission by placement audition or CI. Perfecting the execution of barre work. Intensification of centre work. More stress on aesthetic quality of movement and phrasing. Students expected to be proficient in pointe work. Outside projects, concerts, and performances are required. May be repeated.
- DAA 4616 Choreography III (2) VP DAN**
PR: DAA 3615. CR: DAA 3109 or above. Work directed toward duets and group dances. The students will submit choreographic ideas for instructor's approval, then proceed with rehearsals. Lec-lab., reading. Rehearsal hours to be arranged.
- DAA 4617 Choreography IV (2) VP DAN**
PR: DAA 4616. The student will prepare studies based on free form, minimal art, and chance methods. Lec-lab., reading.
- DAA 4694 Senior Choreography Project (1) VP DAN**
PR: Dance majors with senior standing. The creation of an original group work and solo within the senior's major concentration-ballet or modern. To be performed and presented with the concurrence of a faculty advisor.
- DAA 4920 Dance Studies (1-4) VP DAN**
PR: CI and CC. Dance Major status. Individual study to extended competency in technique and performance of Dance through participation in special workshops.
- DAE 3351 Ethnic/Folk Dance (2) VP DAN**
An exploration of ethnic and folk dance forms in various cultures of the eastern and western hemispheres. Students will investigate ways of doing, making, and teaching dances through studio work, videos, performances, and readings.
- DAE 4300 Dance Pedagogy: Theory and Practice (3) VP DAN**
PR: CI, CC. Designed to provide prospective teachers with opportunities to develop concepts of pedagogy based on principles of teaching/learning dance. Specific sections will focus on Secondary Curriculum and Methods and on Pre-K and Elementary Methods.
- DAE 4310 Dance Pedagogy: Pre-School to Elementary (3) VP DAN**
This course is designed to meet the needs of students in Dance Education to understand the scope and sequence of dance curriculum design and teaching methods appropriate to Pre-K and elementary students.
- DAE 4340 Dance Pedagogy: Secondary Curriculum (3) VP DAN**
This course is designed to meet the needs of students in Dance Education to understand the scope and sequence of dance curriculum design and teaching methods appropriate to the secondary student.
- DAE 4397 Special Studies Dance Education (3) VP DAN**
PR: CI and CC. PR: CI and CC. For majors and non-majors. Designed to provide prospective dance teachers with opportunities to develop concepts of pedagogy based on principles of teaching-learning in dance techniques and choreography. May be repeated up to 9 credit hours.
- DAE 4936 Senior Seminar in Dance Education (2) VP DAN**
CR: DAE 4940 This course represents a synthesis of the teacher Candidate's courses and is required concurrently with the internship.
- DAE 4940 Internship in Dance Education (1-12) VP DAN**
CR: DAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.
- DAN 2100 Introduction To Dance 6A FA (3) VP DAN**
For majors and non-dance majors, a study of the art and language of dance through lectures, discussions, concert attendance, and studio practice. Designed to develop awareness and insight of this art form through discussion, observation, writing, and movement experience.
- DAN 2160 Entry Seminar (2) VP DAN**
This is a study of dance-related career opportunities through lectures, assigned reading and video viewing. This course will aid majors in understanding dance as an aesthetic art form through discussion and critical evaluation.
- DAN 3584 Practicum In Dance Production (2) VP DAN**
A practicum in mounting dance concerts with shop work and backstage participation. Intended for students working in costuming, set preparation, light presentation, stage management and production crew. Dance majors must have at least 4 credits for graduation accumulated in two different semesters. 40 hour lab required. May be repeated.
- DAN 3614 Music For Dance (2) VP DAN**
PR: Designed for majors and non-majors. Development of musical skills in movement studies. Continued study of the inter-relationship of music and dance through movement experiences, observations, video, and writing.
- DAN 3615 Music For Dance II (2) VP DAN**
PR: DAN 3614. Development of practical music skills in relation to dance. Continued problems in rhythmic materials and the relationship of music forms to dance. Elements within historical context.
- DAN 3714 Dance Kinesiology (3) VP DAN**
This course will give the student an understanding of basic human anatomy and how it functions in relation to movement, injury prevention, teaching and performance. Individual structural differences and how these affect movement potential will also be studied. There will be an emphasis on the kinesiological analysis of movement with the goal of increased efficiency, enhanced performance and injury prevention.
- DAN 4134 Dance History Through the 19th Century 6A XLW (3) VP DAN**
Designed for majors and non-majors, this course will present a comprehensive view of the evolution of dance as an art form from

- its origins through the 19th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing.
- DAN 4135 20th Century Dance XMW (3) VP DAN**
Designed for majors and non-majors, this course will trace the development of dance as an art form in the 20th Century. It is designed to develop awareness and insight through lecture, discussion, video, observation and writing. Students will be required to attend at least two dance performances.
- DAN 4181 Dance Senior Seminar (2) VP DAN**
PR: Dance major with senior status. A study of career opportunities in performance, teaching, research, design, and choreography. To aid majors in self-appraisal as artists and develop methods to further their potential in the professional world. Discussion, critical evaluation and projects.
- DAN 4404 Laban Movement Analysis (3) VP DAN**
Specialized study in movement theories, body alignment, and movement patterns focusing on the scientific and analytical basis of movement in dance with consideration for developmental processes, technique, creative expression, and performance.
- DAN 4906 Directed Study (1-5) VP DAN**
PR: Cl. CC. Independent studies in the various areas of Dance. Must receive approval prior to registration. May be repeated.
- DAN 4930 Selected Topics in Dance (1-5) VP DAN**
PR: Cl and CC. The content of the course will be governed by student and instructor interest. May be repeated by majors.
- DEC 4161 Program Management of Distributive and Marketing Education (3) ED EDV**
The study of the purposes, processes, organization, planning, directing, coordinating and evaluation of Distributive and Marketing Education Cooperative Programs.
- DEP 2004 The Life Cycle (3) AS GEY**
An examination of individuals and the physical, cognitive, personality, and social changes which occur throughout the entire life span.
- DEP 3103 Child Psychology SS (3) AS PSY**
Not for major credit. Developmental and psychosocial aspects of childhood, including hereditary, maturational, psychological, and social determinants of child behavior.
- DEP 4005 Developmental Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or Cl. Survey of methods, empirical findings, and theoretical interpretations in the study of human development.
- DEP 4135 Psychology of Language Development (3) AS PSY**
PR: PSY 3213 with a grade of C or better or Cl. Available both to majors and non-majors. Surveys the course of and processes underlying normal language development. Presents data and theory on phonological, semantic, syntactic, and pragmatic development.
- EAB 4715 Supervised Practicum and Field Experience in Applied Behavior Analysis (1-6) AS PSY**
PR: PSY 4933 with a grade of B or better. Does not count toward major credit. (S/U only). Field experience in Behavior Analysis in applied settings. Under the supervision, involves the design, implementation and evaluation of behavior analysis methods in applied settings. Includes both field practicum and didactic components. May be repeated for a maximum of 6 hours. Does not count toward major credit (S/U only).
- EAP 1850 English for Foreign Students I (3) AS WLE**
A special course for students learning English as a second language. Intensive study and drill in American English pronunciation and listening comprehension.
- EAP 1851 English for Foreign Students II (3) AS WLE**
PR: EAP 1850 or Cl. A continuation of EAP 1850. Emphasis on reading and composition.
- EAS 4121 Hydro and Aerodynamics (3) EN EGR**
PR: EML 3701, MAP 2302. Advanced fluid dynamics, ideal and viscous flows, applications to flow around immersed bodies.
- ECH 3023C Process Engineering 1: Algebraic and Graphical Description (4) EN ECH**
PR: EGN 3343. CR: CHM 4410 or ECH 4123C. Integration of previous knowledge into the definition of reactors and separation processes, through the hierarchical use of material balance, phenomenological and energy balance equations. Representation of streams as arrows and processes as black boxes in Box Flow Diagrams, BFD. Application of degree of freedom analysis.
- ECH 3023L Chemical Engineering Lab I (1) EN ECH**
PR: EGN 3343; CP: ECH 3023C The theory and application of chemical engineering instrumental measurement methods: density, temperature, flow, pressure, viscosity, refractive index, humidity, gaseous and liquid composition, and pH/ion selective electrodes (ISE) analysis.
- ECH 3702 Instrument Systems I (4) EN ECH**
PR: EGN 3373. Application of discrete logic operations for sensor interfaced and process control situations in Chemical & Mechanical Engineering, use of programmable logic controllers in process control. Introduction to the use of personal computer I/O interface cards of control application.
- ECH 4123 Chemical Engineering Thermodynamics (3) EN ECH**
PR: EGN 3343 Correlation of thermodynamic properties of real systems and solutions. Description of multicomponent, multiphase systems in equilibrium. Applications to separation processes and reactor design.
- ECH 4264 Transport Phenomena (4) EN ECH**
PR: MAP 2302, EGN 3343. Mathematical description and solution of fundamental problems in heat, mass and momentum transfer. Estimation of transport coefficients. Application in fluid flow and heat exchange.
- ECH 4265C Process Engineering 2: Separation Processes (4) EN ECH**
PR: ECH 3023C, ECH 4264, CHM 4410 or ECH 4123C. Integration of phase equilibria with the principles of fluid mechanics, heat and mass transfer in the description of separation processes. Selection of the number of stages and limiting operating conditions in cascades — NTU and HTU. Sizing of partial condensers and pressure differential in columns. Transfer to single particles.
- ECH 4265L Chemical Engineering Laboratory II (1) EN ECH**
CP: ECH 4265C. Chemical Engineering processes laboratory experiments: fluid flow, heat transfer, phase and chemical equilibria, reacting systems, and process control.
- ECH 4323C Automatic Control I (4) EN ECH**
PR: ECH 4265C, ECH 4415C, MAP 2302. Analysis of factors affecting process dynamics. Instrumentation required for control system design. Modes of control and feedback controllers. Stability. Design case studies. Simulation of processes.
- ECH 4415L Chemical Engineering Lab III (1) EN ECH**
Chemical Engineering Processes laboratory experiments: fluid flow, heat transfer, reacting systems, and process control.
- ECH 4615 Plant Design MW (4) EN ECH**
PR: ECH 4415C, ECH 4845; CP: ECH 4323C. Synthesis and analysis of economically feasible and environmentally acceptable chemical processing routes. Design of chemical production facilities including waste disposal and treatment facilities. Chemical product design and quality. Social, economic and employment issues in Chemical Processing Industry. Computer-Aided Design. Case studies and Design Project.
- ECH 4845 Quantitative Methods in Chemical Engineering (3) EN ECH**
PR: ECH 3023C, ECH 4264, MAP 2302. Modeling and analysis of Chemical Engineering Systems; Numerical solution of sets of non-linear equations, ordinary and partial differential equations, optimization.
- ECH 4905 Independent Study (1-4) EN ECH**
PR: Cl. Specialized independent study determined by the student's needs and interests. Students must have contract with instructor.
- ECH 4930 Special Topics in Chemical Engineering (1-4) EN ECH**
PR: CC.
- ECH 4931 Special Topics in Chemical Engineering (1-4) EN ECH**
PR: Cl.
- ECH 4936 Undergraduate Seminar (1) EN ECH**
PR: ECH 3023C Introduction to the profession. Career development. Information sources for Chemical Engineers. Professional organizations. Ethics in the profession. Safety and Chemical Engineering. Lifelong learning. Leadership in the profession. Legal issues.
- ECH 5324 Automatic Process Control II (3) EN ECH**
PR: ECH 4323C or Cl, majors only / 2 hrs lec., 3 hrs. lab/week. The course covers the root locus and frequency response methods to study stability of control loops. The techniques of ratio, cascade, feed forward, selective, override, and multi-variable control techniques are discussed in detail and shown how to utilize to design control systems, z-transforms and discrete controllers including PID, Dahlin and deadline compensation.
- ECH 5740 Theory and Design of Bioprocesses (3) EN ECH**
Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.
- ECH 5742 Pharmaceutical Engineering (2) EN ECH**
Introduction to pharmaceutical engineering, including dosage forms (tablets, capsules, powders, liquids, topical forms, and aerosols), recipients, regulatory issues, clinical studies, and good manufacturing practices.

ECH 5747C Selected Topics in Chemical Engineering Biotechnology (1-3) EN ECH

PR: Senior or GS standing in engineering or CI. Open to majors and non-majors with CI. Selected topics in engineering in biotechnology, including cell separation technology, immobilized enzymes and cells, food engineering, biohazardous waste, and bioseparations.

ECH 5820 Product Development (2) EN ECH

Introduction to the development of consumer products, including the history of innovation, creativity development, the product development environment, and a detailed examination of several product areas.

ECH 5820 Product Development (2) EN ECH

PR: Senior or GS in Engineering or CI. Introduction to the development of consumer products, including the history of innovation, creativity development, the product development environment, and a detailed examination of several product areas.

ECH 5930 Special Topics III (1-4) EN ECH

PR: CI.

ECH 5931 Special Topics IV (1-4) EN ECH

PR: CI.

ECO 1000 Basic Economics SS (3) BA ECN

No credit after completing either ECO 2023 or ECO 2013. Survey of economic principles and issues. Scarcity, choice, markets, prices, the monetary system, unemployment, inflation, international trade and finance.

ECO 2013 Economic Principles (Macroeconomics) SS (3) BA ECN

Introduction to the theory of income determination with emphasis on monetary and fiscal policies. Objectives of full employment, price stability, economic growth and balance of payments stability.

ECO 2023 Economic Principles (Microeconomics) SS (3) BA ECN

Introduction to the theory of price determination. How an economy decides what to produce, how to produce, and how to distribute goods and services.

ECO 2935 Selected Topics In Economics (1-3) BA ECN

Not available for credit to upper-level students admitted to the College of Business. Topics selected by department. May be repeated if topics vary.

ECO 3100 Managerial Economics (3) BA ECN

PR: ECO 2023. Application of microeconomic theory to problems in business decision making with a special focus on price determination. May not receive credit for both ECO 3100 and ECO 3101.

ECO 3101 Intermediate Price Theory (3) BA ECN

PR: ECO 2023. The price system and allocation of scarce resources between competing uses. May not receive credit for both ECO 3100 and ECO 3101.

ECO 3203 Intermediate Macroeconomics (3) BA ECN

PR: ECO 2013 and ECO 3100 or ECO 3101 with a grade of "C" or better. Determination of income, employment, prices, and interest rates. Aggregate demand and aggregate supply.

ECO 3622 American Economic History (3) BA ECN

PR: ECO 2013 and ECO 2023. Growth and evolution of American economic institutions from Colonial times to the present.

ECO 3703 International Economics MW (3) BA ECN

PR: ECO 2013 and ECO 2023. Role of international trade in the U.S. economy. Gains from trade, balance of payments, exchange rate determination, balance of payments stability, and international commercial policy.

ECO 4105 Advanced Price Theory (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "B" or better. An advanced survey of special topics in microeconomics: borrowing and saving, decision making under uncertainty, markets for capital and labor, game theory, production and exchange efficiency, social welfare, and efficiency consequences of market and non-market allocation.

ECO 4201 Advanced Macroeconomic Theory (3) BA ECN

PR: ECO 3203 with a grade of "B" or better. An advanced analysis of a particular topic or topics in macroeconomics. Areas of study include the theories of money, growth, and business cycles. Discussions of how such theories accord with the data area also presented.

ECO 4303 History Of Economic Thought (3) BA ECN

PR: ECO 2013 and ECO 2023. Development of economic thought from Plato to Marshall.

ECO 4323 Radical Political Economy MW (3) BA ECN

PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. The radical (left) and Marxist schools of thought in economics. Application of radical theory to problems of advanced capitalist and socialist societies.

ECO 4401 Introduction to Mathematical Economics (3) BA ECN

PR: ECO 3100 or 3101, and MAC 2241 or MAC 2233 or CI. Mathematical models of optimizing behavior and economic

equilibrium.

ECO 4421 Introduction to Econometrics (3) BA ECN

PR: ECO 3100 or 3101, and QMB 3200 with a grade of "B" or better or CI. Survey of basic econometric techniques. Regression analysis employed to estimate consumption, investment, demand, cost, and production functions. Examines problems of auto-correlation, heteroscedasticity, multicollinearity, and specification errors.

ECO 4504 Public Finance (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "C" or better. The public sector and its contribution to economic welfare. Government expenditures and revenues. Resource allocation, income distribution, stabilization, and economic growth.

ECO 4713 International Macroeconomics (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "C" or better. Advanced analysis of international macroeconomic relationships. Foreign exchange market, international monetary system balance of payments.

ECO 4723 International Trade and Policy (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "C" or better. Advanced analysis of international trade theory and commercial policy, international economic integration, multinational enterprise.

ECO 4905 Independent Study (1-3) BA ECN

PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. May be repeated up to 6 hours.

ECO 4914 Independent Research (1-3) BA ECN

PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor. May be repeated up to 6 hours.

ECO 4935 Selected Topics in Economics (1-3) BA ECN

Topics to be selected by the instructor or instructors on pertinent economic issues.

ECP 3201 Economics of Women and Work MW (3) BA ECN

PR: ECO 1000 or ECO 2013 and ECO 2023. Survey of research on women, men and work in the labor market and the household. Focuses on the economic status of women. Includes historical perspective, examination of the family as an economic unit, changing work roles, and gender differences in occupation and earnings.

ECP 3203 Labor Economics (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "C" or better. Determinants of wage and employment levels; occupational, industrial and geographical wage differentials; union and public policy effects on labor markets; the economics of discrimination; inflation, and unemployment.

ECP 3302 Environmental Economics MW (3) BA ECN

PR: ECO 2023. An economic analysis of environmental issues. The economics of resource use and pollution control are examined using the concepts of externalities, cost-benefit analysis, public goods, and property rights.

ECP 3413 Economics of Regulation and Antitrust (3) BA ECN

PR: ECO 2013 and ECO 2023. Economic analysis of the rationale and performance of government regulation and antitrust policy. Examination of antitrust issues such as price fixing, mergers, and monopolization, and issues regulating electric utilities, airlines, trucking, consumer product safety, product quality, and the environment.

ECP 3530 Economics of Health (3) BA ECN

PR: ECO 3100 or ECO 3101 with a grade of "C" or better. Application of economic methods to health care topics such as demand for medical care, public and private health insurance, physician and hospital supply of medical care, government regulations, and national healthcare systems.

ECP 3613 Economics of the Urban Environment MW (3) BA ECN

PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. Economic analysis of cities and urban social problems. Poverty, discrimination, housing, transportation, pollution, crime, and fiscal considerations.

ECP 4232 Collective Bargaining and Public Policy (3) BA ECN

PR: ECO 2023 or CI. Administration of labor management agreements. Impact of the government role in collective bargaining and labor relations.

ECP 4451 Law and Economics (3) BA ECN

PR: ECO 2013 and ECO 2023. Advanced analysis of the economic impact of tort, criminal, property, and contract law as well as in the formation and adjudication of law.

ECP 4505 Economics of Crime (3) BA ECN

PR: ECO 2013 and ECO 2023. Application of economic theory to the analyses of criminal behavior, crime prevention, law enforcement, sanctions, and corrections.

ECS 3013 Economic Development (3) BA ECN

- PR: ECO 2013 and ECO 2023. Economic development in emerging nations.
- ECS 4003 Comparative Economic Systems MW (3) BA ECN**
PR: ECO 1000 or ECO 2013 or ECO 2023 or CI. The major economic systems: traditional, capitalism, democratic socialism, communism and fascism.
- EDE 4301 Classroom Management, School Safety, Ethics, Law and Elementary Methods (3) ED EDE**
PR: Admission to the program in the Department of Childhood Education. This course examines the legal issues affecting classroom/school management, school safety, professional ethics and elementary school methods. The course explores the current knowledge of best practices of a variety of teaching and management strategies and methods deemed appropriate for a diverse elementary classroom setting including ESOL students and other exceptionalities.
- EDE 4905 Independent Study: Elementary Education (1-4) ED EDE**
S/U only. Specialized independent study determined by the student's needs and interests.
- EDE 4909 Directed Study: Elementary Education (1-4) ED EDE**
PR: Senior standing. To extend competency in teaching field.
- EDE 4940 Internship: Elementary Education (10-12) ED EDE**
PR: EDE 4941 and EDE 4942; CR: EDE 4936. S/U only. Teacher candidate is required to demonstrate professional competencies during one semester of full day internship in a public or private elementary school.
- EDE 4941 Childhood Education Internship Level I (3) ED EDE**
PR: Admission to the Elementary Education. CR: RED 4310, EDG 4620. Concurrent enrollment in EDG 4620-Elementary section. S/U only. Students spend six hours per week in a supervised in-school experience and attend weekly seminar.
- EDE 4942 Childhood Education Internship Level II (6) ED EDE**
PR: EDE 4941, RED 4310, EDG 4620, EDF 3122, LAE 4314, EDE 4301, MAE 4310, SCE 4310, LAE 4414, SSE 4313, EME 2040. S/U only. Students spend 12 hours per week in a supervised internship experience in classroom settings and attend a weekly seminar.
- EDF 2005 Introduction to Education and Field Experience (3) ED EDC**
Introductory survey course required for admission into the College of Education. A broad overview of the history, sociology and philosophy of education in the United States focuses on education as a field of study and teaching as a profession. Includes lecture and field experience.
- EDF 3122 Learning and the Developing Child (3) ED EDF**
PR: General psychology and admission to College of Education. Preadolescent child growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of classroom.
- EDF 3214 Human Development And Learning (3) ED EDF**
PR: General psychology and admission to College of Education. Application of respondent and operant learning principles to classroom learning, teaching models for different instructional goals, analysis of teacher behavior, micro-teaching.
- EDF 3228 Human Behavior and Environmental Selection 6A MW(3) ED EDF**
Learning principles, behavior analysis applied to global environmental and social issues. Requires elementary computer word processing skills.
- EDF 3604 Social Foundations of Education MW (3) ED EDF**
PR: Upper level standing. Social, economic and political context within which schools function and the values which provide direction for our schools.
- EDF 4111 Child Growth and Learning (3) ED EDF**
An introduction to child development and learning from an educational and psychological perspective. Emphasis is on the application of relevant constructs as they would reflect developmentally appropriate practices in early childhood learning settings.
- EDF 4131 Learning And The Developing Adolescent (3) ED EDF**
PR: General psychology and admission to College of Education. Adolescent growth and development, learning theory, and behavioral analysis applied to instruction and to the organization and management of the classroom.
- EDF 4430 Measurement For Teachers (3) ED EDQ**
PR: Upper level standing. Concepts and skills related to designing and developing classroom tests; evaluating tests, instruction, and student progress; and communicating student achievement. Including application of performance assessment techniques and computer applications for measuring and assessing pupil progress.
- EDF 4905 Independent Study: Educational Foundations (1-4) ED EDF**
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.
- EDF 4909 Directed Study: Educational Foundations (1-3) ED EDF**
PR: Senior Standing. Offered only as a scheduled class. To extend competency in teaching field.
- EDF 5607 Trends in the Social-Political Foundations of Schooling in the US (3) ED EDF**
Current debates re: purpose and practice of formal schooling in the U.S. with historical and sociological perspectives. Satisfies social foundations requirements for Fla. Teacher certification and ESL competency in knowledge of intercultural issues in education.
- EDG 2701 Teaching Diverse Populations and Field Experience (3) ED EDC**
Introductory survey course required for admission into the College of Education. Places schools and teaching within the context of the U.S. as a pluralistic society. Topics include: the demographics of diversity; prejudice; elements of culture; American heritage of diversity and its value; and barriers to cultural understanding. Includes lecture and field experience.
- EDG 4320 Introduction to Creative Drama (3) VP EDD**
This course for classroom teachers introduces the theory and practice of creative drama as it applies to use by elementary, middle school and secondary school teachers. Beginning with a study of dramatic play as it relates to human development, the course includes basic strategies when using pantomime, voice improvisation, theatre games, and role playing and story dramatization.
- EDG 4620 Curriculum and Instruction (3) ED EDC**
An introduction to the field of curriculum and instruction. Emphasis is placed on principles of curriculum development and use of instructional strategies. Students will develop, implement, and evaluate a variety of lesson plans.
- EDG 4909 Directed Studies (1-4) ED EDC**
PR: Senior standing. Offered only as a scheduled class. Department permit required. To extend competency in teaching field.
- EEC 2000 Introduction to Early Childhood Education (3) ED EDU**
An overview of early childhood education with emphasis on its historical development, current theories, and practices.
- EEC 4008 Literature in Early Childhood Education 6A LW (3) ED EDU**
Jr./Sr. Standing. Emphasis is placed on developing knowledge of literature for younger children (0-8 yrs.) and methodologies and strategies for utilizing literature to teach literacy in content areas of the curriculum.
- EEC 4203 Programs for Young Children (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Develops students' understanding of historical and social foundations of early childhood education, establishing professional beliefs regarding teaching young children, and developing an appropriate learning environment.
- EEC 4211 Integrated Curriculum: Science and Mathematics (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of science and mathematical concepts for the appropriate stages of cognitive development of young children. Emphasis will be placed on how science and mathematics are integrated throughout the curriculum and become valued functional tools.
- EEC 4212 Integrated Curriculum: Social Sciences/Humanities & Art (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Develops an understanding of appropriate curriculum experiences in social science, humanities, and arts for kindergarten and primary grades with an emphasis on integrated experiences, and sociological influences such as culture, ethnicity, language and gender impact understandings, values, and learning.
- EEC 4300 Cognitive Experiences for Young Children (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Emphasizes theoretical and practical aspects of cognitive development for children ages 3 through 6 with focus on planning integrated experiences and content in science, mathematics, and social sciences.
- EEC 4303 Creative and Affective Experiences for Young Children (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Develops students' understandings of young children's creative expression through art, music, movement, play and drama. Emphasizes how to plan, implement, and evaluate appropriate learning experiences as well as selection of appropriate instructional materials.
- EEC 4408 Child, Family & Teacher Relations (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood

majors only. Focuses on developing an understanding of traditional and non-traditional families, structural and life style variations and parenting in diverse cultures and at-risk families. Implications from these understandings will guide development of a parent involvement plan that includes effective ways to communicate with parents, conference with parents, and plan parent meetings and home visits.

- EEC 4706 Language and Emerging Literacy (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Provides knowledge of language development and emerging literacy for typical and atypical development in children from birth to third grade, including ESOL children.
- EEC 4905 Independent Study: Early Childhood Education (1-4) ED EDU**
PR: S/U only. Early Childhood majors only. Specialized independent study determined by the student's needs and interests.
- EEC 4909 Directed Study: Early Childhood Education (1-3) ED EDU**
PR: Senior standing. To extend knowledge in teaching field.
- EEC 4936 Senior Seminar in Elementary Early Childhood Education (2) ED EDU**
PR: Senior standing; CR: EEC 4940. Synthesis of teacher candidate's courses in complete college program.
- EEC 4940 Internship: Early Childhood (10-12) ED EDU**
CR: EEC 4936. S/U only. Teacher candidate is required to demonstrate professional competencies during one semester of full-day internship in a public or private elementary school.
- EEC 4941 Field Experience I (3) ED EDU**
PR: Admission to College of Education. Early Childhood majors only. Field placement with three and four year olds where teacher candidates have opportunities to apply knowledge and skills in authentic situations and become objective observers of young children's development. Weekly seminars are conducted in conjunction with the field experience which provide teacher candidates an opportunity for reflection on their understandings.
- EEC 4942 Field Experience II (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Emphasis on developing deeper understanding of children's development and implications of development for program planning for both typical and atypical children.
- EEC 4943 Field Experience III (3) ED EDU**
PR: Admission to College of Education, EDF 4111. Early Childhood majors only. Field placement in kindergarten or primary grade where teacher candidates have opportunities to apply knowledge and skills in authentic situations. Focus on developing deeper understanding of growth and development and relationship to curriculum planning with an emphasis on self-evaluation of knowledge, skills, and dispositions essential for teaching.
- EED 4011 Introduction to Behavior Disorders (3) ED EDS**
PR: EEX 4011, or equivalent or DPR. Survey of emotional, behavioral and social disorders in children and youth. History of the field, definitions, classifications, theoretical approaches, intervention techniques, classroom management, service delivery models, trends and issues.
- EED 4909 Directed Study: Behavior Disorders (1-3) ED EDS**
PR: Senior standing, DPR. To extend competency in teaching field.
- EED 4941 Undergraduate Supervised Practicum in Behavior Disorders (1-6) ED EDS**
PR: EEX 4011. S/U only. DPR. Supervised field experience in assessment, classroom management, and clinical teaching with children who have emotional and behavioral disabilities.
- EEL 2161 Electrical Engineering Computer Methods (3) EN EGE**
Use of computers to perform analysis, simulation, and design of Electrical Engineering systems. Use of computer systems, including Internet resources. Use of analytical software. Computer programming in C++ for the solution of Electrical Engineering problems.
- EEL 3100 Network Analysis and Design (3) EN EGE**
PR: EGN 3373. A second course in linear circuit analysis and design. Transient and steady-state responses of passive R-L-C networks to various functions.
- EEL 3302 Electronics I (3) EN EGE**
PR: EGN 3373. A course in the physical principles of electronic devices with emphasis on semi-conductor electronics. Includes the analysis and design of amplifiers and switching circuits.
- EEL 4030 Electrical Systems Environments (3) EN EGE**
PR: MAP 2302 and PR: PHY 2049. Dynamics, vibration, thermodynamics, and heat transfer in electrical, electronic, and electromechanical systems and their environments.
- EEL 4102 Linear Systems Analysis (3) EN EGE**
PR: EEL 3100. Provides further study in the analysis of linear networks and systems. Includes time and frequency domain points of view. Laplace, Fourier and superposition integrals.
- EEL 4243 Switching Power Supply Design (3) EN EGE**
PR: EEL 4301 Provides the basic principles of switching power supply circuits: magnetic circuits, power semiconductors, Buck, Boost, and Flyback configurations, dc to dc converters, dc to ac inverters. Requires the design and construction of a switching power supply.
- EEL 4301 Electronics II (3) EN EGE**
PR: EEL 3302. Provides further study in electronic circuits. Includes feedback and frequency response techniques in amplifier design.
- EEL 4305 Communications Electronics (3) EN EGE**
PR: EEL 4301 Provides the basic principles of RF communications circuits including oscillators, mixers, high frequency amplifiers, etc. Requires the design and implementation of a short range communications link including a transmitter and a superheterodyne receiver.
- EEL 4351C Semiconductor Devices (3) EN EGE**
PR: EEL 3302. An introduction to the fundamentals of semiconductor materials and semiconductor device operation.
- EEL 4420 RF & Microwave Measurements (2-3) EN EGE**
PR: EEL 4316L or CI. This course introduces students to the theory and applications of modern radio frequency and microwave measurements. Topics to be included are network analyzer, spectrum analyzer, noise, power, and non-linear distortion measurements. Modern trends also treated are the use of on-wafer measurements for transistor characterization and the evaluation of monolithic microwave integrated circuits.
- EEL 4421 RF/Microwave Circuits I (3) EN EGE**
PR: EEL 3100, EEL 4471. Introduction to passive microwave circuit design. Investigate the characteristics of transmission lines used in modern microwave systems, the tools used for analysis, and some common circuit topologies for matching, filtering and power distribution. Part one of a two-part sequence. EE majors only. Not available on an S/U basis.
- EEL 4422 RF/Microwave Circuits II (3) EN EGE**
PR: EEL 4421. Introduction to active RF/Microwave circuit design. Investigate the characteristics of amplifiers and oscillators used in modern microwave systems, the tools used for analysis, and some common circuit topologies for biasing and matching. Substantial coverage of stability analysis, constant gain methods and noise figure. Part two of a two-part sequence. EE majors only. Not available on an S/U basis.
- EEL 4471 Electromagnetics MW (3) EN EGE**
PR: MAP 2302, PHY 2049, PHY 2049L and EE majors or CI. Electromagnetic field theory, including static and dynamic electromagnetic fields; applications; environmental effects (effects of radiation, magnetic fields).
- EEL 4512C Introduction to Communication Systems (3) EN EGE**
PR: EEL 4102. Provides an introduction to the fundamental principles and techniques of analog and digital communication systems. Theory is put into practice by investigating a variety of applications. Lectures and projects develop understanding of modern communication systems design and analysis.
- EEL 4567 Electro-Optics (3) EN EGE**
PR: EEL 3301L, EEL 3302L, EEL 3410. An introduction to the field of electro-optics, including visible and infra-red sources and detectors, radiometry, optical and electronic components, and fiber optics.
- EEL 4657 Linear Control Systems (3) EN EGE**
PR: EEL 3100. Introduction to analysis and design of linear feedback control systems. Covers block diagram, flow charts. Bode, Nyquist, and root locus techniques.
- EEL 4705 Logic Design (3) EN EGE**
PR: EGN 3373, CR: EEL 4705L; for CS & E students CP: COP 2002. Binary number systems; truth functions; Boolean algebra; canonical forms; minimization of combinational logic circuits; synchronous logic circuits in computers.
- EEL 4705L Logic Laboratory (1) EN EGE**
CR: EEL 4705. Develop designs and demonstrate logic concepts. Schematic capture for design implementation, simulation and design verification.
- EEL 4743L Microprocessor Laboratory (1) EN EGE**
CR: EEL 4744. Application of microprocessors and microcontrollers for data entry, processing, display and real time signal input/output and control.
- EEL 4744 Microprocessor Principles and Applications (3) EN EGE**
PR: EEL 4705 and EEL 4705L. CR: EEL 4743L. Functional Description. Arithmetic and Logic capabilities. Control and Timing.

- Interrupts and priority systems. Software design and documentation. Distributed function processing.
- EEL 4748 Microprocessor-Based System Design and Application (3) EN ESB**
PR: CDA 3201, CDA 3201L. Study of techniques for design of microprocessor-based systems used in various applications. Includes a project on development of an experimental application system.
- EEL 4756 Signal and Image Processing (3) EN ESB**
PR: EGN 4450, EEL 4851C. Sampling and quantization of signals and images; frequency-domain representations, transforms; filtering, convolution, and correlation; low-level image analysis algorithms; color images; fast methods and parallelism.
- EEL 4781C Distributed Processing and Computer Networks (3) EN ESB**
PR: EEL 4851C. Design and analysis of distributed processing systems. Covers communication hardware and software, network operating systems, and reliability enhancement techniques.
- EEL 4782 Computer Information Networks for Information Technology (3) US EIT**
The course covers concepts of computer networks. Physical and logical structures are presented. Physical media, circuit switching, data flow, high-level protocols, and the ISO model are discussed. Bus, ring, star, and wireless topologies are presented.
- EEL 4782L Information Networks Laboratory for Information Technology (1) US EIT**
CR: COP 4610 or CI. The lab section of this course will allow students to apply hardware and software concepts discussed in the lecture portion of the class. Special isolated networking labs provide both software and hardware tools for student experimentation.
- EEL 4851C Data Structures (3) EN ESB**
PR: CDA 3103, COP 3514. Fundamentals of data organization for purposes of program efficiency, clarity and simplicity will be addressed.
- EEL 4852C Data Base Systems (3) EN ESB**
PR: EEL 4851C. Fundamentals of data base management systems. CODASYL, network, hierarchical, and relational data base systems are analyzed, and typical applications are presented.
- EEL 4854 Data Structures and Algorithms for Information Technology (3) US EIT**
PR: COP 3515 or CI. Representing data for manipulation by the computer is studied. Design and analysis of well-known data structures and algorithms to manipulate them, are studied. Program efficiency, clarity and speed are considered in various structures and algorithms.
- EEL 4905 Independent Study (1-5) EN EGE**
PR: CI. S/U only. Specialized independent study determined by the students' needs and interests.
- EEL 4906 Professional Issues and Engineering Design MW (2) EN EGE**
PR: EEL 4102; CR: EEL 4301, EEL 4512C, EEL 4657, EEL 4744. An introduction of engineering design with applications specific to practical engineering problems. Included are discussion of real-world issues as economics, safety, ethics and the environment.
- EEL 4914 Senior Project Design (3) EN EGE**
PR: EEL 4906 and Senior Standing, CI. Students apply the knowledge acquired in the classroom to design a system which meets a predetermined set of specifications. Students work individually or in small groups with a faculty member (project director) in their area of interest. (Majors only.)
- EEL 4935 Special Electrical Engineering Topics I (1-4) EN EGE**
EEL 4936 Special Electrical Engineering Topics II (1-4) EN EGE
EEL 4937 Special Electrical Engineering Topics III (1-4) EN EGE
EEL 5250 Power System Analysis (3) EN EGE
PR: EGN 3375. Analysis and design technique for AC power systems.
- EEL 5344C Digital CMOS/VLSI Design (3) EN EGE**
PR: EEL 4705 or GS. Design, layout, simulation, and test of custom digital CMOS/VLSI chips, using a CMOS cell library and state-of-the-art CAD tools. Digital CMOS static and dynamic gates, flip flops, CMOS array structures commonly used in digital systems. Top down design example of a bit slice processor.
- EEL 5356 Integrated Circuit Technology (3) EN EGE**
PR: EEL 4351 or GS. Physics and Chemistry of integrated circuit and discrete device fabrication, materials limitations, processing schemes, failure and yield analysis. A laboratory is integral to the course.
- EEL 5357 Analog CMOS/VLSI Design (3) EN EGE**
PR: EEL 4301 or GS. Design of analog circuits for CMOS/VLSI design. Op amps, comparators, D to A and A to D converters. Switched capacitor filters. Analog simulation.
- EEL 5382 Physical Basis Of Microelectronics (3) EN EGE**
PR: EEL 4471 or GS. Quantum mechanics with emphasis on electronic properties in atoms, molecules, and crystals; quantum statistics; energy band theory; crystal structures; defect chemistry; semiconductor properties.
- EEL 5437 Microwave Engineering (3) EN EGE**
PR: EEL 4471, EEL 4102, or GS. Introduction to passive and active components, devices, and circuits, including transmission lines and wave guides, employed in microwave integrated circuits and systems.
- EEL 5462 Antenna Theory (3) EN EGE**
PR: EEL 4471 or GS. Antenna theory beginning with fundamental parameter definitions and continuing with mathematical concepts, elemental antennas and arrays.
- EEL 5572C Local and Metropolitan Area Networks (3) EN EGE**
PR: EEL 4512C or GS. Basics of data communication exchange of digital information over communication media; Basics of LANs/MANs and its components: media topologies, access methods, etc.; LAN/MAN architectures and protocols-IEEE 802.xLAN Standards; High speed LANs such as FDDI, IEEE 802.6 MAN, etc., Internetworking; LAN/MAN Design and selections.
- EEL 5631 Digital Control Systems (3) EN EGE**
PR: EEL 4657 or GS. Sample data and digital control processes
- EEL 5754C Microprocessor Based Digital Signal Processing (3) EN EGE**
PR: EEL 4705 or CI. Arithmetic systems, processing structures, efficient algorithms. DSP hardware, TI, NEC and other DSP microprocessors; multiprocessing hardware and software. System development. Application to telecommunications and voice processing.
- EEL 5771 Introduction to Computer Graphics I (3) EN ESB**
PR: EEL 4851C. An introduction to the evolution of computer graphics including point-plotting, line drawing, two-dimensional transformations and graphics software packages.
- EEL 5935 Special Electrical Engineering Topics I (1-3) EN EGE**
EEL 5936 Special Electrical Engineering Topics II (1-3) EN EGE
EEL 5937 Special Electrical Engineering Topics III (1-3) EN EGE
EEX 4011 Foundations of Special Education (3) ED EDS
PR: DPR. CR: EEX 4941. Characteristics and needs of children who have learning disabilities, emotional disabilities, hearing impairments, mental retardation, physical handicaps, speech impairments, visual limitations, and who are gifted and talented.
- EEX 4054 Perspectives on Learning and Behavioral Differences (3) ED EDS**
PR: EEX 4011. The purpose of this course is to introduce students to the historical and theoretical perspectives on educating students with learning and behavioral differences, develop a critical understanding of current practices in service delivery systems, and examine professional issues and trends that impact the future of the field.
- EEX 4070 Integrating Exceptional Students in the Regular Classroom (2-3) ED EDS**
No credit for department majors. Designed for non-special education majors. Includes basic identification techniques and strategies to promote academic and social integration and interaction of "mainstreamed" exceptional students. Concurrent field experience projects are included.
- EEX 4221 Educational Assessment of Exceptional Students (3) ED EDS**
PR: EDF 3214, EDF 4430 and EEX 4011. CR: EEX 4941 and EEX 4846. DPR. Introduction to assessment of exceptional students through formal and informal techniques. Emphasis placed on the interpretation of information for educational programming and individualization of instruction.
- EEX 4243 Education of Exceptional Adolescents and Adults (3) ED EDS**
PR: EEX 4011 or equivalent or DPR. Procedures for implementing educational programs for exceptional adolescents and adults. Topics include service delivery, curriculum, academic remediation, advocacy, utilization of ancillary services, alternative programs and community resources.
- EEX 4604 Behavior Management for Special Needs and At-Risk Students (3) ED EDS**
PR: EEX 4011. CR: EEX 4941, ELD 4941, or EMR 4941. Techniques to prevent, analyze, and manage challenging and disruptive classroom behavior as well as teaching social skills.
- EEX 4742 Narrative Perspectives on Exceptionality: Cultural and Ethical Issues 6A LW (3) ED EDS**

- DPR. This course is designed to use literature as a way to interpret the lives of individuals with disabilities, their families and those who play an educational role in their lives. The course also addresses cultural and ethnic diversity so as to better analyze the role of ethics and values in decisions made pertaining to individuals with disabilities.
- EEX 4846 Clinical Teaching in Special Education (3) ED EDS**
PR: EEX 4011, DPR, CR: EEX 4941. Effective teaching principles, instructional management procedures, and specialized teaching techniques for exceptional students.
- EEX 4905 Independent Study: Exceptional Student Education (1-3) ED EDS**
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.
- EEX 4909 Directed Study: Exceptional Student Education (1-3) ED EDS**
PR: Senior standing. DPR. To extend competency in teaching field.
- EEX 4936 Senior Seminar in Exceptional Student Education (1) ED EDS**
PR: Senior standing; CR: EEX 4940. Required concurrently with internship. Synthesis of teacher candidate's courses in complete college program.
- EEX 4940 Internship: Exceptional Student Education (1-12) ED EDS**
CR: EEX 4936. S/U only. One full semester of internship in an accredited public or private school.
- EEX 4941 Practicum in Exceptional Student Education (1-4) ED EDS**
CR: Sem I: EEX 4011; Sem II: EEX 4604; Sem III: EEX 4221 and EEX 4846. Designed to provide teacher candidates with carefully planned and supervised clinical experiences with exceptional students populations in a variety of settings. Candidates demonstrate the ability to apply concepts, theories and research. Repeatable up to six credit hours.
- EEX 5705 Seminar in Preschool Handicapped (2) ED EDS**
Intended to familiarize the education student with the wide range of needs and services of the preschool children with disabilities and their families and how they coordinate with educational services.
- EEX 5752 Working With Families: A Pluralistic Perspective (3) ED EDS**
PR: Introductory course in special education, GS. The impact of the socio/cultural environment on the education of at-risk children and children with disabilities; family systems theory, principles of multi-cultural education, strategies for working effectively with families of school-age children, diverse cultures and family structures represented in school populations today.
- EGI 4941 Undergraduate Supervised Practicum in Gifted Student Education (1-6) ED EDS**
Organized, supervised experiences with gifted children. Specific experiences may be either a combination of observation and assistance with gifted children or individualized projects.
- EGI 5051 Nature and Needs of the Gifted (3) ED EDS**
This survey course examines the characteristics and educational needs of children and youth who are gifted, including those from special populations. Emphasis is on giftedness as defined historically, nationally and locally. The course also explores changing views of intelligence and talent development related to policy and practice in gifted education as well as the processes of identification and programming.
- EGI 5325 Theory and Development of Creativity (3) ED EDS**
Exploration of the concept of creativity, its factors, measurement, and application to education. Opportunities are given to work with children in a laboratory setting and to prepare materials to be used with small groups of children.
- EGN 2031 History of Technology HP (3) EN EGB**
Covers the evolution of technology and its influence on society from pre-historic man to the modern day. Topics include: seven technological ages of man, methods of producing power, materials, transportation, communication and calculation, and technology and society.
- EGN 2080 Light and the Arts: A Quantitative Approach FA (3) EN EGB**
Physical and aesthetic aspects of light. Elementary physics of light sources, waves and photons, human vision. Color and intensity effects in well-known paintings, photographs, films. Theatrical lighting. Holography.
- EGN 2081 Circuit Mathematics and Physics (2) EN EGB**
Remedial work on the mathematical and physical concepts that are necessary for EGN 3373. Differentiation and integration, complex numbers, phasors, vectors, the physical laws for resistors, capacitors, and inductors.
- EGN 2082 History of Electrotechnology HP (3) EN EGB**
Highlights of the history of electrotechnology and its relation to the development of civilization. The contributions of Volta, Faraday, Morse, Bell, Hertz, Marconi, Franklin, etc. in the context of the development of western civilization. The impact of communications, electronics and computers in the twenty-first century.
- EGN 2210 Computer Tools for Engineers (3) EN EGB**
PR: MAC 2281. Students will be introduced to computer based engineering tools and their application to the solution of engineering problems. The programming language, FORTRAN, will be the most emphasized tool, but coverage will also be given to other engineering/mathematical tools such as equation solving tools and spreadsheets.
- EGN 3000 Foundations of Engineering (1) EN EGB**
Introduction to the profession of engineering. Exposure to the different disciplines of engineering incorporate examples of tools and techniques used in design and presentation.
- EGN 3311 Statics (3) EN EGB**
PR: PHY 2048. Principles of statics, mechanical equilibrium, forces, moments, plane trusses. Lec.-pro.
- EGN 3321 Dynamics (3) EN EGB**
PR: EGN 3311. Dynamics of discrete particles; kinematics and kinetics for rigid bodies. Lec.
- EGN 3331 Mechanics of Materials (3) EN EGB**
PR: EGN 3311. Stress, strain, Hooke's Law; torsion, beam, column analysis; combined stresses; inelastic effects, limit design. Lec.
- EGN 3331L Mechanics of Materials Laboratory (1) EN EGB**
PR: EGN 3311. CR: EGN 3331. Experiments in mechanics of deformable bodies. Lab.
- EGN 3343 Thermodynamics I (3) EN EGB**
PR: PHY 2049. Axiomatic introduction to thermodynamic concepts of energy, entropy, work and heat. Properties of ideal and real substances. Applications: power production and refrigeration, phase equilibria.
- EGN 3353 Basic Fluid Mechanics (3) EN EGB**
PR: EGN 3311, CR: EGN 3321. Fundamental and experimental concepts in ideal and viscous fluid theory; momentum and energy consideration, introduction to hydraulics, pipe flow. Lecture.
- EGN 3358 Thermodynamics, Fluids, and Heat Transfer (4) EN EGB**
PR: PHY 2049. Thermodynamic concepts of energy, entropy, work and heat and thermodynamic cycles. Basic concepts of fluid mechanics, including viscous fluids, pipe flow with minor losses, simple fluid machinery, momentum and external flow. Steady state conductive and convective heat transfer.
- EGN 3365 Materials Engineering I (3) EN EGB**
PR: CHM 2046; CR: EGN 3311. Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.
- EGN 3373 Introduction to Electrical Systems I (3) EN EGB**
PR: PHY 2049, PHY 2049L, CR: MAP 2302. A course in AC and DC linear circuit analysis. Transient and steady-state analysis. Polyphase circuits.
- EGN 3375 Electromechanical Systems (3) EN EGB**
PR: EGN 3373. Analysis of electromechanical device performance: transformers, transducers, DC motors and generators, AC motors and alternators.
- EGN 3420 Engineering Analysis (3) EN EGB**
PR: MAC 2282. Introduction to aspects of matrix algebra and complex algebra which are essential in engineering: simultaneous equations, connection matrices, basic eigenvalue theory, the complex exponential.
- EGN 3433 System Dynamics (3) EN EGB**
Dynamic analysis of electrical, mechanical, hydraulic and thermal systems; Laplace transforms; numerical method; use of computers in dynamic systems.
- EGN 3443 Engineering Statistics I (3) EN EGB**
PR: MAC 2282. An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.
- EGN 3613C Engineering Economy I (3) EN EGB**
A study in analyzing the economic limitations imposed on engineering activities using basic models which consider the time value of money.
- EGN 3615 Engineering Economics with Social and Global Implications SS (3) EN EGB**
Presents basic economic models used to evaluate engineering activities and an understanding of the social and ethical implications of financial decisions in a multicultural environment through lectures, case studies and current readings.
- EGN 4366 Materials Engineering II (3) EN EGB**
PR: EGN 3365. Applications and structure property relationships of commonly used engineering materials. Steel, nonferrous alloys

- and their welding, heat treatment and processing. Introduction to ceramic and polymeric materials.
- EGN 4420 Numerical and Computer Methods in Engineering (3) EN EGB**
PR: MAP 2302. Computation methods of analysis for engineering problem solving by use of digital computers, matrix methods, differential equations, curve fitting, integral equations.
- EGN 4450 Introduction to Linear Systems (2) EN EGB**
PR: MAC 2282. Study and application of matrix algebra, differential equations and calculus of finite differences.
- EGN 4831 Technology and Society MW (3) EN EGB**
Non-technical survey of engineering activities: utilities, nuclear power, genetics weaponry, space, etc. Students conduct individual in-depth study of environmental/ethical problem.
- EGN 4905 Independent Study (1-5) EN EGB**
PR: CI. Specialized independent study determined by the students' needs and interests.
- EGN 4930 Special Topics in Engineering (1-3) EN EGB**
PR: CI. New technical topics of interest to engineering students.
- EGN 5421 Engineering Applications for Vector Analysis (3) EN EGB**
Vector methods in electromagnetism and fluid mechanics. Vector operators, line and flux integrals, potential and transport theorems, applications.
- EGN 5422 Engineering Applications of Partial Differential Equations (3) EN EGB**
Power series solutions for ordinary differential equations, Sturm-Liouville theory, special functions. Vector methods with generalized coordinates. Separation of variables for partial differential equations. Green's functions. Calculus of variations. Numerical methods.
- EGN 5423 Neural Networks and Mathematics for Communication (3) EN EGB**
Finite fields and coding applications. Probabilities of error detection and correction. Introduction to neural networks. Advanced matrix algorithms: LU and QR factorizations, least-squares, pseudoinverses.
- EGN 5424 Engineering Applications of Complex Analysis (3) EN EGB**
Analytic functions, conformal mapping, residue theory, Laurent series, transforms. Applications to various problems in engineering and physics.
- EGN 5425 Engineering Applications of Advanced Matrix Computations (3) EN EGB**
Survey of theory and software for matrix computations: factorization methods, least squares and pseudoinverses, eigenvector algorithms. Special matrices and representations for control system and finite element applications.
- EGS 1113 Introduction to Design Graphics (3) EN EGB**
The student learns how to graphically represent technical designs using sketches, traditional drawing tools, and AutoCAD. The lab features twenty Pentium II computers running AutoCad R14.
- EIA 3192 Technology Education and Society (4) ED EDV**
Introduction to programs, facilities and opportunities in teaching Technology Education. Includes historical, current and futuristic implications of technology in society.
- EIA 4360 Special Teaching Methods: Technology Education (3) ED EDV**
Equips Technology Education instructors with professional competencies for classroom and laboratory settings. Includes the selection of appropriate methods, planning, and delivery of instruction, along with supervision of students in laboratory areas.
- EIN 4312C Work Analysis (3) EN EGS**
PR: EGN 3613C, EGN 3443. Operation analysis and workspace design, work measurement, standard data, ergonomics, and labor costing.
- EIN 4313C Human Factors 6A (3) EN EGS**
Design of man-machine systems, by taking into consideration both human and machine capabilities and limitations.
- EIN 4333 Production Control (3) EN EGS**
PR: ESI 4312C. Planning and control of production systems. Includes: forecasting and inventory control models, scheduling and sequencing, MRP, CPM/PERT, and resource requirements.
- EIN 4364C Facilities Design I (3) EN EGS**
PR: EIN 4312C, EIN 4411; CR: ESI 4221, EIN 4333. Design and modification of industrial production and material handling facilities. Basic analysis techniques, use of computer programs, automated warehousing.
- EIN 4365 Facilities Design II MW (3) EN EGS**
PR: EIN 4364; CR: ESI 4523. CAD/CIEM, complete design of a plant facility. Course to use computers and software geared toward plant design and operation. A team of students is to be responsible for the complete project.
- EIN 4411 Manufacturing Processes (3) EN EGS**
PR: EGS 1113. The study of basic manufacturing processes and precision assembly. CAD/CAM including NC programming.
- EIN 4601L Automation and Robotics (3) EN EGS**
PR: EIN 4411. Introduction to the practices and concepts of automation as applied to material handling, inventory storage, material transfer, industrial processes and quality control.
- EIN 4933 Special Topics in Industrial Engineering (1-6) EN EGS**
Special topics related to economic analysis, optimization, human factors, manufacturing and automation aspect of industrial systems. Repeatable up to 5 credit hours.
- EIN 5245 Work Physiology and Biomechanics (3) EN EGS**
PR: CC, majors only. Human physiological limitations encountered in design, analysis and evaluation of man-machine systems.
- EIN 5322 Principles of Engineering Management (3) EN EGS**
Introduction to the fundamentals of planning, organizing and leadership as needed by engineers, scientists, and other professionals considering managerial positions.
- EIN 5350 Technology and Finance (3) EN EGS**
A course for technical managers that focuses on how financial and economic principles are utilized to make technical investments and manage technical enterprises.
- EIN 5357 Engineering Value Analysis (3) EN EGS**
PR: EIN 5219 or equiv., majors only. Statistical models for analyzing engineering alternatives from an economic viewpoint. The use of advanced engineering economy concepts in solving industrial problems.
- EIV 4210 Program Management: Industrial-Technical Education (4) ED EDV**
Planning, organizing, motivating and controlling of the learning environment in Industrial-Technical Education classroom and laboratories. Program standards for OSHA, program review, record keeping, and budgeting will be examined.
- EIV 4360 Special Teaching Methods: Industrial-Technical Education (4) ED EDV**
Instructional techniques in industrial-technical education. Vocational Industrial Clubs of America activities may be included.
- EIV 5315 Program Management: Diversified Cooperative Training (3) ED EDV**
Organization, coordination, and budgeting of adult, cooperative, and special programs.
- ELD 4011 Introduction to Specific Learning Disabilities (3) ED EDS**
PR: EEX 4011 or DPR. Characteristics, needs and abilities of children with SLD. Emphasis is on theories, issues, trends, and philosophy of problems for such children.
- ELD 4905 Independent Study: Specific Learning Disabilities (1-3) ED EDS**
PR: DPR. S/U only. Specialized independent study determined by student's needs and interests.
- ELD 4909 Directed Study: Specific Learning Disabilities (1-3) ED EDS**
PR: Senior standing, DPR. To extend competency in teaching field.
- ELD 4941 Undergraduate Supervised Practicum in SLD (1-6) ED EDS**
PR: EEX 4011. S/U only. DPR. Supervised field experiences in assessment, behavior management and clinical teaching with classes for children who have specific learning disabilities.
- ELR 3301L Laboratory I (1) EN EGE**
PR: EGN 3373. Basic circuit theory applications; computer-aided design tools, electrical measurement techniques.
- ELR 3302L Laboratory II (1) EN EGE**
PR: ELR 3301L and EEL 3302, CR: EEL 4301. Design, build and test active electronic networks; computer-aided design tools; computer data acquisition strategies.
- ELR 4316L Wireless Circuits & Systems Design Laboratory (2) EN EGE**
An extensive hands-on introduction to wireless radio frequency and microwave circuits and systems, involving modern measurements, fabrication and computer-aided design experiences at both component and sub-system levels. Not available on an S/U basis.
- EMA 4324 Corrosion of Engineering Materials I (3) EN EGX**
PR: EGN 3365L. Principles of electrochemical corrosion and the representation of corrosion processes by polarization diagrams. Origin and prevention of the localized forms of corrosion and approaches to corrosion control.
- EMA 5326 Corrosion Control (3) EN EGX**
PR: EGN 3365. Provide understanding of corrosion fundamentals. Introduce design for corrosion detection, protection, and control. Acquire research project experience.
- EME 2040 Introduction to Computers in Education (3) ED EDK**

Designed as an introduction to computer technology and its role in teaching and learning processes. Topics include educational software, ethical and social issues, hardware, interactive multimedia, models for integrating technology into instruction, productivity tools and telecommunications.

EML 5403 Microcomputers in Education (3) ED EDK

A survey course designed to introduce practicing teachers to microcomputer technology and its function in the classroom to augment the teaching and learning processes. Objectives include the use and evaluation of educational software, classroom use of computers, instructional computing research, generic applications software (word processors, database managers, etc.), programming, disk operating systems, and microcomputer hardware.

EML 3035 Programming Concepts for Mechanical Engineers (1) EN EGR

PR: MAC 2281, PHY 2048 Solution of engineering and science problems using programming language such as Visual Basic or Maple. Topics include fundamentals of programming, controlling program flow and arrays. Restricted to majors; not repeatable for credit.

EML 3041 Computational Methods (3) EN EGR

PR: MAP 2302, EML 3035. Techniques to solving engineering problems using numerical methods. Topics include roots of equations, matrix algebra, simultaneous linear equations, numerical integration and differentiation, and curve fitting.

EML 3262 Kinematics and Dynamics of Machinery (3) EN EGR

PR: EGN 3321 Kinematics of machines and mechanisms; position, velocity, and acceleration analysis of mechanisms; cams; gear trains; inertia forces in mechanisms; flywheels; balancing of rotating masses.

EML 3303 Mechanical Engineering Lab I (3) EN EGR

PR: EGN 3443. CR: EML 3701, EML 3500. Engineering laboratory measurements. Use of the library and the writing of technical reports. Experiments in the measurement of temperature, pressure, fluid flow, psychrometrics, concentration, viscosity. Mass-energy balances of simple systems.

EML 3500 Machine Analysis and Design I (3) EN EGR

PR: EGN 3311. Stress and deflection analysis of machine parts, variable loads, endurance limits, fasteners, bearings, power transmission, code consideration of pressure and vacuum vessels, elements of design.

EML 3701 Fluid Systems (3) EN EGR

PR: EGN 3343, EGN 3321. Principles of fluid flow; piping and duct systems; fluid machinery; metering of compressible and incompressible flow; boundary layer theory; dimensional analysis; introduction to aerodynamics.

EML 4031 Visual Basic for Engineers and Scientists (3) EN EGR

PR: EML 3041 Introduces students to the powerful graphical interface language of Visual Basic. Illustrates the use of the language in engineering and science applications.

EML 4106C Thermal Systems and Economics (3) EN EGR

PR: EGN 3343. Power and refrigeration cycles; fuels and combustion; internal combustion engine cycles; co-generation; nuclear energy; methods of economic analysis.

EML 4124 Heat Transfer (3) EN EGR

CR: EML 3701, EML 3041. Conduction, convection and radiant heat transfer; thermal properties of materials; role of fluid flow in convective heat transfer; design and selection of heat exchangers.

EML 4220 Vibrations (3) EN EGR

PR: EML 3262. Natural frequency, damping and resonance in single-degree-of-freedom systems. Vibration isolation and absorption. Lagrange's equations. Multi-degree of freedom systems. Introduction to vibration of continuous systems and predictive maintenance.

EML 4230 Introduction to Composite Materials (3) EN EGR

PR: EML 3500 The course introduces manufacturing types and applications of advanced composites. Students study micromechanical and macro mechanical behavior of a lamina and analyze and design a laminated structure made of advanced composite materials.

EML 4246 Tribology (3) EN EGR

PR: EML 4501. Introduction to friction, lubrication and wear. Contact of real surfaces, mechanics of friction, surface failures, boundary lubrication fluid properties, thin film lubrication, thick film lubrication, bearing and lubricant selection.

EML 4302 Mechanical Engineering Laboratory II (3) EN EGR

PR: EML 3303. Continuation of EML 3303 with emphasis on material and energy balances, stress analysis and vibrations. Lec.-lab. The Team-Project-Time Approach.

EML 4312 Mechanical Controls (3) EN EGR

PR: EGN 3321, EGN 3373. Introduces the concept of dynamic

systems. Modeling of dynamic systems. Laplace Transforms. Transfer Functions. Block Diagrams. Characteristic equation. Time response of first and second order systems. Stability of dynamic systems. Routh stability criterion. Frequency response of dynamic systems. Polar plots and Bode plots. Introduction to state space model.

EML 4325 Mechanical Manufacturing Processes (3) EN EGR

PR: EGN 3365. Description of mechanical material cutting, forming and fabrication methods, as used in modern industrial manufacturing processes.

EML 4395 Motor Selection and Control (3) EN EGR

PR: ENG 3373 Standard electrical voltages; power wiring in industrial plants; NEMA motor designs and their uses; techniques for estimating motor starting times and temperature rise; motor selection, starting, and operating safety interlocks; conventional starting and control systems; programmable controllers; electrical code requirements for conductors and protective devices.

EML 4414 Power Plant Engineering (3) EN EGR

PR: EML 4106C. The study of large scale thermo-electric power conversion for utility systems. Combustion of hydrocarbon fuels, furnace, steam generated auxiliary system design. Topics include control of our emissions, design and performance of combined power facilities.

EML 4419 Propulsion I (3) EN EGR

PR: EML 3701, EML 3500 or CI. Introduction to the design of propulsion systems. Basic analysis of internal combustion, jet and rocket engines. Application to ground and air transportation. Advanced propulsion concepts. Special topics for class discussion.

EML 4421 Internal Combustion Engines (3) EN EGR

This course is for the application of thermodynamics, chemistry, dynamics of machinery, electronics and fluid mechanics. Topics covered are: introduction of engines, fuels and combustion, numerical modeling, ignition, fuel systems, balance of reciprocating mechanisms and emission control of exhaust pollutants.

EML 4501 Machine Design (3) EN EGR

PR: EML 3500. Designed to teach students to apply the principles of engineering mechanics, materials and manufacturing to the design/analysis of machine elements and mechanical systems. Emphasis is given toward good design practice as well as pitfalls that can result in a catastrophic failure.

EML 4551 Capstone Design MW (3) EN EGR

CR: EML 4501, EML 4124 Comprehensive design or feasibility project requiring application of previously acquired engineering knowledge; use of ANSYS, CAD AND Pro/E.

EML 4552 Senior Mechanical Design (3) EN EGR

PR: CI. Comprehensive design or feasibility study project. In some cases may be a continuation of EML 4551.

EML 4562 Introduction to Composite Materials (3) EN EGR

PR: EML 3500 and EML 3041. The course introduces manufacturing types and applications of advanced composites. Students study micromechanical and macromechanical behavior of a lamina and analyze and design a laminated structure made of advanced composite materials.

EML 4601 Air Conditioning Design (3) EN EGR

PR: EML 4106C, EML 3701. Application of thermodynamics, heat transfer, and fluid flow to sizing of HVAC systems. Heating and cooling calculations, air requirements, equipment sizing. Energy Code requirements. Design project.

EML 4905 Independent Study (1-4) EN EGR

PR: CI. Specialized independent study determined by the student's needs and interests.

EML 4930 Special Topics in Mechanical Engineering (1-4) EN EGR

PR: CC.

EML 5930 Special Topics III (1-4) EN EGR

PR: CC.

EMR 4011 Mental Retardation and Developmental Disabilities (3) ED EDS

PR: EEX 4011 or equivalent. This course is designed to provide students with a broad introduction to the area of mental retardation and developmental disabilities with particular emphasis on the educational aspects. This course is required by the state for certification in mental retardation.

EMR 4230 Educating the Severely/Profoundly Handicapped (3) ED EDS

PR: EMR 3011 or DPR. Emphasis on educational methods and materials for teaching children with severe/profound handicaps. Practicum/field experience linkage.

EMR 4905 Independent Study: Mental Retardation (1-3) ED EDS S/U. May be repeated when subjects vary. DPR. Specialized independent study determined by the student's needs and interests.

EMR 4909 Directed Study: Mental Retardation (1-3) ED EDS

PR: Senior standing, DPR. Offered only as a scheduled class. To extend competency in teaching field.

- EMR 4941 Undergraduate Supervised Practicum in Mental Retardation (1-6) ED EDS**
PR: EEX 4011. S/U only. DPR. Supervised field experiences in assessment, behavior management, and clinical teaching with children who have mental retardation.
- ENC 1101 Composition I 6A EC (3) AS ENG**
PR: ENC 1101 and ENC 1102 must be taken in numerical sequence. Instruction and practice in the skills of writing and reading.
- ENC 1102 Composition II 6A EC (3) AS ENG**
PR: ENC 1101. Instruction and practice in the skills of writing and reading.
- ENC 1121 Composition I: Honors 6A EC (3) AS ENG**
Reserved for students in University Honors. Honors Section of ENC 1101.
- ENC 1122 Composition II: Honors 6A EC (3) AS ENG**
PR: ENC 1121. Reserved for students in University Honors. Honors Section of ENC 1102.
- ENC 2210 Technical Writing 6A (3) AS ENG**
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. Effective presentation of technical and semi-technical information.
- ENC 3211 Communication for Engineers 6A (3) AS ENG**
Focuses on writing concerns of engineers. Deals with the content, organization, format, and style of specific types of engineering documents. Provides opportunity to improve oral presentations. Will not be counted toward the English major.
- ENC 3213 Professional Writing 6A (3) AS ENG**
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. Introduction to the techniques and types of professional writing, including correspondence and reports most often found in business, technical, and scientific communities.
- ENC 3310 Expository Writing 6A (3) AS ENG**
PR: ENC 1101 and ENC 1102 or ENC 1121 and ENC 1122. A course teaching the techniques for writing effective prose, excluding fiction, in which student essays are extensively criticized, edited, and discussed in individual sessions with the instructor.
- ENC 4260 Advanced Technical Writing (3) AS ENG**
PR: ENC 2210, or ENC 3310, or CI. Advanced Technical Writing is a course designed to develop writing skills of a high order: technical exposition; technical narration, description, and argumentation; graphics; proposals; progress reports; physical research reports; and feasibility reports.
- ENC 4311 Advanced Composition (3) AS ENG**
PR: ENC 3310 or CI. Instruction and practice in writing effective, lucid, and compelling prose, with special emphasis on style, logical argumentation, and critical thinking.
- ENC 4931 Selected Topics in Professional and Technical Writing (3) AS ENG**
PR: ENC 3213, ENC 2210, or ENC 3310 or CI. Focus of the course will be determined by student demand and instructor interest. Topics to be covered may include legal writing, the conventions of business writing, and writing for the social sciences. May be taken twice for credit with different topics.
- ENG 4013 Literary Criticism (3) AS ENG**
A study of the works of major literary critics from Aristotle to the present, with emphasis on their meaning, their implied world view, and their significance for our own time and literature. Required for Literature majors.
- ENG 4060 History of the English Language (3) AS ENG**
The evolution of language from Anglo-Saxon through Middle English to Modern English. Development of the English lexicon. Changes in the pronunciation, syntactic, and semantic systems; discussion of the forms which influenced them.
- ENG 4906 Individual Research (1-4) AS ENG**
PR: CC. Directed study in special projects.
- ENG 4907 Directed Reading (3) AS ENG**
PR: CC. Readings in special topics.
- ENG 4935 Honors Seminar I (3) AS ENG**
PR: Admission to English Honors Program. CR: ENG 4936. Variable topics. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.
- ENG 4936 Honors Seminar II (3) AS ENG**
PR: Admission to English Honors Program. CR: ENG 4935. Variable topics. Students will be expected to participate in class discussion, make formal presentations, and complete a major research project.
- ENG 4970 Honors Thesis (3) AS ENG**
PR: ENG 4935, ENG 4936. For students writing honors theses.
- ENL 3015 British Literature to 1616 (3) AS ENG**
A survey of representative prose, poetry, and drama from its beginnings through the Renaissance, including such poems and figures as *Beowulf*, Chaucer, Malory, More, Hooker, Skelton, Wyatt, Sidney, Spenser, Shakespeare, Donne, and Jonson.
- ENL 3230 British Literature 1616-1780 (3) AS ENG**
A survey of 17th Century and Neoclassical Literature, including such figures as Donne, Herbert, Crashaw, Vaughan, Marvell, Milton, Pope, Swift, Johnson, Boswell, and Goldsmith.
- ENL 3251 British Literature 1780-1900 (3) AS ENG**
The poetry and poetics of the Romantic figures, with attention to the continuing importance of Romantic thinking in contemporary affairs and letters; a survey of representative figures of the Victorian and Edwardian periods, including poetry, prose, and drama.
- ENL 3273 British Literature 1900-1945 (3) AS ENG**
Survey of poetry, drama, and fiction of such writers as Eliot, Yeats, Thomas, Conrad, Shaw, Joyce, Lawrence, Huxley, Woolf, Forster, Waugh, Owen, Auden, O'Casey, and others.
- ENL 3323 Shakespeare from an Historical Perspective HP (3) AS ENG**
Examines the plays of Shakespeare from *Romeo and Juliet* to *Othello* as manifestations of the social, political, and intellectual forces of the time. Lectures will be available on audio tapes. Will not be counted toward the English major.
- ENL 3331 Early Shakespeare (3) AS ENG**
A study of from five to eight of Shakespeare's comedies, histories, and early tragedies, ending with *Hamlet*. Special attention to developing the student's ability to read and interpret the text.
- ENL 3332 Late Shakespeare (3) AS ENG**
A study of from five to eight of Shakespeare's problem plays, major tragedies, and late romances. Special attention to developing the student's ability to read and interpret the text.
- ENL 4122 British Novel Through Hardy (3) AS ENG**
A study of early and later British novels such as Fielding, Smollett, Sterne, Austen, Scott, Dickens, Eliot, and Hardy, among others.
- ENL 4132 British Novel: Conrad to the Present (3) AS ENG**
A critical study of British fiction from 1900 to the present, with emphasis on such writers as Conrad, Lawrence, Joyce, Woolf, Huxley, Orwell, Burgess, Murdoch, Golding, and others.
- ENL 4303 Selected British Authors (3) AS ENG**
The study of two or three major figures in British Literature. The course may include such writers as Fielding and Austen, Keats and Yeats, Joyce and Woolf. Specific topics will vary. May be taken twice for credit with different topics.
- ENL 4311 Chaucer (3) AS ENG**
An intensive study of *The Canterbury Tales* and major critical concerns.
- ENL 4338 Advanced Studies in Shakespeare (3) AS ENG**
PR: ENL 3331 or ENL 3332, or CI. Intensive study of selected plays of Shakespeare, with special attention to significant critical issues and to the Elizabethan and Jacobean cultural setting.
- ENL 4341 Milton (3) AS ENG**
Study of the poetry and major prose of John Milton, with special emphasis on *Paradise Lost*.
- ENV 4001 Environmental Systems Engineering (3) EN EGX**
CR: ENG 3353. An introduction to various aspects of environmental problems faced by today's society. Topics covered are: air pollution, water pollution, noise pollution, solid waste management, ionizing radiation, disease transmission, and food protection.
- ENV 4004L Environmental Engineering Lab (2) EN EGX**
Laboratory experience in the measuring of environmental parameters.
- ENV 4351 Solid Waste Engineering (2) EN EGX**
Introduction to the principles of integrated municipal solid waste management; waste minimization, recycle and disposal options. Design of landfill disposal systems. Course restricted to Civil and Environmental Engineering majors.
- ENV 4417 Water Quality and Treatment (3) EN EGX**
PR: EGN 3353 An introduction to municipal water supply and waste water treatment. Topics include water requirements and waste volumes, water quality, physical and chemical treatment processes, and advanced wastewater treatment processes.
- ENV 4502 Water Treatment Engineering (3) EN EGX**
PR: EGN 3353. CR: ENV 4001. The theory and the design of unit operations normally used in the practice of environmental engineering, such as agitation and mixing of liquids, filtration, leaching, gas absorption, sedimentation and clarification, drying, and evaporation.
- ENV 4503 Wastewater Treatment Engineering (3) EN EGX**
PR: ECH 3023C, EGN 3353, ENV 4001. The theory and design of unit processes normally used in environmental engineering such

330 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- as coagulation of colloidal materials, water stabilization, water softening and neutralization, ion exchange, adsorption and oxidation processes for removal of iron and magnesium.
- ENV 4552C Environmental Unit Operations and Processes (3) EN EGX**
PR: ENV 4001, ENV 4417 or CI. Theory, experimental investigation, and modeling of operations and processes in engineered and natural systems. Laboratory evaluation of unit operations and processes used in water and wastewater treatment including chlorination, activated carbon absorption, biological treatment, gas/liquid mass transfer, filtration, coagulation, flocculation, and settling. Application of experimental data to process analysis and design. Field monitoring of surface water quality; simulation of transport and transformation of pollutants in surface waters.
- ENV 4891 Capstone Environmental Engineering Design MW(3) EN EGX**
PR: CWR 4103, ENV 4001, ENV 4417. A capstone environmental design experience for seniors in Civil and Environmental Engineering. A design oriented course to design both industrial and domestic water treatment and water transport systems and wastewater and collection systems. The course emphasizes the design procedure normally used in engineering practice.
- ENV 5103 Air Pollution Control (3) EN EGX**
PR: EGN 3353. Behavior and effects of atmospheric contaminants and the principles of making measurements in the air environment. Basic concepts of meteorology and control technology are discussed. Regulatory aspects and air pollution standards are covered.
- ENV 5334 Hazardous Waste Management and Remedial Action (3) EN EGX**
PR: ENV 5345 and one of the following: ENV 6347, ENV 6519, ENV 6558; or CI, majors only Introduction to hazardous waste management and remediation: RCRA regulatory concepts, definitions, aspects of hazardous waste management from within the plant to final disposal. History of hazardous waste cleanup leading to CERCLA and its amendments, site investigations; site control; those aspects of treatment that are unique to remedial action. (PR: undergraduate preparation in environmental engineering or an environmental science program)
- ENV 5345 Solid Waste Control (3) EN EGX**
PR: CI. Introduction to solid waste management, including its definition as an umbrella for hazardous waste: regulatory concepts; waste types, quantities, and characterization; collection and recycling; facility siting; disposal; thermal treatment. (PR: undergraduate preparation in environmental engineering, or graduate standing in environmental engineering or an environmental science program)
- ENV 5504C Environmental Engineering Processes (3) EN EGX**
PR: ENV 4001, ENV 4004L, ENV 4417 Theory, experimental investigation, and modeling of operations and processes in engineered and natural systems. Laboratory evaluation of unit operations and process used in water and wastewater treatment including chlorination, activated carbon adsorption, biological treatment, gas/liquid mass transfer, filtration, coagulation, flocculation, and settling. This course is restricted to majors, has no external laboratory section associated with the course, is not available on an S/U basis only, is not cross-listed with another department or college.
- ENV 3004 Introduction to Entomology (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. An introduction to general aspects of insect morphology, development, and classification. The identification of local forms will be emphasized. Lec.-lab.
- ENV 5505 Aquatic Entomology (3) AS BIO**
PR: ENV 3004 or CI. Taxonomy, development, and ecology of aquatic insects with emphasis on local forms. Lec.-lab.
- EPH 5051 Advanced Theories in Motor and Physical Disabilities (3) ED EDS**
PR: EEX 4011 or DPR. Biological and functional aspects of motor and physical health disabilities, including dysfunctions in central nervous system covering motor, sensory, language and psychological disorders.
- EPH 5321 Educational Strategies for Physically and Multihandicapped Students (3) ED EDS**
PR: EPH 5051. Educational management of students with cerebral palsy, motor disabilities and multihandicapped conditions including rehabilitation and other community services.
- ESE 5342 Teaching the Adolescent Learner (3) ED EDI**
Emphasis is placed on adolescent developmental and learning needs linking them to practices in the classroom appropriate to the diverse secondary education population (ESOL, special education, multicultural, at-risk, etc.) in preparation for planning responsive standards-based instruction.
- ESE 5344 Classroom Management for a Diverse School and Society (3) ED EDI**
This course covers practical, theoretical, philosophical and ethical aspects of school and society, the education profession, and secondary schools with particular focus on classroom management, school violence, school safety, educational law and other critical social issues.
- ESI 4221 Industrial Statistics and Quality Control (3) EN EGS**
PR: EGN 3443, EIN 4411. Application of statistical techniques to the control of industrial processes. Control charts, acceptance sampling, design of experiments, analysis of variance and regression.
- ESI 4244 Design of Experiments (3) EN EGS**
PR: EGN 3443. Activity forecasting models and control. Design and use of inventory control models, both designs applicable to engineering analyses. Analysis of variance and regression.
- ESI 4312 Deterministic O. R. (3) EN EGS**
PR: EGN 4450. An introduction to operations research techniques with particular emphasis on deterministic models. Linear programming, dynamic programming, goal programming, integer programming, and PERT/CPM networks are considered.
- ESI 4313 Probabilistic O. R. (3) EN EGS**
PR: EGN 3443. Probabilistic models in Operations Research. Discrete and continuous time processes, queuing models, inventory models, simulation models, Markovian decision process and decision analysis.
- ESI 4523 Industrial Systems Simulation (3) EN EGS**
PR: ESI 4313. A study of the development and analysis of computer simulation models: Monte Carlo, time-slice, and next-event. Introduction to special purpose simulation languages.
- ESI 4905 Independent Study (1-5) EN EGS**
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests.
- ESI 4911 Senior Project (2) EN EGS**
PR: EIN 4364, CR: EIN 4333, ESI 4523. Analysis and design of systems in a directed project format. Individual or group work consisting of project proposal, project activities, and final report. Student projects are directed by faculty, with chairman's approval.
- ESI 5219 Statistical Methods For Engineering Managers (3) EN EGS**
Not open to students who have had EGN 3443. Study of statistical methods applied to engineering management problems involving estimation and prediction under conditions of uncertainty.
- ESI 5236 Reliability Engineering (3) EN EGS**
PR: ESI 5219 or equiv., majors only PR: EGN 3443 or equivalent. Fundamental concepts of reliability. Estimation of reliability of systems and components. Measures of availability, maintainability and reliability.
- ESI 5306 Operations Research For Engineering Management (3) EN EGS**
Not open to students who have had ESI 4315. ESI 5219 or equiv., majors only. Linear programming, non-linear programming, queuing, inventory, network analysis.
- ESI 5470 Manufacturing Systems Analysis (3) EN EGS**
PR: CC, majors only. The study of systems of manufacturing entities such as machine tools, robots, and materials handlers. Emphasis is on mathematical description of integrated systems and system optimization.
- ESI 5522 Computer Simulation (3) EN EGS**
PR: ESI 4521 or equiv., majors only. Design of discrete and continuous simulation models. Model validation and verification. Statistical analysis of simulation model output.
- ETG 4931 Special Topics in Technology I (1-5) EN ESB**
PR: CI. No credit for Engineering Majors.
- ETG 4932 Special Topics in Technology II (1-5) EN ESB**
PR: CI. No credit for Engineering Majors.
- EUH 2011 Ancient History I HP (3) AS HTY**
An introductory survey of ancient history. EUH 2011 treats the ancient Near East and Greece from the origins of civilization to the full development of the Hellenistic kingdoms prior to conflict with Rome.
- EUH 2012 Ancient History II HP (3) AS HTY**
An introductory survey of ancient history. EUH 2012 deals with Rome through the Regal, Republican, and Imperial periods, from the beginnings of civilization in Italy to the division of the Roman Empire, A.D. 285.
- EUH 2021 Medieval History I HP (3) AS HTY**
A thematic survey of the Middle Ages. EUH 2021 deals with the nascent, Christian civilization of Europe, circa 300-1050 A.D.
- EUH 2022 Medieval History II HP (3) AS HTY**

- A thematic survey of the Middle Ages. EUH 2022 treats the mature medieval civilization of Europe, circa 1050-1500.
- EUH 2030 Modern European History I HP (3) AS HTY**
A thematic survey of Europe in the modern age. EUH 2030 treats the period from the Renaissance to the French Revolution.
- EUH 2031 Modern European History II HP (3) AS HTY**
A thematic survey of Europe in the modern age. EUH 2031, treats the period from the French Revolution to the present.
- EUH 3142 Renaissance and Reformation (4) AS HTY**
A history of Europe from the Renaissance to the Thirty Years' War (1400-1618). The cultural, social, and economic characteristics will provide the framework for artistic, philosophical, religious, and political developments.
- EUH 3181 Medieval Culture (4) AS HTY**
A survey of thought, culture, and art in the Middle Ages. Medieval attitudes as manifested in literature, art, philosophy, education, and religion; with emphasis upon Medieval man's changing perception of himself and his world.
- EUH 3185 Viking History (4) AS HTY**
The role of the Vikings in the shaping of Western history. A comprehensive survey of their institutions, outlook and daily life. Viking expansion into Europe and North America.
- EUH 3188 Medieval Society (4) AS HTY**
A study of the daily life and attitudes of the medieval nobleman, peasant, townsmen, and the agrarian-urban economy and society which affected their lives.
- EUH 3189 Medieval Politics (4) AS HTY**
An inquiry into the nature, distribution, and use of political power during the Middle Ages, in such institutions as feudalism, monarchy, cities, and the church.
- EUH 3202 History of 17th and 18th Century Europe (4) AS HTY**
A history of Europe from the beginning of the Thirty Years' War to the outbreak of the French Revolution. Political and intellectual developments will be assessed in the light of society and the economy.
- EUH 3205 History of Nineteenth Century Europe (4) AS HTY**
A comparative study of economic, political, social, and intellectual developments in nineteenth century Europe.
- EUH 3206 History of Twentieth Century Europe (4) AS HTY**
A comparative study of economic, political, social, and intellectual developments in twentieth century Europe.
- EUH 3401 Classical Greece (4) AS HTY**
A study of ancient Greece focusing on the brilliant period following the Persian Wars, but embracing as well the formative Bronze, Middle and Archaic ages, and the decline culminating in the conquest of Greece by Philip II of Macedon in 338 B.C.
- EUH 3402 Age of Alexander (4) AS HTY**
A study focusing on the career of Alexander the Great and on the Greek and Macedonian conquest of Imperial Persia. Also treated are the great hellenistic kingdoms prior to Rome's conquest of the eastern Mediterranean.
- EUH 3412 Roman Republic (4) AS HTY**
A study of the Roman Republic from 509 B.C. to the assassination of Julius Caesar in 44 B. C., with a prelude treating Rome's early development under royal rule. Political growth and change provide the framework for the treatment.
- EUH 3413 Roman Empire (4) AS HTY**
A study of Imperial Roman from the assassination of Julius Caesar in 44 B.C. to the death of the emperor Constantine in A.D. 337. Emphasized is Rome's government of a vast Mediterranean empire including much of the near East and Europe.
- EUH 3461 German History to 1870 (4) AS HTY**
A political, social, and cultural approach to the history of the Germans from 1500 through 1870, with emphasis on the Protestant Reformation, the rise of Brandenburg-Prussian, and the unification under Bismarck.
- EUH 3462 German History 1870 to the Present (4) AS HTY**
A political, social, and cultural approach to the history of the German Empire from 1870 through the 1970's. The nation's two attempts to try for world power status are highlighted, as well as the Weimar Republic, prototype of the embattled democracy.
- EUH 3501 British History to 1688 (4) AS HTY**
A study of major developments in British history from the 15th century to 1688.
- EUH 3502 British History 1688 to Present (4) AS HTY**
A study of the major themes of British history since the Glorious Revolution, including social, political, and economic developments leading to the creation of the modern demographic welfare state.
- EUH 3574 History of Imperial Russia, 1689-1917 (4) AS HTY**
A survey of social, political, economic, and cultural development in the Russian Empire from Peter the Great to Nicholas II. Topics include the expansion and modernization of the Empire, the culture of the Imperial court, peasant rebellions, social and legal reforms, the role of the West, and the collapse of the Romanov dynasty.
- EUH 3576 History of the Soviet Union, 1917-1991 (4) AS HTY**
A study of Soviet society under communism from the Revolution to the collapse of the USSR. Topics include the origins and development of revolutionary socialism, the Bolshevik seizure of power, Stalinism and the Great Terror, popular dissent and resistance, the treatment and experience of ethnic minorities, Gorbachev and the dissolution of the Soviet Union.
- EUS 3000 Europe SS (3) AS INT**
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.
- EUS 3022 Russia SS HP AF (3) AS INT**
Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.
- EVR 2001 Introduction to Environmental Science NS (3) AS ESP**
An introductory lecture course linking the human and physical/biological world. The course will develop an understanding of population and resource interactions.
- EVR 2001L Environmental Science Lab (1) AS ESP**
A laboratory course linking the human and physical/biological world. The lab will develop an understanding of population and resource interactions and complement the lecture course. Field trips.
- EVR 2861 Introduction to Environmental Policy (3) AS ESP**
An introduction to environmental policy using class lectures, student projects, and independent readings. Emphasis will be placed on understanding basic policy mechanisms and major policy actions relating to environmental issues at the local, national and international level.
- EVR 4027 Wetland Environments MW (3) AS ESP**
PR: PCB 3043 or CI. Study of the general properties and ecology of wetlands, examination of the distribution and functions of wetlands, and consideration of wetland conservation and policies.
- EVR 4900 Directed Readings (1-6) AS ESP**
To provide advanced students with interdisciplinary research experience in areas of specific interest.
- EVR 4905 Independent Study (1-6) AS ESP**
To provide advanced students with the opportunity for independent study in areas of specific interest.
- EVR 4910 Environmental Science and Policy Project (3) AS ESP**
Open to senior majors only. S/U only. Environmental science project consisting of research in a field related to environmental science/environmental policy. Supervised by a faculty member. Contract and report required.
- EVR 4921 Environmental Science and Policy Seminar (1) AS ESP**
Restricted to senior majors. S/U only. A topical reading and discussion seminar focusing on the interdisciplinary nature of environmental science and environmental policy.
- EVR 4930 Selected Topics (1-4) AS ESP**
Each topic is a course under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of Environmental Science, Policy, Ethics and Law included.
- EVR 4940 Environmental Science Internship (3) AS ESP**
Open to senior majors only. S/U only. The purpose of this course is to promote the student's understanding and application of environmental science and policy within a practical organizational context. Contract and report required.
- EVT 4065 History and Principles of Vocational Education (4) ED EDV**
An overview of current policies and principles in vocational education including their historical, sociological, and philosophical bases. Open to majors and non-majors.
- EVT 4084C Professional Development in Industrial Technical Education (1-3) ED EDV**
Designed for the ITE teacher in forming plans of professional development. Competencies include the development of a personal education philosophy; attributes in creating harmonious school community relationships; and desirable staff and teacher associations.
- EVT 4165 Curriculum Construction: Industrial-Technical Education (4) ED EDV**
Design, development, implementation and evaluation of effective

- curricular materials in industrial, technical and health related occupations; includes individualized and self-paced materials. Open to majors and non-majors.
- EVT 4365 Basic Teaching Methods in Vocational Education (4) ED EDV**
Examines the role of the vocational instructor in the teaching learning process; looks at factors that promote and inhibit learning. Reviews a wide variety of instructional approaches, techniques and methods; includes selection of techniques for situations.
- EVT 4367 Assessing Student Skill in Industrial Technical Education (4) ED EDV**
Techniques for assessing student's mastery of skills in industrial/technical education. Focuses on specific competencies including developing and administering performance tests, monitoring student process, and others. Open to majors and non-majors.
- EVT 4562 Vocational Education for Special Needs Students (4) ED EDV**
Focuses on modifying the vocational education curriculum, laboratory, shop, student outcomes, learning activities, tests, media, etc. to accommodate the unique learning needs of minority, handicapped, disadvantaged, non-traditional and other special needs students.
- EVT 4651 Equity in Schools and the Workplace 6A MW (3) ED EDV**
Issues related to gender equity in schools and the workplace. Includes legal, ethical, psychological, sociological, and economic factors; males and females in traditional and non-traditional occupations.
- EVT 4905 Independent Study: Industrial-Technical Education (1-4) ED EDV**
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests.
- EVT 4909 Directed Study: Industrial-Technical Education (1-3) ED EDV**
PR: CI. To extend competency in teaching field.
- EVT 4936 Senior Seminar in Industrial-Technical Education (2) ED EDV**
PR: Senior standing; CR: EVT 4940. Synthesis of teacher candidate's courses in complete college program.
- EVT 4940 Internship: Industrial-Technical Education (1-12) ED EDV**
CR: EVT 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9-12 semester hours.
- EVT 4946 Supervised Field Experience: Industrial-Technical Education (1-6) ED EDV**
PR: CI. S/U only. Planned supervised functions in the area of specialization and coordinated with selected schools, government, offices, social agencies, businesses and industries on site.
- EVT 5369 Preparation and Development for Teaching (4) ED EDV**
The development of selected instructional materials, use of new educational media, performance evaluation instruments, and counseling techniques.
- EVT 5664 School Community Development (3) ED EDV**
Identifying, assessing, and analyzing, individual, institutional and community needs for the purpose of cooperative program planning, community involvement, and public support.
- EXP 4104 Sensory Processes (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Available to both majors and non-majors. Psychophysical and neurophysiological data and theory underlying sensory processes. Visual, auditory, chemical, and somatosensory systems, with particular emphasis on visual processes.
- EXP 4204C Perception (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Topics include sensory and physiological bases of perception and how people process relevant information in their environments.
- EXP 4304 Motivation (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. A survey of motivational processes and mechanisms from physiological and psychological viewpoints.
- EXP 4404 Psychology of Learning (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Survey of methods, empirical findings, and theoretical interpretations in conditioning and instrumental learning.
- EXP 4523C Cognitive Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Survey of methods, empirical findings, and theoretical interpretations of human learning, information processing, verbal learning, and judgment and decision-making.
- EXP 4640 Psychology of Language (3) AS PSY**
- Historical survey of relations between psychology and linguistics leading to the emergence of psycholinguistics as a field of study. Current status of theory and research in the field.
- FIL 2001 Film: The Language Of Vision 6A FA (4) VP ART**
Exploration of the history of creative filmmaking from its beginnings to the present time. Open to both majors and non-majors.
- FIL 3004 The Film as Mass Communication I: Syntax (3) AS COM**
PR: MMC 2100 and MMC 3602 or DPR. The language, conventions, elements, and patterns of the film medium as related to current models of effective mass communication and new theories of nonverbal communication.
- FIL 3201C Beginning Film (3) VP ART**
Intermediate problems in film with emphasis on the exploration of materials and media and the development of individual concepts.
- FIL 3510 World Cinema FA (4) VP ART**
Offers international perspectives through an examination of films from around the world. Each week narrative films from acclaimed directors will be screened, read about and discussed.
- FIL 4202C Advanced Film (3) VP ART**
PR: FIL 3510C. More advanced projects in filmmaking to further develop works both technically and conceptually.
- FIL 4404 Social History of the Film, 1945 to the Present (3) AS COM**
PR: MMC 2100 and MMC 3602 or DPR. The development of the film from 1945 to the present.
- FIL 5205C Cinematography (4) VP ART**
PR: PGY 4520C. Advanced studio work using black and white, color and sound as technical and aesthetic factors in visual, artistic productions.
- FIN 2104 Personal Finance (3) BA FIN**
Not available for credit to upper-level students who have been admitted to the College of Business. May not be counted toward major requirements in FIN or GBA. Survey of the problems and techniques of personal financial planning. Includes consumer credit, insurance, home ownership, and personal investing, with attention given to current economic and legal constraints.
- FIN 2106 Introduction to Investments (3) BA FIN**
Not available for credit to upper-level students who have been admitted to the College of Business. May not be counted toward major requirements in FIN or GBA. Emphasizes the operations of the security markets and the risks and returns of alternative investment media. Designed for non-business administration students.
- FIN 2935 Selected Topics in Finance (1-6) BA FIN**
Not available for credit to upper-level students who have been admitted to the College of Business Administration. Topics to be selected by department chair.
- FIN 3233 Money and Banking (3) BA FIN**
PR: ECO 2013. Examines the structure and operations of our monetary system, commercial banking, central banking, money, and capital markets, and provides an introduction to monetary theory and policy.
- FIN 3403 Principles of Finance (3) BA FIN**
PR: ACG 2071 or CI and ECO 2023. Study of the processes, decision structures, and institutional arrangements concerned with the use and acquisition of funds by a firm. Includes the management of the asset and liability structure of the firm under certain and risky situations. The financial decision process will include and recognize the international as well as domestic aspects of financial management.
- FIN 3604 International Finance (3) BA FIN**
PR: ECO 2013 and FIN 3403 or CI. Study of factors affecting international business, assessment of risks, international managerial finance, institutions and instruments of international business finance.
- FIN 4245 Federal Reserve System and Monetary Policy (3) BA FIN**
PR: FIN 3233 or CI. An analysis of the Federal Reserve System, with special emphasis on monetary theory and the formulation and administration of monetary policy.
- FIN 4303 Financial Institutions and Markets (3) BA FIN**
PR: FIN 3403. A study of financial institutions and their roles in the capital markets; includes the savings allocation, investment, and financial decision making processes.
- FIN 4324 Bank Management (3) BA FIN**
PR: FIN 3403 and FIN 3233. Application of traditional finance concepts to the management of commercial banks with emphasis on decision making and problem-solving techniques to major problem areas in banking.
- FIN 4412 Working Capital Management (3) BA FIN**
PR: FIN 3403. An examination of short-term financial management - that is, policies and decisions related to managing the current

- operations of a firm. Topics to be covered include cash management, credit and collection policy, inventory decisions, and sources of short-term financing.
- FIN 4414 Advanced Corporation Finance (3) BA FIN**
PR: FIN 4504. An examination of the financial policies of corporations, with special reference to dividend policy, financial structure, capital expenditures, acquisitions, mergers, and reorganizations.
- FIN 4443 Financial Policies and Strategies (3) BA FIN**
PR: FIN 4414. A senior seminar for majors in Finance. Primarily a case course examining financial policies and the application of financial analysis to alternative strategies.
- FIN 4461 Financial Statement Analysis (3) BA FIN**
PR: FIN 3403. Provides an understanding of the relationship between financial statements produced in accordance with GAAP and the informational content such statements provide. After completing the course, the student should have a better understanding of the usefulness of published financial statements to various users in a variety of circumstances.
- FIN 4504 Principles of Investments (3) BA FIN**
PR: ECO 2013 and FIN 3403. Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. Includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact on the valuation process.
- FIN 4514 Advanced Investment Analysis and Management (3) BA FIN**
PR: FIN 4504. A comprehensive study of security analysis and portfolio management. The course will utilize a quantitative approach to investment selection and management.
- FIN 4905 Independent Study (1-3) BA FIN**
PR: CI, CC, S/U only. Specialized independent study determined by the student's needs and interests.
- FIN 4915 Independent Research (1-3) BA FIN**
PR: CI. The research project will be mutually determined by the student and instructor.
- FIN 4934 Selected Topics in Finance (1-3) BA FIN**
Topics to be selected by instructor and department chairperson on pertinent finance issues.
- FLE 4290 Technology in the Foreign and Second Language Classroom (3) ED EDX**
This course prepares pre-service and in-service teachers to infuse technology into foreign language and ESOL instruction. Students will develop technology skills and knowledge based on sound pedagogical principles that reflect research and theory in Second Language Acquisition and will apply this practical and theoretical knowledge to K-16 Foreign Language/ ESOL instructional situations.
- FLE 4314 Methods of Teaching Foreign Languages and ESOL in the Elementary School (3) ED EDX**
PR: EDG 4620 or concurrent registration. Fluency in target language and in English. Methods of planning and teaching foreign languages in the elementary school. The emphasis is on teaching communicatively and on integrating culture in the K-6 classroom.
- FLE 4316 Language Principles and Acquisition (1-3) ED EDX**
PR: FLE 4316. Overview of applied Second Language Acquisition theory and the components of language, linking them to methods and techniques of providing comprehensible instruction and supporting the development of oral proficiency and literacy skills for (LEP) children.
- FLE 4333 Methods of Teaching Foreign Languages and ESOL in the Secondary School (3) ED EDX**
PR: FLE 4314. Fluency in the target language and in English or DPR. Methods of teaching foreign languages within a communicative framework. Includes examination and practice of current instructional techniques in listening, speaking, reading and writing skills, testing, error correction, and computer assisted language instruction. The emphasis is on teaching foreign languages and teaching for cultural understanding at the secondary level 7-12.
- FLE 4365 ESOL Competencies and Strategies (1-3) ED EDX**
Designed to enable participants to meet the special limitations and cultural educational needs of LEP students in content area classes. Designed to provide a theoretical and practical foundation for ESOL competencies and strategies.
- FLE 4370 Practicum in Foreign Language Teaching in the Secondary School (3) ED EDX**
PR: Senior standing or enrollment in Plan II Master's Program or DPR. Required concurrently with FLE 4314 or FLE 4333. Fluency in the target language and in English. Pre-internship field experience in a K-12 environment. Will include observation and practice in a K-12 classroom as well as class meetings.
- FLE 4936 Senior Seminar in Foreign Language Education (2) ED EDX**
PR: Senior standing. Required concurrently with internship. Synthesis of teacher candidate's courses in complete college program.
- FLE 4940 Internship: Foreign Language Education (1-12) ED EDX**
Intern takes Senior Seminar in Education concurrently. S/U only. One full semester of internship in a public or private school.
- FLE 5365 ESOL Education in Content Areas (3) ED EDX**
Enables participants to meet the special linguistic & cultural educational needs of limited English proficient (LEP) students in content area classes. Provides a theoretical & practical foundation for ESOL competencies in courses include ESOL infusion.
- FOL 3100 General Foreign Language I (1-4) AS WLE**
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or in professional translation.
- FOL 4101 General Foreign Language II (1-3) AS WLE**
A general purpose course that may be used for transfer of credit, credit by examination, and similar matters; may also be used for formal courses in less commonly taught languages or for workshops in professional interpreting.
- FOL 4905 Directed Study (1-3) AS WLE**
Departmental approval required.
- FOL 5906 Directed Study (1-3) AS WLE**
PR: FOL 4101 or equivalent.
- FRE 1120 Beginning French I (4) AS WLE**
CR: FRE 1120L. The first course in the study of elementary French. Emphasis on the development of basic skills in comprehension, speaking and reading.
- FRE 1120L Beginning French I Laboratory (1) AS WLE**
CR: FRE 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- FRE 1121 Beginning French II (4) AS WLE**
PR: FRE 1120 or equivalent. CR: FRE 1121L. A continuation of FRE 1120.
- FRE 1121L Beginning French II Laboratory (1) AS WLE**
CR: FRE 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- FRE 1170 Overseas Study-Elem. French (4) AS WLE**
Departmental approval required. Elementary-level French taught in France. In lieu of FRE 1120 and FRE 1121.
- FRE 2200 French III (3) AS WLE**
PR: FRE 1121 or equivalent. A review of the basic structure of French.
- FRE 2201 French IV (3) AS WLE**
PR: FRE 2200 or equivalent. Readings in French on the intermediate level.
- FRE 2240 Conversation II (3) AS WLE**
PR: FRE 2241 or equivalent proficiency Conversation practice with concentration on current idiomatic usage.
- FRE 2241 Conversation I (3) AS WLE**
PR: FRE 1121. For development of basic conversational skills.
- FRE 2270 Overseas Study-Intro. French (1-6) AS WLE**
PR: Two semesters of university-level French or equivalent proficiency. Departmental approval required.
- FRE 3230 Reading in French Literature and Culture (3) AS WLE**
PR: FRE 2201 or equivalent. This course is designed to build reading skills in French while giving students a broad background in French culture.
- FRE 3420 Composition I (3) AS WLE**
PR: FRE 2200 and/or FRE 2201. A fundamental composition course for students who have completed FRE 2200 and/or 2201.
- FRE 3440 French For Business (3) AS WLE**
PR: FRE 2200 or equivalent. An introduction to the French language in ordinary business transactions.
- FRE 3470 Overseas Study (1-6) AS WLE**
Departmental approval required. An intensive study-travel project in France.
- FRE 3500 French Civilization (3) AS WLE**
Readings and discussion on the cultural history of France.
- FRE 3502 The Francophone World (3) AS WLE**
An undergraduate 3 credit course, which offers an overview of the

334 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- main French speaking cultures throughout the world, outside of France: French Canada, the Caribbean, Belgium, Switzerland, the Maghreb, Sub-Saharan Africa, the Indian Ocean, the Middle East, Southeast Asia, Louisiana.
- FRE 4392 African Images in Francophone Film HP AF SS MW(3) AS WLE**
This is a film based course and technologically enhanced course which will look at cultural, socio-economic, political and gender issues in French speaking Africa. Course materials will be available in English and French.
- FRE 4421 Composition II (3) AS WLE**
Continuation of French composition. This course is designed to follow FRE 3420.
- FRE 4471 Advanced Overseas Study (1-6) AS WLE**
PR: FRE 3470 or Cl. Departmental approval required. Intensive language study in France.
- FRE 4700 French Linguistics (3) AS WLE**
PR: LIN 3010 and FRE 2201 or equivalent. An introduction to the phonological, morphological and syntactic structure of French.
- FRE 4905 Directed Study (1-3) AS WLE**
Departmental approval required.
- FRE 4930 Selected Topics (1-3) AS WLE**
Study of an author, movement or theme.
- FRE 5425 Advanced Written Expression (3) AS WLE**
PR: FRE 4421, or equivalent. Course is designed to give advanced training in free composition in French.
- FRE 5566 Contemporary France (3) AS WLE**
PR: FRE 3500 or equivalent or graduate standing. An advanced course in French civilization and culture including a study of recent social, artistic and political trends as well as various current intellectual movements. Text and discussions in French.
- FRT 3001 Great French Love Stories in Translation MW(3) AS WLE**
An overview of the evolution of the concept of romantic and passionate love in French literature throughout the centuries and its impact on western literature and thought.
- FRT 3140 French Literary Masterpieces in English Translation 6A LW(3) AS WLE**
A survey of the major literary works of France, tracing not only literary but intellectual and cultural history from the Middle Ages to the present.
- FRW 4100 The French Novel MW(3) AS WLE**
PR: FRE 3230, FRE 3420 or Cl. Study of the most representative novels from the 17th - 20th centuries in France, examining literary movements, ideas, and techniques. Course taught in French.
- FRW 4101 Introduction to French Drama and Poetry MW(3) AS WLE**
PR: FRE 3230. A study of the history of drama and poetry. Will include medieval drama, Racine, Corneille, Moliere, Anouilh, Sartre, Ionesco and others. Will also include Villon, Ronsard, DuBella, Lamartine, Hugo, Vigny, Musset, Baudelaire, Mallarme, Rimbaud, Valery, Peguy, Eluard, Apollinaire, Char, and others. Course content may vary from year to year. Course taught in French.
- FRW 5222 Classical Prose and Poetry (3) AS WLE**
PR: FRW 4101. Emphasis on Malherbe, Descartes, Pascal, La Fontaine, and Boileau.
- FRW 5226 20th Century Poetry and Theatre (3) AS WLE**
PR: FRW 4101. Valery, Claudel, Anouilh, Motherland, Sartre, Ionesco.
- FRW 5286 The 20th Century Novel (3) AS WLE**
PR: FRW 4100. Proust, Gide, Mauriac, Malraux, Camus, Robbe-Grillet.
- FRW 5314 Classical Drama (3) AS WLE**
PR: FRW 4101. Corneille, Moliere, and Racine.
- FRW 5415 Literature of the Middle Ages (3) AS WLE**
PR: FRW 4100 or FRW 4101. Major genres, including epics, Arthurian romances, drama and lyric poetry. Reading in modern French translation.
- FRW 5425 Literature of the Renaissance (3) AS WLE**
PR: FRW 4100 or FRW 4101. A study of Renaissance French humanism including Rabelais, Montaigne, and Pleiade poets.
- FRW 5445 18th Century Literature (3) AS WLE**
PR: FRW 4100. The classical tradition and the new currents of thought in the Age of Enlightenment.
- FRW 5528 Pre-Romanticism (3) AS WLE**
PR: FRW 4100 or FRW 4101. The precursors of romanticism. Emphasis on Rousseau, Bernardin de St. Pierre, Chénier, and Chateaubriand.
- FRW 5535 Romanticism and Early Realism (3) AS WLE**
PR: FRW 4101. A study of the romantic and early realistic movements with emphasis on Lamartine, Vigny, Musset, Hugo, and Balzac.
- FRW 5556 Naturalism and Realism (3) AS WLE**
PR: FRW 4100 or FRW 4101. A detailed study of realism and naturalism with emphasis on Flaubert, Zola, les Goncourt, Maupassant, and Daudet.
- FRW 5934 Selected Topics (1-3) AS WLE**
PR: Upper-level or graduate standing. Study of an author, movement or theme.
- FSS 3220 Introduction to Food Production Management (3) US HRM**
Food preparation, standards and techniques in commercial food production and service. Factors affecting the quality of food, practical experience in food production and service, in accordance with food standards, sanitation & safety and cost control.
- GEA 2000 World Regional Geography SS HP AF(4) AS GPY**
Comparative and analytical analysis of representative regions of the world with emphasis on cultural, political, economic, environmental, and physical diversity.
- GEA 3194 Regional Geography (4) AS GPY**
Variable title course to systematically study and compare special regions identified by the instructor.
- GEA 3300 Geography of Middle America (4) AS GPY**
- GEA 3405 Geography of Latin America 6A(4) AS GPY**
- GEA 3500 Geography of Europe 6A(4) AS GPY**
- GEA 3703 Geography of Asia (4) AS GPY**
- GEB 2350 Doing Business Around the World SS(3) BA GBA**
This course introduces the student to: 1) the nature of international business; 2) the framework of international organizations and the monetary system within which international business functions; 3) forces affecting international business, and 4) management responses to problems caused by international environments.
- GEB 2935 Selected Topics in Business (1-6) BA GBA**
Topics to be selected by department chairs.
- GEB 4890 Strategic Management and Decision Making MW(3) BA GBA**
PR: Senior standing and FIN 3403, MAN 3025, MAR 3023. The course is intended to provide a unifying, integrating, and coordinating opportunity to tie together concepts, principles, and skills learned separately in other, more specialized courses in Business Administration.
- GEB 4905 Independent Study (1-3) BA GBA**
PR: Cl. S/U only. Specialized independent study determined by the student's needs and interests.
- GEB 4915 Independent Research (1-4) BA GBA**
PR: Cl. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
- GEB 4935 Selected Topics in Business Administration (1-4) BA GBA**
The content and organization of this course will vary according to the current interests of the faculty and needs of students.
- GEO 1930 Geography of Current Events SS(4) AS GPY**
Application of basic geographic principles of the analysis of contemporary events in various parts of the world.
- GEO 2041C Map Interpretation (4) AS GPY**
Analysis and synthesis of various types of maps and map projections.
- GEO 2371 Introduction to Earth Systems Science NS(3) AS GPY**
For non-majors only. The application of basic earth system science analysis to environmental problems. Review of impact of human activities on the surface of the earth at local and global scales.
- GEO 3013 Introduction to Physical Geography NS(3) AS GPY**
CR: GEO 3013L. Principles of physical geography; maps, earth-sun relationships; meteorological, hydrological, pedological, aeolian, and glacial processes; and resultant landforms.
- GEO 3013L Introduction to Physical Geography Lab (1) AS GPY**
Laboratory portion of introduction to physical geography (GEO 3013).
- GEO 3164C Quantitative Methods (4) AS GPY**
PR: 12 credit hours in Geography or Cl. Statistical analysis in geographic research.
- GEO 3180 Digital Thematic Mapping (4) AS GPY**
An introduction to the concepts underlying modern, computer-based mapping and to the collection and storage of digital spatial data.
- GEO 3402 Human Geography (4) AS GPY**
Systematic treatment of human activities on earth; population, settlement, agriculture, industry, trade, transportation, and political aspects are among those considered.
- GEO 3602 Urban Geography (4) AS GPY**
PR: GEO 3402 or Cl. Spatial analysis of urban areas; growth,

- location, spacing, and size. Development, site, situation, internal structure, and hinterland are considered.
- GEO 4114C Geographic Techniques and Methodology (4) AS GPY**
PR: GEO 3141C and GEO 3164C, or CI. Selected topics in various geographic techniques and methodologies and their application.
- GEO 4131C Remote Sensing of the Environment (4) AS GPY**
PR: GEO 3140C and GEO 3164C, or CI. Analysis of satellite images and aerial photographs for studies of the environment.
- GEO 4151C Geographic Information Systems (4) AS GPY**
PR: GEO 3140C and GEO 3164C, or CI. An introduction to the concepts underlying Geographical Information Systems, with an emphasis on analytical capabilities of such systems in both raster and vector domains.
- GEO 4201C Advanced Physical Geography (4) AS GPY**
PR: GEO 3013 or CI. Intensive study of a topic selected from physical geography.
- GEO 4210 Process Geomorphology (4) AS GPY**
PR: GEO 3013 or GLY 2010 or CI. Origin, evolution, and distribution of the landforms of North America.
- GEO 4244 Tropical Meteorology NS (4) AS GPY**
PR: GEO 3013, one approved Calculus course, or CI. This course examines the tropical atmosphere, its interaction with land and ocean, as well as weather and climate phenomena that are unique to the tropics. Students will take an in-depth look at hurricane climatology, the El Nino and Southern Oscillation phenomenon, thunderstorms and lightning, satellite remote sensing, monsoons, sea-breeze convergence and Florida climatology, surface energy exchange, land use change and its impact on tropical climates.
- GEO 4265 Soil Genesis and Classification (3) AS GPY**
PR: GEO 3013, or CI. A systematic study of soil genesis and classification with a focus on North American and Florida soils.
- GEO 4280C Hydrology (4) AS GPY**
PR: GEO 3013 or CI. Introduction to the general principles that govern hydrologic processes. Approaches to hydrologic measurements and the application of hydrologic analyses to water-resource management issues are examined.
- GEO 4300 Biogeography (4) AS GPY**
PR: GEO 3013 and GEO 3164C, or CI. Analysis of the present and past distribution of species at an intermediate to large spatial scale.
- GEO 4340 Natural Hazards (4) AS GPY**
PR: GEO 3164 or CI. Examination of the physical, social, economic, political and cultural forces that create the phenomena of natural hazards. Case studies from around the world will include floods, droughts, tornadoes, hurricanes, freezes, heat waves, wild fires, earthquakes, tsunami, and volcanoes.
- GEO 4372 Global Conservation 6A MW (4) AS GPY**
The distribution, exploitation, and conservation of physical and human resources, ecology.
- GEO 4421 Cultural Geography (4) AS GPY**
PR: GEO 3402 or CI. The interrelationships of culture and nature, from ancient times to the present.
- GEO 4470 Political Geography MW (4) AS GPY**
PR: GEO 3402 or CI. The geographic factors underlying political decisions and influencing their outcome; the geographic consequences of these decisions; geopolitics.
- GEO 4502 Economic Geography (4) AS GPY**
PR: GEO 3402 or CI. The spatial organization of economic production, consumption, and exchange systems.
- GEO 4604 Advanced Urban Geography MW (4) AS GPY**
PR: GEO 3402, GEO 3602, or CI. Intensive examination of issues such as economic restructuring and inner-city decline, ghetto formation, gentrification, transportation, and policy-making.
- GEO 4700 Transportation Geography (4) AS GPY**
PR: GEO 3402 and GEO 3164 or CI. General concepts related to the movement of goods and people, with particular emphasis on spatial principles and urban transportation problems and planning.
- GEO 4900 Directed Reading (1-4) AS GPY**
PR: 20 hours in geography and CI prior to registration.
- GEO 4910 Individual Research (1-4) AS GPY**
PR: 20 hours in geography and CI prior to registration.
- GEO 4933 Geography Colloquium (1) AS GPY**
Senior Standing in geography Weekly topical lectures by faculty and outside speakers. Students will develop a plan for their professional or graduate careers.
- GEO 5134C Advanced Remote Sensing (3) AS GPY**
PR: GS in Geography or CI, GEO 4124C. Study of digital image processing techniques. Topics include filtering techniques, geometric and radiometric normalization, and classification algorithms with emphasis on developing.
- GEO 5157 Advanced Geographic Information Systems (3) AS GPY**
PR: GS in Geography or CI. Spatial problem solving utilizing GIS mapping and statistical methods. The course is designed to give students hands-on experience in using computerized techniques for geographic analysis.
- GEO 5177 GIS for Non-Majors (3) AS GPY**
An introduction to the concepts underlying digital thematic mapping and geographical information systems (GIS) for non-geography majors and non-geography graduate students.
- GEO 5215 Advances in Geomorphology (3) AS GPY**
PR: GEO 4372 or CI. Advanced examination of geomorphic processes and landforms with an emphasis on Florida.
- GEO 5263 Advances in Soils (3) AS GPY**
PR: GEO 4372 or CI. Examination of how earth systems influence soil formation and variation. Details analysis of soils climosequences, biosequences, toposequences, lithosequences, chronosequences, and anthrosequences.
- GEO 5288 Hydrological Systems (3) AS GPY**
PR: GEO 4372 or CI. A systematic approach to hydrology using the drainage basin as the fundamental unit of analysis is used to explore form and process, while modeling streamflows.
- GEO 5347 Advances in Natural Hazards (3) AS GPY**
PR: GEO 4372 or CI. Analysis of natural hazards integrating principles of physical, social, economic, political, and technical forces that affect extreme geophysical events.
- GEO 5475 Advanced Political Geography (3) AS GPY**
PR: GEO 4470 or CI. Advanced investigation of geopolitical issues including: the human construction of territoriality, ethnic relations, the making of nations and states, the geopolitics of localities, and environmental policy making.
- GEO 5545 Advanced Economic Geography (3) AS GPY**
PR: GEO 4502 or CI. An intensive examination of selected issues in economic geography including: regional development and decline; spatial labor market trends; business locational analysis; and comparative economic policy.
- GEO 5605 Contemporary Urban Issues (3) AS GPY**
PR: GEO 3602; GEO 4604; or CI. Advanced survey of urban issues such as: industrial restructuring and urban development, inner-city ethnic relations, the geopolitics of urban governance, and urban culture.
- GEO 5704 Advanced Transportation Geography (3) AS GPY**
PR: GEO 4114; GEO 4700; or CI. Review of transportation issues and analysis, focusing on modeling and planning for flows of goods and people. Provides a hands-on approach to use of GIS for such analysis.
- GER 1120 Beginning German I (4) AS WLE**
CR: GER 1120L. Development of basic skills in listening and reading comprehension, speaking and writing of German.
- GER 1120L Beginning German I Laboratory (1) AS WLE**
CR: GER 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- GER 1121 Beginning German II (4) AS WLE**
PR: GER 1120 or equivalent. CR: GER 1121L. Continued development of basic skills in listening and reading comprehension, speaking and writing German.
- GER 1121L Beginning German II Laboratory (1) AS WLE**
CR: GER 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- GER 2200 German III (3) AS WLE**
PR: GER 1121 or equivalent. A review of the basic structure of spoken and written German. May be taken concurrently with GER 2201.
- GER 2201 German IV (3) AS WLE**
PR: GER 1121 or equivalent. Readings in German on the intermediate level. May be taken concurrently with GER 2200.
- GER 2240 Conversation I (3) AS WLE**
PR: GER 1121. For development of basic conversational skills.
- GER 3420 Composition I (3) AS WLE**
A fundamental course for students who have completed GER 2200 or GER 2201.
- GER 3440 German for Business and International Trade (3) AS WLE**
PR: GER 2200, or CI. An introduction to the German language in ordinary business transactions.
- GER 3500 German Civilization (3) AS WLE**
PR: GER 2200 or GER 2201. Readings in German on the cultural history of Germany.
- GER 4410 Conversation II (3) AS WLE**

336 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- Free conversation based on the current German idiom.
- GER 4421 Composition II (3) AS WLE**
Practical training in modern German usage and differences of style.
- GER 5605 Goethe (3) AS WLE**
Selected novels, poems: Werther, Wahlverwandtschaften, Wilhelm, Meister, Westostlicher, Divan.
- GER 5845 History of the German Language (3) AS WLE**
A diachronic approach to the study of the German language. The course traces the history and development of the language from Indo-European through Germanic, Old, Middle, and New High German.
- GET 3100 German Literature in English Translation MW(3) AS WLE**
Analysis and interpretation of selected major works of German literature, to be read in English, with regard to their thought content and relevance to our thoughts and actions.
- GEW 4100 Survey of German Literature I (3) AS WLE**
Course will examine a variety of texts from the 9th to the early 19th century, exposing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Not repeatable.
- GEW 4101 Survey of German Literature II (3) AS WLE**
Course will examine a variety of texts from the 19th century to the present, exposing significant moments in German literature and thought and exploring diverse perspectives on German culture and society. Course taught in German. Course not repeatable.
- GEW 4900 Directed Study (1-3) AS WLE**
Departmental approval required.
- GEW 4930 Selected Topics (1-3) AS WLE**
Study of an author, movement or theme.
- GEW 5475 20th Century Literature to 1945 (3) AS WLE**
A study of major styles in German literature from 1900 to WW II with emphasis on Hauptmann, Schnitzler, Hofmannsthal, George Rilke, Kaiser, Heym, Trakl, Thomas Mann, Hesse, Kafka, Benn, Brecht.
- GEW 5489 20th Century Literature: 1945 to Present (3) AS WLE**
Study of major trends in German literature since WW II with emphasis on Borchert, Frisch, Durrenmatt, Boll, Uwe, Johnson, Grass, Aichinger, Eich Enzensberger, Bachmann.
- GEW 5515 The Enlightenment (3) AS WLE**
Selected dramas and critical writings by Lessing, Wieland, Kant.
- GEW 5545 Romanticism (3) AS WLE**
Jenaer circle and Heidelberg circle; the late romantic period, the writers between Classicism and Romanticism.
- GEW 5555 Realism (3) AS WLE**
Selected works by Grillparzer, Grabbe, Buchner, Hebbel, Heine, Immerman, Stifter, Keller, Meyer, Storm, Raabe, Hulshoff, and Morike.
- GEW 5606 Faust (3) AS WLE**
Sources, form, content, and literary significance of Urfaust and Faust.
- GEW 5615 Schiller (3) AS WLE**
Selected dramas, philosophical, and aesthetical writings.
- GEW 5934 Selected Topics (1-3) AS WLE**
PR: Upper-level or graduate standing. Study of an author, movement or theme.
- GEY 2000 Introduction to Gerontology SS (3) AS GEY**
This course is designed to be an introduction to the study of aging. The aging process is viewed from a multi-disciplinary perspective including the biological, psychological, and sociological aspects of aging.
- GEY 3323 Community Services for Older Adults (3) AS GEY**
This class is designed to introduce students to services available to older adults and to careers in the field of aging services. Content includes theoretical and practical issues, as well as exposure to opportunities for service and employment.
- GEY 3601 Physical Changes and Aging (3) AS GEY**
A survey of normal and pathological physical changes occurring from middle age through older age. Course emphasis will be on basic age-related changes and their implications for behavior in older age.
- GEY 3625 Sociocultural Aspects of Aging 6A SS AF(3) AS GEY**
Consideration of human aging in a broad sociocultural context. Course emphasis will be on historical, philosophic, and demographic aspects of aging, theories of social gerontology, attitudes toward aging and the aged, cross-cultural perspectives on aging, the sociology of retirement, and aging and the community.
- GEY 4322 Gerontological Case Management (3) AS GEY**
This course examines the role and function of case management in meeting the care needs of the older adult. All aspects of case management practice are covered, including the elements of the case management process as well as ethical and legal issues.
- GEY 4327 Long-Term Care Administration I (3) AS GEY**
PR: GEY 2000. A survey of Long Term Care (LTC) environments. Explored are such issues as definitions of LTC, physiological conditions of LTC uses, the institutional setting, the sociopsychological context, and methods of evaluation and intervention.
- GEY 4328 Long-Term Care Administration II (3) AS GEY**
PR: GEY 4327, ACG 2011, each with a grade of C or better. Administration of long-term care institutions from a group dynamics perspective. Emphasis on informed problem solving and decision-making via analysis of the psychosocial and sociocultural environment in the nursing home community. Course objective is to create efficient and humane living and working conditions in nursing homes.
- GEY 4329 Long-Term Care Administration III (3) AS GEY**
PR: GEY 4328, ACG 2011, each with a grade of C or better. This course will familiarize the student with the basic aspects of nursing home administration through the practical application of management theory and concepts.
- GEY 4340 Housing for the Elderly (3) AS GEY**
Major issues and aspects of conventional and planned housing for the elderly. Several field trips will be taken.
- GEY 4360 Gerontological Counseling (3) AS GEY**
An introduction to the study of the major mental health problems of the elderly. Current approaches to counseling the elderly in community and institutional settings are discussed.
- GEY 4401 Research Methods in Gerontology (3) AS GEY**
PR: STA 2122 or equivalent with a grade of C or better. Restricted to Gerontology majors, others by departmental permission. Methods and techniques of social research in gerontology. Design of gerontological studies, collection and analysis of data, interpretation of results, and preparation of reports.
- GEY 4608 Alzheimer's Disease Management (3) AS GEY**
PR: GEY 2000 or GEY 3326. This course will provide instruction on effective approaches for providing care to persons with Alzheimer's Disease and related disorders in residential and home care settings. The major dementing disorders and typical behaviors presented by patients are presented along with strategies for successful behavior management. Building a dementia program and building dementia care teams are also covered.
- GEY 4612 Psychology of Aging SS (3) AS GEY**
A comprehensive overview of psychological aspects of aging. Topics will include age-related changes in sensation/perception, cognition, and personality, as well as application to late-life psychopathology.
- GEY 4628 Minority Aging SS (3) AS GEY**
Minority status, race, and ethnicity are socially constructed concepts that reflect our aging society's value systems, prejudices, and social stratification. This course, which is not restricted to majors nor repeatable for credit, will expose students to these concepts through a life course and political economy perspective.
- GEY 4635 Business Management in an Aging Society XMW(3) AS GEY**
This course provides interested students with an interdisciplinary perspective that addresses both business management and the impact of our aging society on business.
- GEY 4641 Death and Dying SS (3) AS GEY**
A broad overview of the basic concepts and psychosocial issues relating to the meaning of loss and death, the process of death, and the experience of grieving. Health care practices are considered along with community resources.
- GEY 4647 Ethical and Legal Issues of Aging SS MW(3) AS GEY**
A consideration of the major ethical and legal issues in aging and their implications for policies, priorities, and services.
- GEY 4900 Directed Readings (1-3) AS GEY**
PR: CI. A reading program with topics in gerontology conducted under the supervision of a faculty member.
- GEY 4935 Special Topics in Gerontology (3) AS GEY**
Courses on topics such as preretirement, mental health, human services organization, nursing home administration, the older woman, and elder abuse will be offered.
- GEY 4945 Field Placement (1-9) AS GEY**
PR: CI. Subject to availability of internship sites approved by the Department of Gerontology. Internship in an agency or community setting. A full-time assignment to an agency or organization, engaged in planning or administering programs for older people if in the BA program (6 hours), or to a nursing home if in the BS program (9 hours).
- GEY 5620 Sociological Aspects Of Aging (3) AS GEY**
Examines, within a sociological frame of reference, the interrelationships between the aged (or aging) and the structure and function of the social system and its major institutionalized

- subsystems.
- GEY 5630 Economics and Aging (3) AS GEY**
Examines basic economic systems as they impact the aged. Emphasis is on applied aspects of economic planning, pensions, insurance, social security and other support systems.
- GEY 5642 Perspectives on Death and Dying (3) AS GEY**
Study of the various psychological, medical, legal, and religious problems caused by dying and death, and how individuals and groups have responded in the past and present.
- GLY 2000 Earth and Environmental Systems NS (3) AS GLY**
May substitute for GLY 2010 for geology majors. This course examines the geology of the earth and the environment, using an earth systems approach that looks at interactions between the lithosphere, hydrosphere, atmosphere, and biosphere. Students will learn general principles of geology, travel world-wide on the internet, and participate in discussions on topics ranging from the scientific method to the latest geologic discoveries. Open University course; taught via internet and TV. Open University course; taught via internet and TV.
- GLY 2010 Dynamic Earth: Introduction to Physical Geology NS (3) AS GLY**
Required for Geology majors; open to non-majors. Study of minerals, rocks, and dynamic processes of the earth. Introduction to the origin of earth's materials, landforms, and structures.
- GLY 2010L Dynamic Earth Laboratory (1) AS GLY**
PR: GLY 2010 or concurrent registration. Required for Geology majors; open to non-majors. Laboratory study of earth materials, landforms, geologic structures, topographic and geologic maps. Lec-lab-field trips.
- GLY 2015L Essentials of Geology Laboratory (1) AS GLY**
Fundamental concepts and skills of modern geology, including rock and mineral identification, analysis of geologic maps, field analysis, and applications of computers in Geology. Required field trip.
- GLY 2030 Hazards of the Earth's Surface: Environmental Geology NS (3) AS GLY**
May substitute for GLY 2010 for geology majors. A first course in geology emphasizing environmental aspects of the earth's crust, such as earthquakes, depletion of the earth's resources, water-supply problems, and geologic aspects of land use and planning.
- GLY 2040 Origins: From the Big Bang to the Ice Age NS (3) AS GLY**
May substitute for GLY 2010 for geology majors. The history of the cosmos, origin of the universe, galaxies, the solar system, and earth, evolution of life, great extinction's including the dinosaurs, evolution of the primates, and the environmental future of the planet. (For both non-science and science majors.)
- GLY 2050 Science, Earth and Life NS (3) AS GLY**
May substitute for GLY 2010 for geology majors. The nature, history and philosophy of science intended primarily for non-science majors. Consideration of science as a way of knowing through examples taken primarily from historical geology and biology (e.g., extinction of the dinosaurs, continental drift, evolution) but also from physics and astronomy. Consideration of social relevance of science.
- GLY 2100 History of the Earth and Life NS (3) AS GLY**
PR: A course in geology. Required for Geology majors; open to non-majors. Study of the physical and biological history of the earth including evolution of the major groups of organisms, plate tectonics, and interpretation of ancient environments.
- GLY 2100L Earth History Laboratory (1) AS GLY**
Laboratory study of the history of the earth and life. Required for Geology majors; open to non-majors.
- GLY 2930 Selected Topics in Geology (1-3) AS GLY**
Does not count toward the geology major. Topical courses in geology of general interest.
- GLY 3311C The Solid Earth: Petrology and Geochemistry (4) AS GLY**
Igneous and metamorphic rocks of modern and ancient tectonic environments. Rock-forming processes at plate margins and intraplate sites. Essentials of hand specimen and microscopic mineralogy. Required field trip. Lec-lab. May not be repeated for credit.
- GLY 3420C The Solid Earth: Plate Tectonics and Earth Structure (4) AS GLY**
PR: 4 hrs. introductory geology including GLY 2015L; MAC 2312 or equivalent; PHY 2048. Plate tectonic theory and its implication re: the formation of structural features on outcrop and regional scales. Field and geophysical tools for structural analysis. Required field trip. Lec-Lab.
- GLY 3552C Sedimentary Record 1: Sedimentary Processes and Petrology (4) AS GLY**
PR: GLY 2015L, CHM 2045, MAC 2281. CR: GLY 3311C. A lecture and laboratory class that discusses sedimentary processes, formation and classification of sedimentary rock, and the sedimentary rock record. Examination of the rock record to solve problems in sedimentary geology.
- GLY 3610C Introduction to Invertebrate Paleontology (4) AS GLY**
PR: GLY 2100, BSC 2010 or equivalent strongly encouraged as background. Lectures cover principles and applications of paleontology, including biostratigraphy, taphonomy, paleoecology, and micro- and macroevolutionary patterns and processes. Labs survey the invertebrate phyla comprising the bulk of the fossil record.
- GLY 3720C The Fluid Earth (4) AS GLY**
PR: GLY 2015L; MAC 2311 and MAC 2312 or equivalent; CHM 2045 and CHM 2046; PHY 2048 and PHY 2048L. Physical, chemical and biological processes affecting fluids of the lithosphere, oceans and atmosphere. Water as a geologic medium and global entity. A systems approach. Not available as S/U for geology majors; S/U available for others.
- GLY 3850 Geology For Engineers (3) AS GLY**
PR: Junior standing in College of Engineering or CI. No credit toward the geology major, or for those with credit for GLY 2010. An examination of geologic materials and processes designed for engineering students; classification and properties of earth materials, surface processes, site investigation techniques, applications of geology to the solution of engineering problems.
- GLY 4045 Moons, Planets, and Meteors: An Introduction to Planetary Science XMW (3) AS GLY**
PR: Junior standing. Solar System exploration, from Aristotle to NASA. Modern views on the origins of meteorites, the Moon, Mars, Venus, and other planetary bodies, and the methods of planetary study. Meteor impacts, their effects, future hazard. Space science as a tool in the study of the Earth. Field trips, lectures, Internet exercises.
- GLY 4053 Theories and Arguments about the Earth MW(3) AS GLY**
PR: 2000 level geology course. History of thinking about the Earth: context - geologic controversies; emphasis - geologic reasoning.
- GLY 4104C Sedimentary Record 3: Paleontology and Earth Evolution (4) AS GLY**
PR: GLY 2015L, GLY 3552C, BSC 2010. The study of "deep time", including how it is measured, how it is correlated over the Earth's surface, and how important physical, biologic, and chemical geologic processes have varied with time. Lec.-Lab.
- GLY 4554C Sedimentary Record 2: The Earth's Surface (4) AS GLY**
PR: At least one course in Geology with lab. Principles of weathering, erosion, production, and transport of sediment on the earth's surface, and the resulting geomorphology. Modern sedimentary environments and the process-response systems that govern them. Course is open to anyone with at least one course in geology with lab. Course is not available on an S/U basis for geology majors; it is for other majors.
- GLY 4734 Beaches and Coastal Environments MW (3) AS GLY**
A comprehensive introduction to the nature of all coastal environments including beaches, dunes, tidal inlets, estuaries, reefs, and river deltas. Emphasis will be on the natural state of these environments and how human activities have and will impact them. Consideration of coastal management policies involving economics, ethics, policy, and environmental law.
- GLY 4780 Geological Field Studies (1-3) AS GLY**
PR: 1 geology course. Lectures and field trip to study modern geologic systems and/or geologic origins of specific regions. Mapping and field description techniques introduced. Topic/destination of trip varies. Trip requires camping and vigorous physical activity. Lec. Field trip.
- GLY 4805 Geology and Development of Modern Africa MW (3) AS GLY**
An in-depth look at how geology has affected the politics, history and culture of Africa. Units include the Nile and hydrogeology, deserts and climate, rifting and hominid evolution, and mining and politics.
- GLY 4822C Fluid Earth 2: Hydrogeology (4) AS GLY**
PR: GLY 2015L, GLY 3720C, PHY 2048, MAC 2281. CR: MAC 2282. Ground water flow systems, ground water geology, introduction to numerical and analytical models of ground water flow. Lec.-lab.-field trips.
- GLY 4866 Computational Geology (3) AS GLY**
PR: One semester of calculus and physics. Geologic problems and problem-solving from a mathematical perspective. The intersection of geology and math. Calculations and error analysis. Not available as S/U for geology majors; S/U available for others.
- GLY 4905 Independent Study (1-3) AS GLY**
PR: CI. S/U only. Specialized independent study determined by the student's needs and interests.

- GLY 4915 Undergraduate Research (1-3) AS GLY**
PR: Senior or advanced junior standing and written permission of department prior to registration. S/U only. Individual experimental investigations with faculty supervision.
- GLY 4920 Geology Colloquium (1) AS GLY**
PR: Senior standing in Geology. S/U only. Weekly topical lectures by faculty, graduate students and invited speakers.
- GLY 4921 Geocommunications (3) AS GLY**
PR: Twelve (12) or more hours upper level geology courses. A course in communicating within the disciplines of the earth sciences. Emphasis will be on: writing for publication and technical reports, preparation and presentation of posters, and preparation and presentation of oral papers in earth sciences. Course is open to anyone majoring in geology, geography, anthropology or environmental science and policy. Course is not available on a S/U basis for geology majors.
- GLY 4930 Selected Topics in Geology (1-4) AS GLY**
Each topic is a course under the direction of a faculty member with the content depending on the interests of the students and faculty involved. All areas of geology included.
- GLY 4946L Practical and Applied Geology: Teaching Experience (1) AS GLY**
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to give students experience in teaching geology. Topics vary widely, with several different offerings each semester. May be repeated for credit.
- GLY 4947L Practical and Applied Geology: Laboratory Experience (1) AS GLY**
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic laboratory skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.
- GLY 4948L Practical and Applied Geology: Field Experience (1) AS GLY**
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic skills of a practicing field geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.
- GLY 4949L Practical and Applied Geology: Computational Experience (1) AS GLY**
PR: Junior standing, declared Geology major, and at least 12 credit hours of Geology courses, or CI. CR: Enrollment in other Practical/Applied sections. Completion of Geology supporting course sequence highly recommended. Hands-on course designed to teach the basic computational skills of a practicing geologist. Topics vary widely, with several different offerings each semester. May be repeated for credit.
- GLY 4970 Undergraduate Honors Thesis (3) AS GLY**
Open to seniors admitted to the Geology undergraduate honors program. Students will complete an independent research project under supervision of a faculty member, and present results in a senior thesis and a public presentation.
- GLY 5752 Geological Field Excursion (2) AS GLY**
PR: Senior standing in geology or CI. Lectures and 2-3 week field excursion to study regional geology, structure and lithogenesis of geologically complex terrain. Mapping and outcrop description techniques are emphasized. Destination of trip varies. Trip requires camping and vigorous physical activity. Lec.-field trip.
- GLY 5865 Statistical Models in Geology (3) AS GLY**
PR: STA 2023 or equivalent or CI. Application of statistical methods to geological problems. Emphasis on sampling plans, nature of geologic distributions, and application of analyses of variance to solving geological problems. Lec.
- GLY 5932 Selected Topics in Geology (1-4) AS GLY**
PR: Senior or advanced junior standing. Each topic is a course under the direction of a faculty member. All areas of geology included.
- GRA 2206C Typography (3) VP ART**
Restricted to majors. This foundational course explores the structure of letter forms and lettering. This course provides information about the importance of type in the context of graphic design and application for printed and electronic media.
- GRA 3104 Computer Graphics (3) VP ART**
Restricted to majors. This course is the continuation of Graphic Design I. The coursework emphasizes the utilization of electronic media for visual problem solving. Students will increase their skill with web based design and photo-editing software.
- GRA 3110 Graphic Design I (3) VP ART**
Restricted to majors. This course explores the application of formal design principles to visual problem solving through typography, layout, and web design. Students will apply conventional and electronic tools and techniques to the graphic design process.
- GRA 3735 Multimedia Systems I (3) VP ART**
Restricted to majors. This course introduces multimedia systems and focuses on their use as tools in the production of digital multimedia. Content covers all key hardware, navigation, and operating components.
- GRA 4930C Graphic Design: Senior Studio (3) VP ART**
Restricted to majors. Advanced problems in graphic design, advertising, and multimedia visual communication systems will be discussed and assigned as projects. Focus is upon efficient and effective use of technology in the design production process.
- GRA 4940 Graphic Design: Internship (2) VP ART**
Competitive portfolio may be required. Restricted to majors. On site supervised work experience in an educational, graphic studio, advertising agency, or corporate environment.
- GRA 4945 Graphic Design: Professional Practicum (3) VP ART**
Restricted to majors. Students fine-tune their portfolios, create self promotional print and digital projects and develop their resumes. Includes field trips to studios, agencies, corporate graphic departments and marketing firms.
- GRA 4955C Senior Project: Portfolio (3) VP ART**
Restricted to majors. This course covers the organization and presentation of a design/advertising/graphic portfolio and appropriate related materials. Emphasis is upon portfolio development, professional production, and self promotional skills.
- GRE 1120 Beginning Classical Greek I (4) AS WLE**
An introductory course in classical Greek grammar with appropriate readings.
- GRE 1121 Beginning Classical Greek II (4) AS WLE**
PR: GRE 1120 or equivalent. An introductory course in classical Greek grammar with appropriate readings.
- GRE 2040 New Testament Greek I (4) AS REL**
An introduction to an intensive study of the koine Greek of the New Testament, for beginners; New Testament readings, composition, analysis of the structure of Greek of the New Testament.
- GRE 2041 New Testament Greek II (4) AS REL**
PR: GRE 2040. Intermediate readings and grammar of the Greek New Testament.
- GRE 2200 Intermediate Classical Greek (4) AS WLE**
PR: GRE 1121 or equivalent. Readings in Greek at an intermediate level.
- GRK 1120 Beginning Modern Greek I (4) AS WLE**
CR: GRK 1120L. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.
- GRK 1120L Beginning Modern Greek I Laboratory (1) AS WLE**
CR: GRK 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- GRK 1121 Modern Greek II (4) AS WLE**
PR: GRK 1120 or its equivalent; CR: GRK 1121L. A continuation of GRK 1120. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.
- GRK 1121L Modern Greek II Laboratory (1) AS WLE**
CR: GRK 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- GRK 2200 Modern Greek III (4) AS WLE**
PR: GRK 1121 or the equivalent. For language students who intend to attain basic proficiency.
- GRK 2201 Modern Greek IV (4) AS WLE**
PR: GRK 2200 or its equivalent. Continuation of GRK 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.
- GRK 4905 Directed Study (1-5) AS WLE**
Departmental approval required. S/U only. Permits study options in Modern Greek not available in the regularly scheduled curriculum at departmental discretion.
- GRK 4930 Selected Topics (1-5) AS WLE**
Departmental approval required. Course permits classes in Modern Greek not available in the regularly scheduled curriculum at departmental discretion.
- GRW 4905 Directed Reading (1-4) AS WLE**

- Departmental approval required.
- GRW 5905 Directed Reading (1-4) AS WLE**
Departmental approval required.
- GRW 5934 Selected Topics (4) AS WLE**
Available to majors and non-majors. Study of an author, movement or theme.
- HBR 1120 Modern Hebrew I (4) AS WLE**
CR: HBR 1120L. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition.
- HBR 1120L Modern Hebrew I Laboratory (1) AS WLE**
CR: HBR 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- HBR 1121 Modern Hebrew II (4) AS WLE**
PR: HBR 1120 or its equivalent; CR: HBR 1121L. A continuation of HBR 1120. An intensive study of basic skills; pronunciation, listening comprehension, speaking and some composition. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.
- HBR 1121L Modern Hebrew II Laboratory (1) AS WLE**
CR: HBR 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- HBR 2200 Modern Hebrew III (4) AS WLE**
PR: HBR 1121 or the equivalent. For language students who intend to attain basic proficiency.
- HBR 2201 Modern Hebrew IV (4) AS WLE**
PR: HBR 2200 or the equivalent. Continuation of HBR 2200. Practice of writing, speaking and listening skills for language students who intend to attain basic proficiency.
- HBR 4905 Directed Study (1-5) AS WLE**
Departmental approval required. S/U only. Permits study options in Modern Hebrew not available in the regularly scheduled curriculum at departmental discretion.
- HEB 1120 Basic Hebrew I (4) AS REL**
Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.
- HEB 1121 Basic Hebrew II (4) AS REL**
Designed to give students a working knowledge of Classical (Biblical) Hebrew and to introduce them to the Biblical literature in the original language.
- HFT 3005 Introduction to Hospitality and Tourism (3) US HRM**
An overview of the hospitality industry, including all of its related fields: restaurant; lodging; meetings, conventions and expositions. Also featured are the applications of the general marketing, human resources, leadership, and management.
- HFT 3263 Restaurant and Catering Management (3) US HRM**
PR: HFT 3424, FSS 3220 Management of food and beverages as they relate to planning, production, supervision and cost control in restaurants and catering food services, with emphasis on techniques of food preparation, menu merchandising, food safety, bar services and wine list.
- HFT 3423 Hospitality Information Systems (3) US HRM**
PR: ISM 3011, HFT 3005 The study of management information systems in the hospitality management industry. The students will evaluate software and hardware computer systems and application software being used in the hospitality industry and develop selection strategies.
- HFT 3424 Cost Control in Hospitality Operations (3) US HRM**
PR: HFT 3005, FIN 3403, MAN 3025 Provides students with a thorough understanding of hospitality financial accounting concepts. The emphasis of the course is to use accounting information in making managerial decisions and to prepare and understand hospitality financial statements.
- HFT 3503 Hotel Marketing and Sales (3) US HRM**
PR: MAR 3023 Principles of marketing and sales and practical application in hospitality marketing philosophies; the marketing mix; product differentiation; corporate travel market; and the association, convention, and trade show market.
- HFT 3603 Law and Security for the Hospitality Industry (3) US HRM**
PR: HFT 3005 Functions of the law, legal environment and legal reasoning. An overview of the security issues in the hospitality industry. The law pertaining to contracts, workmen's comp and the impact of law on economic enterprise in the hospitality industry.
- HFT 4221 Human Resources Management (3) US HRM**
PR: HFT 3005, MAR 3023 Designed to educate new managers and supervisors in the complex issues involved in a comprehensive human resource program and its importance to hotel and restaurant business. Workmen's Compensation, ADA, training, unions, EEO and discrimination issues.
- HFT 4253 Lodging Management (3) US HRM**
PR: HFT 3005, MAN 3025 Principles, practices, and procedures of managerial functions as they relate to the operation of hotels. Training, conflict resolution, total quality management, crisis management, employee empowerment and service standards are focus of team building.
- HFT 4323 Facilities Management in Hospitality Operations (3) US HRM**
PR: HFT 3005 Engineering aspects of hospitality establishments, preventive maintenance procedures, energy conservation, waste management, pollution control, life safety systems, and facilities design and layout, air conditioning lighting, sound control.
- HFT 4474 Management Accounting and Finance in Hospitality (3) US HRM**
PR: FIN 3403, HFT 3005, HFT 3424 Financial functions in hospitality, interpret hospitality financial statements, capital investment decision making, financial instruments and concepts. Analytical modeling for hospitality operations, including ratio analysis and capital budgeting tools.
- HFT 4930 Special Topics in Hospitality (1-3) US HRM**
PR: HFT 3005 Topics to be selected by instructor and department chairperson for pertinent Hospitality Management issues.
- HFT 4945 Advanced Internship (3) US HRM**
PR: HFT 3005 Coordinated hospitality training combines practical experience with didactic academic analysis. Principles, theory and standard practices applied to operational situations.
- HIS 2931 Special Topics (2-4) AS HTY**
This course emphasizes a selected historical problem or issue. A variety of instructional approaches will be taken, and topics may vary.
- HIS 3308 War and Society MW (3) AS HTY**
An examination of the ways in which societies have organized themselves for war and how societies are changed by war. Also explores gendered expectations in war, and the changing conduct of war. Does not count for History major or minor credit.
- HIS 3474 Science and Civilization (4) AS HTY**
A thematic study of the interrelationship of science and society in modern history emphasizing the institutional forms, value structures, and social relations in science as they have developed from the scientific revolution to the present.
- HIS 3930 Special Topics (2-4) AS HTY**
This course is designed to emphasize a selected historical problem or issue that is meaningful and challenging to the student. A variety of instructional approaches will be taken to the material. Topics will be changed each semester.
- HIS 3938 Major Issues in History MW (3) AS HTY**
This course provides an introduction to the disciplines of history by examining a specific historical issue and its relation to at least one of the following dimensions: gender, race and ethnicity, international perspectives, environmental perspectives. Does not count for History major or minor credit.
- HIS 4104 Theory of History (4) AS HTY**
Required of all history majors. Recommended to be taken during the senior year. An analysis of the foundations of historical knowledge and historical methodology. Includes a survey of historical thinking and writing from ancient times to the present.
- HIS 4900 Directed Reading (1-4) AS HTY**
PR: Cl. Arrangement with instructor prior to registration. Readings in special topics.
- HIS 4920 Colloquium in History (2-4) AS HTY**
Reading and discussion of selected topics in the various fields of history. The subject and scope of inquiry will be determined by the instructor for each section.
- HIS 4936 Pro-Seminar in History 6A MW (4) AS HTY**
PR: Cl. Required of all history majors. Advanced topics in the various fields of history. Emphasis on discussion of assigned readings and on research and writing of a major paper.
- HLP 2081 Personal Wellness: A Lifetime Commitment (3) ED EDJ**
An examination of the bases for adopting a positive health lifestyle with a major emphasis on diet, weight management, physical fitness, stress management, and substance-abuse management.
- HLP 4722 Health and Physical Education for the Child (2) ED EDE**
This course helps elementary majors understand the health, psychomotor, growth and developmental needs of children so that the may best plan and conduct safe and healthy learning experiences. They also learn the role of the classroom teacher in the total school health program by providing health services, healthy environments and health instruction.
- HLP 4941 Wellness Internship (12) ED EDP**
Open to Wellness Leadership Physical Education Majors only. S/

340 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- U only. Supervised performance in adult fitness and/or wellness programs. Full semester on-site.
- HSA 4120 Introduction to Public Health (3) PH CFH**
A survey of policies and programs in public/community health with emphasis on specific needs and problems of Florida.
- HSC 2100 Contemporary Health Science SS (3) PH CFH**
A comprehensive approach to health concerns and problems in contemporary society, including methods of assessing individual health needs.
- HSC 2133 Sex, Health, and Decision-Making SS (3) PH CFH**
This course will provide the student with an overview of the issues involving sexual behaviors, decision-making processes and health outcomes. The course will offer a public health perspective of the consequences of risk-taking activities as well as a psychosocial and cultural view of antecedent behaviors.
- HSC 2400 First Aid (2) ED EDP**
Meets the American Red Cross certification requirements in standard and advanced first aid.
- HSC 2933 Selected Topics in Public Health (1-6) PH PHC**
Overview of major public health and health related issues of interest to undergraduates. Course explores a variety of health topics that are related to improving the health and health behaviours of individuals, groups and communities. Specific topics may vary each semester. No prerequisites. Majors and non majors. May be repeated for up to 6 credits.
- HSC 3301 Health, Safety, Nutrition and Motor Skills for the Young Child (3) ED EDP**
Provide students with the knowledge to teach developmentally appropriate motor activities; to provide continuous health services; create and maintain a healthy learning environment; and sequence appropriate health instruction for Pre-K through 3rd grade students.
- HSC 4554 Survey of Human Diseases (3) PH CFH**
PR: Fund. of Biology with Lab or Cl. An overview of the nature, types, and mechanisms of diseases of the major body systems.
- HSC 4933 Special Topics in Public Health (1-6) PH PHC**
PR: Cl. Content will be governed by student demand and instructor interest.
- HUM 1020 The Arts FA (3) AS HUM**
Analysis of selected works of literature, music, film, and visual art, representing artists of diverse periods, cultures, genders, and races. Especially recommended for students who later take 4000-level Humanities courses.
- HUM 2211 Studies in Culture: The Classical Through Medieval Periods HP (3) AS HUM**
A survey of literature and the arts of ancient Greece, Rome, and medieval Europe. Issues to be examined may include the dialogue between local traditions and cosmopolitan cultures, the relationship of the individual to society, and the bases for moral values.
- HUM 2243 Studies in Culture: The Renaissance Through the Twentieth Century HP (3) AS HUM**
A historical survey of the visual arts, literature, music and thought of Europe from the Renaissance through the Twentieth century. Issues to be examined may include the relationship between science and the arts and the consequences of the growing contacts among world civilizations and the impact of technological change.
- HUM 2930 Selected Topics (1-4) AS HUM**
An introductory course dealing with a recurrent theme in the arts or focusing on a particular artistic center (a nation or city at a particular time).
- HUM 3251 Studies in Culture: The Twentieth Century HP (3) AS HUM**
Analyses of selected works of twentieth century art, including films, paintings, music, and literature, in the context of major political, social, and economic events, such as war, depression, totalitarianism, and technological change.
- HUM 3271 Eastern and Western Culture from Antiquity to 1400 AF (3) AS HUM**
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from Ancient times through the Middle Ages, emphasizing Europe and India.
- HUM 3273 Eastern and Western Culture Since 1400 AF (3) AS HUM**
A comparative treatment of music, visual arts, theatre, literature, and philosophy in the East and West, proceeding chronologically from the Renaissance through the present, emphasizing Europe, the United States, and India.
- HUM 3331 Themes in Humanities (3) AS HUM**
PR: HUM 2211 or HUM 2243. A course emphasizing the analysis of primary works in relation to cultural contexts, the integration of secondary sources, and the construction of a written argument. Not restricted to majors.
- HUM 3930 Selected Topics in Humanities (1-4) AS HUM**
Courses offered under this number will always be interdisciplinary, treating more than one art media and relating them historically or in some other way. The interdisciplinary emphasis on literature and the arts, placing them in some larger context of culture or ideas, distinguished HUM courses from related courses offered in other departments of the university. Topics will vary; course may be repeated for credit with change of content.
- HUM 4402 Humanities in India (4) AS HUM**
PR: Sophomore standing or Cl. Examples from the arts and letters of India and the relationship of these arts to the Hindu and Buddhist philosophy-religions.
- HUM 4404 Humanities in China (4) AS HUM**
PR: Sophomore standing or Cl. Examples from the arts and letters of China; their relationship to Taoism, Confucianism and other Chinese philosophies; Western influences on twentieth century Chinese arts and letters.
- HUM 4406 Humanities in Japan (4) AS HUM**
PR: Sophomore standing or Cl. Examples from the arts and letters of Japan, their relationship to Zen Buddhism and other Japanese philosophy-religions; Western influences on twentieth century Japanese arts and letters.
- HUM 4433 Ancient Greek Culture (4) AS HUM**
PR: Sophomore standing or Cl. A study of the poetry, drama, philosophy, historical writing, painting, sculpture and architecture of ancient Greece, including such authors as Homer, Sophocles, and Plato, and monuments such as the Parthenon.
- HUM 4437 Italian Renaissance Culture (4) AS HUM**
PR: Sophomore standing or Cl. A study of the painting, literature, music, sculpture and architecture of early modern Italy (1300-1600), emphasizing humanism, the revival of antiquity, the tension between sacred and secular, and artists such as Michelangelo, Titian, Raphael.
- HUM 4438 Northern Renaissance Culture (4) AS HUM**
PR: Sophomore standing or Cl. A study of the Northern Renaissance, 1400-1580, as exemplified in Germany, France, the Netherlands, England, and Spain. The course includes painting, architecture, literature and music, with special study of Durer, Van Eyck, El Greco, and Bosch.
- HUM 4440 Arts and Letters in the 17th and 18th Centuries (4) AS HUM**
PR: Sophomore standing or Cl. A study of the visual arts, literature and music from the mysticism and ornament of the Baroque to the rationalism and classicism of the Enlightenment, including such artists, authors and composers as Rembrandt, Gentileschi, Voltaire, Bach, and Mozart.
- HUM 4442 Arts and Letters of the Romantic Period (4) AS HUM**
PR: Sophomore standing or Cl. Continental masterworks of fiction, painting, and music in the context of European cultural history from the French Revolution to the Revolutions of 1848.
- HUM 4444 Nineteenth Century European Arts and Letters (4) AS HUM**
PR: Sophomore standing or Cl. A study of continental literary, musical, and artistic masterworks from the Revolutions of 1848 until the outbreak of World War I.
- HUM 4445 Twentieth Century Arts and Letters I (4) AS HUM**
PR: Sophomore standing or Cl. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.
- HUM 4446 Twentieth Century Arts and Letters II (4) AS HUM**
PR: Sophomore standing or Cl. Analysis of selected works of twentieth century art. The course will focus on a particular phase in the development of modernism, a set of themes, or certain stylistic aspects of various arts of the twentieth century.
- HUM 4452 Nineteenth Century American Culture (4) AS HUM**
PR: Sophomore standing or Cl. Study of selected works of art, tracing the course of American expansionism in civilization, and the interaction between the arts and the sciences in American ways of life and work, 1790-1890.
- HUM 4464 Latin American Culture Since 1492 (4) AS HUM**
PR: Sophomore standing or Cl. Analysis of selected Latin American works of art in their cultural context, with emphasis on major art forms selected from the colonial through contemporary periods.
- HUM 4905 Directed Study (1-4) AS HUM**
PR: Cl. Specialized individual study determined by the student's needs and interests
- HUM 4909 BIS Humanities, Independent Study (15) AS BIS**
S/U only.
- HUM 4930 Selected Topics in Humanities (1-4) AS HUM**
PR: Sophomore standing or Cl. This course will deal with a

- recurrent theme in the arts as, for example, love or death, or will focus on artistic centers such as Renaissance Florence or Paris in the 1920s. Topics will vary.
- HUM 4931 Seminar in Humanities 6A (4) AS HUM**
PR: Humanities major or CI; Senior standing. Discussion of interdisciplinary humanities. Includes essay.
- HUM 4938 Major Issues in the Humanities MW (3) AS HUM**
The study of an important topical issue in the Humanities. Materials representing diverse views relating to that issue will be read, and works of art in different media that have relevance to the debate will be studied. Available to majors and non-majors.
- HUM 4940 Internship in Humanities (1-2) AS HUM**
A structured, out-of-class learning experience providing firsthand, practical training in Humanities-related professional careers in the community. Restricted to Humanities majors. Repeatable up to 4 credit hours.
- HUN 2201 Nutrition (3) NU NUR**
PR: Course work in chemistry and biology or permission of faculty. Open to majors and non-majors. The study of fundamental principles of normal nutrition as they relate to human life and growth from conception through senescence, interpretation of current nutrition information, and application of nutrition knowledge in the establishment of good eating habits.
- HUN 4444 Clinical Nutrition (3) NU NUR**
PR: HUN 2201 or equivalent. Focuses on the role nutrition has in causing and preventing disease processes.
- IDH 2009 Discovery: People, Processes and Problems (3) HC HON**
PR: Admission to Honors College. An appreciation of the research process in multiple disciplines culminating in the production of a collaboratively developed research proposal.
- IDH 2010 Acquisition of Knowledge (3) HC HON**
PR: Admission to Honors College. An appreciation of the problems of how human understanding proceeds through operations such as perception, classification, and inference, among others, as well as the open philosophical questions behind these operations.
- IDH 2930 Selected Topics (1-4) HC HON**
PR: IDH 2010 or CI. This course is designed to emphasize a selected problem or issue that is meaningful and challenging to University Honors students and special populations. A variety of instructional approaches will be used. Topics will vary each semester. Repeatable for a total of 8 credits.
- IDH 3100 Arts/Humanities Honors (1-3) HC HON**
PR: IDH 2010. An introduction to western arts and letters from the perspectives of three periods (classicism, romanticism, and modernism), the relationship of ideas to art, the similarities among the arts of a given period, and important differences between periods.
- IDH 3350 Natural Sciences Honors (3) HC HON**
PR: IDH 2010. An exploration of current knowledge concerning fundamental principles in the Sciences, their potential for application and attendant ethical and philosophical questions.
- IDH 3400 Social and Behavioral Sciences Honors (3) HC HON**
PR: IDH 2010. Introduction to the concerns of the Social and Behavioral Sciences, methods of inquiry, discovery, and validation of knowledge. A survey of the way various disciplines examine the question of how society is organized.
- IDH 3600 Seminar in Applied Ethics (3) HC HON**
PR: IDH 2010. This course explores ethical issues related to selected topics such as Ethics of Technology, Ethics in Business, Bio-Medical Ethics, Personal Ethics Development.
- IDH 4000 Honors Program Seminar: Major Works/Majors Issues (4) HC HON**
PR: IDH 2010. This course explores major works and major issues in a variety of disciplines. Each section will be devoted to content in a different academic area.
- IDH 4200 Geographical Perspectives Honors (3) HC HON**
PR: IDH 2010. An introduction to African, Latin American, Middle Eastern, or Asian perspectives focusing on social, political and economic, artistic, cultural and intellectual subject matter. The material will be presented within a geographical, chronological, and humanities background.
- IDH 4910 Undergraduate Research (1-4) HC HON**
PR: DPR. A supervised program of interdisciplinary research in areas of specific interest. Open to all USF students by application through the undergraduate research coordinator.
- IDH 4930 Selected Topics (1-4) HC HON**
PR: IDH 2010 or CI. This course is designed to emphasize a selected problem or issue that is meaningful and challenging to University Honors students and special populations. A variety of instructional approaches will be used. Topics will vary each semester. Repeatable for a total of 8 credits.
- IDH 4950 Honors Program Project (3) HC HON**
Enrollment is limited to St. Petersburg Honors students who have completed at least one Honors Seminar. Senior Honors Program project consisting of an original creative work in literary, visual or performing arts, or in a community-oriented endeavor of substance and originality.
- IDH 4970 Honors Thesis (3) HC HON**
PR: Senior Honors Standing. The development and public presentation of a senior thesis under the direction of a mentor. Course is taken for 2 semesters.
- IDS 2664 Social Science Perspectives I SS (3) AS IAS**
Provides an overview of the evolution and global expansion of Western Civilization. Examines global problems of economic growth and development; geopolitical relations among nations and states, food supply and hunger, and environmental change.
- IDS 2665 Social Science Perspectives II SS (3) AS IAS**
Approaches the study of human behavior and society using the lens of various institutions. The course addresses issues of social stratification, economics, education, religion and social status. The course is not restricted to any major, has no lab section, and is not cross-listed.
- IDS 2666 Historical Perspectives I HP (3) AS IAS**
Approaches the study of human history through a series of specific case-studies that focus on historical processes. The primary focus of the course is to understand the variety of ways that the past has been brought into and understood in the present, rather than a comprehensive survey of a limited time or place.
- IDS 2667 Historical Perspectives II HP (3) AS IAS**
Approaches the study of human history through a series of specific exercises that focus on what historians do: produce histories. The primary focus of the course is to understand the variety of ways that the past can be emplotted in histories, rather than a comprehensive survey of a limited time or place. With this understanding, students will produce several of their own histories.
- IDS 2931 Selected Topics HP (2-5) AS IAS**
Selected topics in the liberal arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.
- IDS 2932 Selected Topics HP (3) AS IAS**
Selected topics in the liberal arts and sciences.
- IDS 2933 Selected Topics III SS (3) AS IAS**
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.
- IDS 2934 Selected Topics IV SS (3) AS IAS**
Selected topics in the Liberal Arts. A basic introduction to the substance and theory of contemporary topics in the arts and sciences.
- IDS 3115 Values and Choices 6A MW (3) ED EDF**
An in-depth examination of values and their relationship to choices in contemporary society using historical perspective and inquiry of moral/ethical dilemmas. Available to majors or non-majors.
- IDS 3186 Scientific and Ethical Dimensions of Human Disease MW (3) AS IAS**
PR: DPR. An interdisciplinary perspective of the biological basis of human disease combined with critical thinking and medical ethics. Basic concepts of human disease are integrated with bioethical dimensions of patient choice, physician responsibility and current health care issues.
- IDS 3662 Arts Connections FA (3) VP FAI**
This is an interdisciplinary course to the arts disciplines of music, dance, theatre, and art. Artists from the four disciplines will provide weekly presentations centered around issues and ideas that have formed the basis of their creative research. Influences of diversity, new technologies and community and public arts will be explored. This course will introduce students to the role the arts play in shaping their perceptions of the world as well as reflecting the underlying values and paradigms that form our culture(s).
- IDS 3663 Critical Issues Affecting the Arts MW (3) VP FAI**
PR: Junior standing or CI. A discussion-based examination of cultural trends, educational policies, governmental regulations, and financial factors which impact Art, Dance, Music, and Theatre.
- IDS 3668 Images of Contemporary Urban Culture 6A LW (3) AS IAS**
Offers multiple perspectives on the vision, theories, and practices of contemporary urban culture through the use of various literary genres. Examines the cultural realities of contemporary urban life, such as social stratification, discontinuity, anonymity and poverty; as well as its many potentials such as creative energy, diversity, and relational networks. Must have enough credit hours required for exit course admittance.
- IDS 3949 Cooperative Education (0) US COE**
60 hours of academic credit, acceptance in Cooperative Education

342 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- Program. S/U only.
- IDS 4910 Community Research (1-4) AS CEL**
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community related research experience.
- IDS 4942 Community Internship (1-4) AS CEL**
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with a community internship experience.
- IDS 4949 Cooperative Education, Alternating (0) US COE**
PR: 45+ semester hours completed, cumulative GPA 2.5+ and accepted in Cooperative Education Program. S/U only. Full-time (40 hrs/wk) paid, career-related work experience, on-site with an employer.
- IDS 4955 International Community Research (1-2) AS CEL**
PR: CEL Program approval. Repeatable up to 8 credit hours. To provide students with an international community research experience.
- IDS 4956 International Community Internship (1-4) AS CEL**
PR: CEL Program approval. To provide students with an international community internship experience. Repeatable up to 8 credits.
- IDS 4990 BIS Inter-Area Studies (30) AS BIS**
PR: ISS 4909, ISS 4939, ISC 4909, ISC 4939, HUM 4909, HUM 4939. S/U only
- INP 2101 Applied Psychology SS (3) AS PSY**
The application of psychological principles and the functions of psychologist in education, government, industry, and clinical practice.
- INP 4004 Industrial Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. Applications of psychological principles to industry. Topics include: selection, training, motivation, job satisfaction, supervision, decision-making.
- INR 1015 World Perspective SS AF (3) AS INT**
An interdisciplinary study of the international system, major world regions and problems.
- INR 2002 Introduction to International Relations (3) AS POL**
Concepts and analytical tools applied to events such as politics among nations, control of foreign policies, types of actors, war and peace.
- INR 3003 Introduction to International Studies (3) AS INT**
An interdisciplinary study which stresses methods and analysis. A major portion will focus on the roles which different disciplines play in interpreting the international scene.
- INR 3018 World Ideologies MW (3) AS INT**
A course which details and examines the ideologies of today's independent countries; analyzing them in their political, social, cultural and historical context.
- INR 3033 International Political Cultures MW (3) AS INT**
This course will explore ways in which culture influences the nature of government, economic success or failure, and constructive and destructive modes of self and social identification.
- INR 3038 International Wealth and Power SS (3) AS INT**
Introduction to the relationship between politics and economics, emphasizing the analysis of government policies in response to both domestic and international economic problems.
- INR 3081 International Issues and Actors (3) AS INT**
Departmental approval required. For majors and minors in INT only. An examination of the most important issues in international affairs. The course analyzes the behavior of major foreign policy actors in the international arena, including nation states, non-governmental and international organizations.
- INR 3084 International Terrorism SS AF (3) AS INT**
A study of contemporary international terrorism and its causes, ranging from national liberation movements to networks of philosophical anarchists.
- INR 3102 American Foreign Policy (3) AS POL**
Analysis of the development and scope of United States foreign policy, emphasizing goals and objectives, policy formulation and implementation, themes and issues.
- INR 3141 Global Security Policy (3) AS INT**
A study of security issues, regional and global (such as proliferation, arms control, arms transfer) as they relate to contemporary international politics.
- INR 3202 International Human Rights MW (3) AS INT**
This course explores the evolution of international rights from the Greeks to the present. It examines human rights issues in major regions of the world.
- INR 3336 Intelligence and U.S. Foreign Policy (3) AS INT**
An examination of the role of intelligence and the intelligence community in U.S. foreign policy, with emphasis on the period since World War II.
- INR 3955 Overseas Study (1-6) AS INT**
A program of individual or group research in a foreign country.
- INR 4035 International Political Economy (3) AS POL**
Analysis of the development and politics of the international economic system, focusing on questions of cooperation and conflict in trade, aid, and investment relationships.
- INR 4083 Conflict In The World MW (3) AS INT**
PR: Junior/Senior standing. An interdisciplinary course examining theories of conflict, conflict resolution processes and strategies, theories and peacemaking strategies, and the concept of Early Warning Systems related to the outburst of conflict.
- INR 4254 Africa in World Affairs MW (3) AS INT**
An examination of Africa's place and role in world affairs, including an analysis of the impact of external forces, international relations in post-colonial Africa, the relations of African states with the major world powers, the U.N. and its agencies.
- INR 4403 International Law SS (3) AS POL**
Examines essential components of the international legal system; recognition; succession; sea, air and space law, treaties, diplomats, International Court of Justice; laws of war, etc. Introduces the student to legal reasoning as employed in the international context.
- INR 4502 International Organizations SS AF (3) AS POL**
Study of the operations and structure of international organizations and effects on world politics; background and achievement of the UN; regional organizations and multi-national corporations.
- INR 4900 Directed Readings (1-3) AS INT**
PR: CI. A supervised program of intensive reading of interdisciplinary materials in areas of specific interest.
- INR 4910 Directed Research (1-3) AS INT**
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.
- INR 4931 Selected Topics (1-4) AS INT**
Interdisciplinary studies with course content dependent on student demand and instructor's interest.
- INR 4936 Senior Seminar MW (3) AS INT**
PR: International Studies major and senior standing. A variable topics seminar integrating concepts and analyses relating to the academic background of INT majors. Should be taken in the student's final semester.
- INR 4943 Internship in International Studies (3-6) AS INT**
PR: Senior status. S/U only. For majors only. The purpose of the course is to promote the student's understanding of global international issues within a local and practical context.
- INR 5012 Globalization (3) AS INT**
Examination of globalization's impact on international relations, including literature from political science, anthropology, geography, sociology, and economics that impacts the study of the nation-state system and power. Open to majors and non-majors.
- INR 5086 Issues in International Relations (3) AS POL**
Sr./GS. Explores specific topics and provides the student with an opportunity for in-depth study of historical and contemporary problems in international politics.
- ISC 1004 Integrated Natural Sciences I: Science that Matters NS (3) AS IDS**
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and Natural Science Education Standards. This course deals with current topics relevant to students, is inquiry based, and emphasizes development of higher order (critical thinking) skills through active learning strategies.
- ISC 1005 Integrated Natural Sciences II: Science that Matters NS (3) AS IDS**
Discussion of integrative concepts in biology, chemistry, geology, and physics based on major knowledge strands of the Florida and Natural Science Education Standards. This course deals with current topics relevant to students, is inquiry based, and emphasizes development of higher order (critical thinking) skills through active learning strategies.
- ISC 4909 BIS Natural Sciences, Independent Study (15) AS BIS**
S/U only.
- ISM 3011 Information Systems in Organizations (3) BA QMB**
PR: CGS 2100 or equivalent; ACG 2021; ACG 2071 or equivalent. May not be counted toward major requirements in MIS. An introduction to the language, concepts, structures and processes involved in the management of information systems including fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.
- ISM 3113 Systems Analysis and Design (3) BA QMB**
PR: ISM 3011 CP: ISM 3232, with a grade of "C" or better (not C-). Study of the techniques and procedures used in assessing information requirements, analyzing information flows and processing activities, and designing computer-based business systems.
- ISM 3232 Business Application Development (3) BA QMB**

- PR: ISM 3011 with a grade of "C" or better (not C-). Presentation of business application development using a modern programming language. Topics include data structures, indexing, file processing, and user interfaces. Good program design techniques are emphasized. Business applications are developed.
- ISM 3431 Management Science Production/Operations Management Applications (3) BA QMB**
PR: MAC 2233 or MAC 2241. Fundamentals of production operations management (POM) and fundamentals of management science (MS). The application of MS models in the solution of POM problems.
- ISM 4133 Advanced Systems Analysis and Design (3) BA QMB**
PR: ISM 3232, ISM 3113, ISM 4212, with grades of "C" or better (not C-). This course builds previous class and/or work experience in systems development, with particular emphasis on the use of an integrated CASE tool on a team project. Students will gain an understanding of systems development problems and approaches using a variety of methods, such as, lectures, discussion, team presentations, guest speakers, demonstrations and computer use.
- ISM 4141 Web Application Development/Java (3) BA QMB**
PR: ISM 3232 with a grade of "C" or better (not C-). Java will be used to introduce object oriented concepts. Programming assignments cover a variety of application features including graphical user interface, database connectivity, multithreading, & client-server computing using Java and Java Server Pages.
- ISM 4212 Database Design and Administration (3) BA QMB**
PR: ISM 3113, ISM 3232, with grades of "C" or better (not C-). Principles of database design/management for mainframe, micro, and client/server environments; including data modeling, physical vs. logical representation and back-up and recovery management.
- ISM 4213 Advanced Database Administration (3) BA QMB**
PR: ISM 3113, ISM 4212, with grades of "C" or better (not C-). Essential concepts of database administration in a business environment are covered in order to prepare students to understand and deal with database administration issues and concepts. Students gain hands-on experience by administering a database environment and completing assignments that involve resource management, data administration, security, backup, recovery and database tuning issues.
- ISM 4220 Business Data Communications (3) BA QMB**
PR: ISM 3113 with a grade of "C" or better (not C-). Fundamentals of data communication, including network architectures, communication protocols, transmission standards and media access control methods.
- ISM 4233 Information System Interface Design (3) BA QMB**
PR: ISM 3232 with a grade of "C" or better (not C-). The fundamental concepts of human perception and cognition are studied in order to develop effective human-computer interfaces. Various types of interfaces are examined. Students will develop human-computer interfaces via state-of-the-art development languages and systems.
- ISM 4234 Object-Oriented Design and Development (3) BA QMB**
PR: ISM 3232 with a grade of "C" or better (not C-). This course presents an object-oriented approach to software development of business information systems. Students will learn to create object models of the business world and to develop information system designs based on these objects. The designs will be implemented by the use of the C++ or other OO programming languages.
- ISM 4240 Distributed Operating Systems (3) BA QMB**
PR: ISM 3232 with a grade of "C" or better (not C-). Introduction to distributed operating systems fundamentals such as distributed systems architecture, file structures, client-server, open systems, resource allocation, and basic tools for manipulating these operating environments.
- ISM 4290 Senior Seminar in Information Systems (3) BA QMB**
PR: ISM 3113, ISM 4212, with grades of "C" or better (not C-). A seminar covering advanced topics in systems management, analysis and design. Applications of these procedures to actual or hypothetical cases.
- ISM 4300 Managing Information Resources (3) BA QMB**
PR: ISM 3113, ISM 4212, ISM 4220, with grades of "C" or better (not C-). Current issues in information systems management focusing on organizational policies, procedures and standards for managing distributed computing resources.
- ISM 4382 Global Information Systems (3) BA QMB**
PR: ISM 3011 with a grade of "C" or better (not C-). Role of information technology in global business organizations and challenges in building information systems to enable global operations.
- ISM 4400 Decision Support Systems (3) BA QMB**
PR: QMB 3200, ISM 3011, with a grade of "C" or better (not C-). Study of quantitative analysis tools and their use in organizational decision making. Emphasis on a structured approach to making common business decisions, demonstrating several forms of mathematical modeling and other management science techniques.
- ISM 4480 Electronic Commerce Systems (3) BA QMB**
PR: ISM 3011 with a grade of "C" or better (not C-), MIS major or CC. This course is designed to familiarize students with the opportunities and challenges associated with electronic commerce, to explore the underlying technologies used in implementing electronic commerce systems, and to develop the practical skills needed to design and develop effective Web pages.
- ISM 4905 Independent Study (1-6) BA QMB**
S/U only. Independent study as directed by designated faculty.
- ISM 4930 Selected Topics in MIS (1-3) BA QMB**
Selected topics in MIS.
- ISM 4950 Independent Research (1-6) BA QMB**
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
- ISS 1101 Knowledge and Society SS (3) AS ISS**
Course introduces students to issues concerning the relationship between knowledge and society. Among the issues addressed are competing accounts of knowledge and the relationship between knowledge and other forms of human experience and different aspects of social life such as religion, morality, aesthetics, politics, and gender.
- ISS 1102 Self and Society SS (3) AS ISS**
CO: ISS 1103. Course introduces students to issues concerning the relationship between the self (or individual) and society. Among the topics that may be addressed are the idea of human nature, how human nature is shaped by social and cultural factors; the moral obligations between individuals and society; and how our understanding of the self is shaped by gender and culture.
- ISS 1103 Nature and Culture SS (3) AS ISS**
This course examines competing ideas and theories concerning the relationship between nature and culture. Among the issues and questions examined are the relationship between nature and our awareness of it; to what extent is nature transformable; should "nature" dictate the shape of social institutions; how does technology affect our society and environment.
- ISS 3010 Introduction to the Social Sciences (3) AS ISS**
Integrates the range of social science fields into a global interdisciplinary perspective. Views social institutions and issues from perspectives of changing paradigms.
- ISS 3930 Selected Topics in the Social Sciences (1-4) AS ISS**
Interdisciplinary studies of varying topics, with course content dependent on student demand and instructor's interest.
- ISS 4151 Native American Women (3) AS ISS**
An interdisciplinary examination of lives of Native American Women, past and present. Topics include history, education, politics, family, etc.
- ISS 4900 Directed Readings (1-3) AS ISS**
PR: CI. A supervised program of intensive reading of interdisciplinary materials in areas of specific interest.
- ISS 4909 BIS Social Sciences, Independent Study (15) AS BIS**
S/U only.
- ISS 4910 Directed Research (1-3) AS ISS**
PR: CI. A supervised program of interdisciplinary research in areas of specific interest.
- ISS 4935 Seminar in the Social Sciences MW (3) AS ISS**
PR: Senior standing and ISS 3010 or CI. The seminar which caps the interdisciplinary major. Weds personal curiosity with the application of theoretical models to research on salient social issues.
- ISS 5934 Selected Topics (1-3) AS AFA**
PR: CI plus senior standing or graduate status. Interdisciplinary studies with course content dependent on student demand and instructor's interest.
- ITA 1120 Beginning Italian I (4) AS WLE**
CR: ITA 1120L. The first course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking, and reading.
- ITA 1120L Beginning Italian Laboratory (1) AS WLE**
CR: ITA 1120. A laboratory designed to offer additional practice using various instructional technologies and media.
- ITA 1121 Beginning Italian II (4) AS WLE**
CR: ITA 1121L. The second course in the study of elementary Italian. Emphasis is on the development of basic skills in comprehension, speaking and reading.
- ITA 1121L Beginning Italian II Laboratory (1) AS WLE**
CR: ITA 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously.

- A laboratory designed to offer additional practice using various instructional technologies and media.
- ITA 2200 Intermediate Italian I (3) AS WLE**
PR: ITA 1121 or equivalent. Readings in Italian on the elementary level. A review of the basic structure of spoken and written Italian.
- ITA 2240 Italian Conversation I (4) AS WLE**
To develop fluency and correctness in spoken Italian. Intensive study for conversational skill based particularly upon the current Italian idiom. Syntax is intensified and the vocabulary and idiomatic expressions expanded.
- ITA 2241 Italian Conversation II (4) AS WLE**
To assist students who have already made a start in speaking Italian, who have not had the advantages of travel or who have non-Italian speaking parents, to improve their skill in speaking Italian. Current events; literary discussions; free conversation; prepared speeches. Differences of media, syntactical signal.
- ITA 3420 Composition (3) AS WLE**
A fundamental composition course for students who have completed ITA 2200.
- ITA 3470 Overseas Study (1-6) AS WLE**
Prior approval and early registration required. An intensive study-travel project in Italy.
- ITW 4100 Survey of Italian Literature I (4) AS WLE**
A survey of Italian literature from the earliest monuments through the classicism of the 18th century.
- ITW 4101 Survey of Italian Literature II (4) AS WLE**
A survey of Italian literature beginning with the Classicism of the 18th century and continuing to present.
- ITW 4905 Directed Study (1-3) AS WLE**
Departmental approval required. Selected topics in Italian literature.
- JOU 2100 Beginning Reporting (3) AS COM**
PR: MMC 2100 and MMC 3602. Basic instruction in news judgment, sources of news, newsgathering, and news writing techniques for various media. Typing ability is required.
- JOU 3101 Advanced Reporting (3) AS COM**
PR: JOU 2100 or RTV 3301 (RTV majors only), JOU 4200 (may be taken concurrently), PHI 1103 and POS 2041. Reporting and writing the more complex and specialized story. Techniques of investigative and analytical reporting, including ethical and legal considerations.
- JOU 3306 Critical Writing: Editorials, Reviews, Columns (3) AS COM**
PR: JOU 3101 and JOU 4200. Interpretive and opinion writing for the mass media. Analysis and discussion of current events as a basis for critical thinking and editorial writing. Evaluation of editorial pages of leading newspapers. Study of journalistic techniques involved in writing reviews and personal columns.
- JOU 3308 Magazine Article and Feature Writing (3) AS COM**
PR: CRW 2100 and JOU 2100. Planning, researching, writing, and marketing articles for general and special interest magazines and newspaper supplements. Experiences in developing article ideas and analysis of magazine articles.
- JOU 3940 Reporting Practicum (1) AS COM**
PR: JOU 3101 and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- JOU 4181 Public Affairs Reporting (3) AS COM**
PR: JOU 3101 or RTV 3301 (RTV majors only), POS 2041 and POS 2112 or POS 3142. Covering city council meetings, courthouse, city hall, courts, society, and other special assignments. Emphasis is on coverage of major governmental units of all levels of government, including examination and interpretation of public documents and records.
- JOU 4200 News Editing I (3) AS COM**
PR: ECO 1000, JOU 2100, and SYG 2010. Evaluating news and its display. Editing and rewriting copy for the mass media including new media, with emphasis on the daily newspaper. News judgment, headlines and makeup. Ethical problems. Introduction to theories of design and graphics.
- JOU 4206 Newspaper and News Publication Design (3) AS COM**
PR: JOU 4200 or CI. Theoretical and practical applications of newspaper and news publication design, including typography, graphics, graphics software and electronic picture editing. Exercises in design for newspapers and news publications in both print and electronic formats.
- JOU 4212 Magazine Design and Production (3) AS COM**
PR: JOU 4200. Theoretical and practical application of design principles for magazines. Design software. Study of visual design, page architecture, typography, color and illustrations. Integration of design elements in the design of magazine covers. Design elements specific to magazine and production preparation.
- JOU 4941 Editing Practicum (1) AS COM**
PR: Senior standing, JOU 4200 and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- JOU 4944 Magazine Practicum (1) AS COM**
PR: Senior standing and CI. For journalism sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- JOU 5105 Newswriting and Editing (3) AS COM**
PR: GS in Mass Communications or CI. Introduction to the basics of gathering, writing, and editing the news, with an emphasis on practical assignments done under professional conditions and standards. Discussions, readings emphasize the larger context and implications of news.
- JOU 5305 Explorations in Newswriting (3) AS COM**
PR: CC. Students work to develop writing styles, reporting on and creating stories about significant issues, events, and ideas. The course explores the notion that narrative-style journalism can be accurate, thorough, fair, and compelling, effectively bringing readers into stories and giving them a bigger stake in the news. The focus is on-going beyond traditional practices of reporting and writing news stories.
- JPN 1120 Modern Japanese I (4) AS WLE**
CR: JPN 1120L. An intensive study of basic skills: pronunciation, listening comprehension, speaking, and some composition.
- JPN 1120L Modern Japanese I Laboratory (1) AS WLE**
CR: JPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- JPN 1121 Modern Japanese II (4) AS WLE**
PR: JPN 1120 or equivalent. CR: JPN 1121L. A continuation of JPN 1120. More sophisticated oral/aural skills are attained. Basic reading skills are acquired.
- JPN 1121L Modern Japanese II Laboratory (1) AS WLE**
CR: JPN 1121. S/U only. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. A laboratory designed to offer additional practice using various instructional technologies and media.
- JPN 2200 Modern Japanese III (3) AS WLE**
PR: JPN 1121 or equivalent. Continuing study to attain basic proficiency in Japanese.
- JPN 2201 Modern Japanese IV (3) AS WLE**
PR: JPN 2200 or equivalent. Continuation of JPN 2200.
- JPN 4905 Directed Study (1-5) AS WLE**
Departmental approval required. S/U only. Permits study options in Japanese not available in regularly scheduled curriculum at departmental discretion.
- JPN 4930 Selected Topics (1-5) AS WLE**
Departmental approval required. Course permits study options in Japanese not available in the regularly scheduled curriculum at departmental discretion.
- LAE 4314 Teaching Writing in the Elementary School, Grades K-6 (3) ED EDE**
PR: Elementary Education majors or CL. The purpose of this course is for students to understand children's writing development and to design and implement instructional strategies for teaching composition in an integrated Language Arts curriculum.
- LAE 4323 Methods of Teaching English: Middle School (3) ED EDT**
Must be taken one or two semesters prior to internship. Recommended to be taken with LAE 4464. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for middle school students.
- LAE 4335 Methods of Teaching English: High School (3) ED EDT**
PR: LAE 4464. Must be taken one semester prior to internship concurrently with LAE 4530. Whole language methods of integrating reading, writing, speaking, listening, viewing, and critical thinking activities into a literature-based program for high school students.
- LAE 4414 Teaching Literature in the Elementary School, Grades K-6 6A LW (3) ED EDE**
Pr./Sr. Standing The purpose of this course is for students to survey and analyze the genres of children's literature and to develop instructional strategies to use literature in literacy learning across the curriculum.
- LAE 4416 Teaching Literature and Writing in the Elementary Grades 6A LW (3) ED EDE**

PR: Elementary Education major. This course is designed to provide students with the skills necessary to implement a coordinated literature program and an integrated writing curriculum. Not repeatable for credit.

LAE 4464 Adolescent Literature for Middle and Secondary Students 6A LW (3) ED EDT

PR: English Education majors or CI. Recommended to be taken with LAE 4323 two semesters prior to internship. A study of the types of literature read by adolescents with an emphasis upon the criteria for the choice of good books and knowledge of available books and teaching materials.

LAE 4469 Teaching World Literature to Middle and Secondary Students MW (3) ED EDT

World literature encompasses more than Western European literature. This course is designed to emphasize, but is not limited to, the study of Eastern literature. This course fulfills the world literature course requirement for teacher certification in English.

LAE 4530 Methods of Teaching English: Practicum (3) ED EDT

PR: Senior standing or enrollment in Plan II Master's Program. CR: LAE 4323 or LAE 4335. Taken one semester, spring or fall, prior to internship.

LAE 4936 Senior Seminar in English Education (2) ED EDT

PR: Senior standing. Required concurrently with internship. Synthesis of teacher candidate's courses in complete college program.

LAE 4940 Internship: English Education (1-12) ED EDT

S/U only. One full semester of internship in a public or private school. Intern takes Senior Seminar in English Education concurrently. In special programs where the intern experience is distributed over two or more semesters, student will be registered for credit which accumulates from 9 to 12 semester hours.

LAE 5462 Young Adult and World Literature for New Teachers (3) ED EDI

PR: Teaching position w/either English degree or 30 hrs of Undergraduate English A study of the types of literature read by adolescents, including literature representative of other cultures, with emphasis upon the criteria for the choice of good books and knowledge of available books and teaching materials.

LAE 5932 Selected Topics in the Teaching of English (3) ED EDT

PR: Certification in English and/or Mass Communications and approval of graduate advisor. Investigation of topics which are of special interest to the student and are related to the teaching of English in the secondary school. Topics will be selected by the student in accordance with his particular goals and will be approved by the student's graduate advisor.

LAH 2020 Latin American Civilization HP AF (3) AS HTY

An introduction to selected issues, events, and people in Latin American history from 1492 to the present. Focus on Argentina, Brazil, Chile, Cuba, and Mexico. Intended for students in any discipline; no prerequisites. An entry-level course for Latin American studies.

LAH 2734 Latin American History in Film HP AF (3) AS HTY

Through the use of films and readings, the course introduces the broad sweep of Latin American history from the pre-Columbian period to today. Emphasis is placed on the social-cultural context to understand the peoples and events that have shaped Latin America.

LAH 3130 Colonial Latin America (4) AS HTY

A study of the Spanish and Portuguese Colonial empires in the New World from 1492-1830.

LAH 3200 Modern Latin America (4) AS HTY

A study of the emergence of the Latin American states. The course will examine developments in Latin America during the nineteenth and twentieth centuries. Special attention is given to the Third World character of the region.

LAH 3430 History of Mexico (4) AS HTY

Mexican history from pre-Columbian cultures to the twentieth century. Emphasis falls on the colonial political economy, social development, the wars of independence, development of the 19th century Mexican state and the Mexican revolution.

LAH 3470 History of the Caribbean (4) AS HTY

A thematic study of the circum-Caribbean from pre-Columbian cultures to the twentieth century, emphasizing the development of the Caribbean political economy with emphasis on monoculture, plantation society, and colonial/neo-colonial relationships.

LAH 3480 History of Cuba (4) AS HTY

Cuban history from pre-Columbian cultures to the Cuban Revolution. Emphasis on colonization, the sugar economy, the struggles for independence, the political economy of the Republic, and the 20th century revolutionary process.

LAS 3002 Latin America (3) AS INT

Area study courses are multi-disciplinary in nature and deal with one or more countries of a region. Each course combines some measure of political, economic, historical, religious, geographic, anthropological, and sociological analysis in dealing with salient features and current problems.

LAS 3004 The Americas - Latin and Caribbean (3) AS INT

This is a telecourse that is designed to introduce the complexities of Latin America and the Caribbean to students in the U.S. (Open University - televised course.)

LAS 3116 Latin America Through Film AF (3) AS INT

This course will use film, video, selected readings, and lectures to teach the interested student about Latin America.

LAT 1120 Beginning Latin I (4) AS WLE

An introductory course in Latin grammar with appropriate readings.

LAT 1121 Beginning Latin II (4) AS WLE

PR: LAT 1120 or equivalent. An introductory course in Latin grammar with appropriate readings.

LAT 2200 Intermediate Latin (4) AS WLE

PR: LAT 1121 or equivalent. Readings in Latin at an intermediate level.

LAT 2201 Intermediate Latin II (4) AS WLE

PR: LAT 2200 This class will introduce students to their first Latin author, and to the techniques and skills of intermediate work in Latin. It will also provide a comprehensive review of Latin Grammar. It is not restricted to majors, and not repeatable for credit.

LIN 3010 Introduction to Linguistics (3) AS WLE

Introduction to the basic principles of linguistic science; phonological and grammatical analysis and description; language change and genetic relationships.

LIN 3670 English Grammar and Usage (3) AS ENG

A course in the basics of traditional English grammar designed as a complement to our composition and creative writing courses, as a review for those students who will take preprofessional exams, and as a basic course for students interested in improving their knowledge of English. Will not be counted toward the English major.

LIN 3801 Language and Meaning 6A (3) AS WLE

A survey introduction for non-specialists to the basic principles of semantics and the way language conveys ideas. This course is also available on WUSF/TV Channel 16 by the O.U. Program.

LIN 4040 Descriptive Linguistics (3) AS WLE

PR: LIN 3010 or CI. Introduction to the basic techniques of formalizing linguistic descriptions through elementary phonological, morphological, and syntactic data solution-problems drawn from a variety of languages. Both taxonomic and generative analysis and descriptions will be developed and compared.

LIN 4575 Language Types of the World () AS WLE

LIN 4600 Language and Society (3) AS WLE

PR: LIN 3010. An analysis of the interrelation of a language and the structure of the society using it. The linguistic behavior patterns characteristic of particular social, political, economic, educational, and racial groups. Problems in communication between strata.

LIN 4671 Traditional English Grammar (3) AS ENG

A course primarily using the sentence diagram to present a detailed analysis of the parts of speech, verb tenses, sentence functions, and other basic grammatical classifications of traditional English grammar.

LIN 4680 Structure of American English (3) AS ENG

An introductory survey of traditional, structural, and generative transformational grammars and their techniques for the analysis and description of linguistic structure in general, and contemporary American English, in particular.

LIN 4710 Language and Communication: Acquisition and Development (3) AS WLE

PR: LIN 3010. A survey of current research and theory in the processes of normal acquisition and development of language and communication in children. The acquisition and development of phonology, syntax, semantics, pragmatics, and nonverbal communication and the role of language in general cognitive development.

LIN 4903 Directed Reading (1-3) AS WLE

PR: CI. Readings in special topics.

LIN 4930 Selected Topics (1-3) AS WLE

PR: CI. Course content depends upon students' needs and instructor's interest and may range over the entire field of linguistics.

LIN 5700 Applied Linguistics (3) AS WLE

Analysis of the phonological, morphological, and syntactic features of English as a basis for linguistic application to problems of English language acquisition by non-native speakers.

LIS 2001 Library and Information Skills (3) AS LIS

An introduction to various types of information sources (print and

346 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- electronic) and search techniques. The course is designed to instruct students how to locate, evaluate, and effectively use information.
- LIS 2002 Introduction to the Internet (3) AS LIS**
Covers the history, structure, and use of the Internet, with an emphasis on using the Internet to answer educational, research, and other information-based needs.
- LIS 2005 Library and Internet Research Skills (3) AS LIS**
An introduction to information research skills as they apply to using both academic libraries and the Internet. Assignments will focus on developing skills to locate, evaluate, and use sources of information.
- LIS 2937 Selected Topics in Library/Information Science (1-3) AS LIS**
Covers a variety of topics in the field of library/information science such as emerging technologies, administration and service, and current professional issues.
- LIS 3361 World Wide Web Page Design and Management (3) AS LIS**
PR: LIS 2002. Covers a variety of strategies in designing and maintaining effective World Wide Web pages for publication on the Internet.
- LIS 4930 Selected Topics in Information Studies (3) AS LIS**
Covers a variety of topics in the field of library/information science such as emerging technologies, administration and service, and current professional issues.
- LIS 5268 Microcomputer Applications Library and Information Centers (3) AS LIS**
Microcomputer hardware and software for libraries and their application in library/information settings. Projects using major applications for budgets, databases, and telecommunications are undertaken.
- LIS 5315 Instructional Graphics (3) AS LIS**
Theoretical aspects, planning and production of instructional graphic material. The theory of graphic communications. Interpreting needs for instructional materials appropriate for given behavioral objectives.
- LIS 5333 TV in Schools and Libraries (3) AS LIS**
Small format video tape recordings and the utilization of open and closed broadcasts in schools and libraries.
- LIS 5404 Foundations of Library and Information Science (3) AS LIS**
Introduction to the study of library and information science, history; organization; specialized literature; outstanding leaders; current trends, issues, and problems; the place of the information agency in society with its contributions to that society.
- LIS 5937 Selected Topics in Library Studies (1-4) AS LIS**
Covers a variety of topics in such areas as collection development, reference services, technical services, and administration.
- LIT 2000 Introduction to Literature 6A HP (3) AS ENG**
The nature and significance of literature in its various forms: fiction, drama, poetry; emphasis on the techniques of reading literature for informed enjoyment. Will not be counted toward the English major.
- LIT 2010 Introduction to Fiction 6A HP (3) AS ENG**
A study of the short story and novel as literary forms; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.
- LIT 2030 Introduction to Poetry 6A HP (3) AS ENG**
A study of the poem as literary form; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.
- LIT 2040 Introduction to Drama 6A HP (3) AS ENG**
A study of the major forms of drama as literature and theatre; approached from an historical perspective though not restricted to any historical period. Will not be counted toward the English major.
- LIT 3022 Modern Short Novel HP (3) AS ENG**
A study of the novella from the nineteenth century to the present. Writers include James, Dostoevsky, Camus, Styron, Nabokov, Gardner, Roth, Vonnegut, among others.
- LIT 3043 Modern Drama (3) AS ENG**
A study of such modern and contemporary dramatists as Ibsen, Strindberg, Chekhov, Pirandello, Shaw, O'Neill, Pinter, Stoppard, Brecht, Beckett, and Ionesco.
- LIT 3073 Contemporary Literature (3) AS ENG**
An introduction to the fiction, poetry, and drama written since 1945—American, British, Continental, or Multicultural. Focus may be on one, two, or all three genres or on works from any combination of nationalities.
- LIT 3101 Literature of the Western World Through the Renaissance 6A (3) AS ENG**
A study in English of the great works of Western Literature from its beginnings through the Renaissance, including the Bible, Homer, Sophocles, Plato, Euripides, Virgil, Cicero, Dante, Petrarch, Machiavelli, and Rabelais, among others.
- LIT 3102 Literature of the Western World Since the Renaissance 6A (3) AS ENG**
A study in English of the great works of Western Literature from the Neoclassic to the Modern Period, including such writers as Moliere, Racine, Voltaire, Dostoevsky, Chekhov, Ibsen, Kafka, Gide, Sartre, and Camus, among others.
- LIT 3103 Great Literature of the World 6A MW LW (3) AS ENG**
A survey of world literature including samples from the ancient and modern era, western and eastern traditions, male and female writers, and various ethnic cultures. Focus on values/ethics, race, ethnicity, and gender; thinking and writing skills. Will not be counted toward the English major.
- LIT 3144 Modern European Novel 6A HP (3) AS ENG**
A study of the Modern European novel in translation as it developed from the nineteenth century to the present, including such writers as Dostoevsky, Flaubert, Kafka, Hesse, Camus, and Solzhenitsyn.
- LIT 3155 Modern Literature 6A MW LW (3) AS ENG**
Examines major literary works of the 20th Century and explores ways in which authors have expressed the age, its great issues and conflicts, in order to gain an historical perspective that will help relate the present to the recent past. Will not be counted toward the English major.
- LIT 3301 Cultural Studies and the Popular Arts 6A MW LW (3) AS ENG**
A study of twentieth century culture as it is represented in the film, fiction, and other cultural artifacts of many different nationalities. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills. Will not be counted toward the English major.
- LIT 3374 The Bible As Literature MW (3) AS ENG**
Major emphasis on literary types, literary personalities of the Old and New Testaments, and Biblical archetypes of British and American literary classics. Fall Semester, Old Testament; Spring Semester, New Testament. Focuses on values/ethics, race, ethnicity and gender; thinking and writing skills. May be taken twice for credit with different topics. May be counted once toward the English major.
- LIT 3383 The Image of Women in Literature 6A MW LW (3) AS ENG**
A study that seeks to trace the origins of contemporary views about women, to analyze major Eastern/Western literary portrayals of women, to examine ideas about women's roles, and to compare/contrast cultural/racial images of women. Will not be counted toward the English major.
- LIT 3410 Religious and Existential Themes (3) AS ENG**
Theological and philosophical ideas, allusions, and symbols in the writings of Dostoevsky, Nietzsche, Mann, Joyce, Eliot, Camus, Sartre, among others.
- LIT 3451 Literature and the Occult 6A MW LW (3) AS ENG**
An introduction to the occult tradition as a major ingredient in English, Continental, American, and Multicultural literature; analysis of the origins, classifications, and areas of the various magic arts from classical times through the present. Focuses on values/ethics, race/ethnicity and gender; thinking and writing skills. Will not be counted toward the English major.
- LIT 3700 Survey of Poetry (3) AS ENG**
A chronological sampling of the major poems written in English from the Middle Ages to the present. Recommended as the first literature course in the poetry option.
- LIT 4386 British and American Literature by Women 6A MW LW (3) AS ENG**
Survey of women's literary tradition in England and America from the seventeenth century to the present. Thematic focus includes self, marriage, sexuality, madness, race and generations. Writing intensive. Will not be counted toward the English major.
- LIT 4804 Literature as Cultural Study MW (3) AS ENG**
The study of literary texts as cultural artifacts. Literary texts as historical, social, political, psychological, philosophical, religious, etc. documents. Topics and works vary. Will not be counted toward the English major.
- LIT 4930 Selected Topics in English Studies (3) AS ENG**
The content of the course will be governed by student demand and instructor interest. It will examine in depth a recurring literary theme or the work of a small group of writers. Special courses in writing may also be offered under this title. May be taken twice for credit with different topics.
- LNW 4381 Livy (4) AS WLE**
PR: Basic knowledge of Latin. Readings in the ideas and artistry of this Roman historian.
- LNW 4634 Catullus (4) AS WLE**
PR: Basic knowledge of Latin. Readings in Catullus. Study of

- techniques and tradition in Roman lyric poetry.
- LNW 4644 Cicero (4) AS WLE**
PR: Basic knowledge of Latin. Readings in the epistles of Cicero.
- LNW 4654 Horace (4) AS WLE**
PR: Basic knowledge of Latin. Readings in the Odes and Epodes of Horace; study of the Ode's tradition.
- LNW 4660 Vergil (4) AS WLE**
Readings in Virgil's Aeneid. Study of the tradition, techniques, and artistry of Roman epic poetry. Available to majors and non-majors.
- LNW 4670 Ovid (4) AS WLE**
PR: LAT 1121 or equivalent. Readings in Ovid's Metamorphoses. Study of Ovid's technique, style, and artistry.
- LNW 4900 Directed Reading (1-4) AS WLE**
Departmental approval required.
- LNW 4930 Selected Topics (4) AS WLE**
Study of an author, movement, or theme.
- LNW 5900 Directed Reading (1-4) AS WLE**
Departmental approval required. S/U.
- LNW 5934 Selected Topics (4) AS WLE**
Study of an author, movement, or theme.
- MAA 4211 Intermediate Analysis I 6A (4) AS MTH**
PR: MAC 2313 and MAS 3105. Sequences, series, metric spaces, continuity, differentiation.
- MAA 4212 Intermediate Analysis II 6A (3) AS MTH**
PR: MAA 4211. Riemann-Stieltjes integration, uniform convergence, and related topics.
- MAA 4402 Complex Variables 6A (3) AS MTH**
PR: MAP 2302 or CI. No credit for students with credit in MAA 5405. Complex numbers, Cauchy-Riemann equations, analytic and conformal functions, power series, Cauchy Theorem, Cauchy Integral Formula, residue theory.
- MAA 5306 Real Analysis I (3) AS MTH**
PR: MAA 4211. Riemann-Stieltjes integrals, uniform convergence, Fourier series, Lebesgue measure and integration on R.
- MAA 5307 Real Analysis II (3) AS MTH**
PR: MAA 5306. Metric spaces, Banach spaces, and function spaces; measure and integration on abstract spaces.
- MAA 5405 Applied Complex Analysis (3) AS MTH**
PR: CI. Complex numbers, analytic and harmonic functions. Series. Contour integrals, residue theory. Conformal mappings. (A survey course emphasizing techniques and applications.)
- MAC 1105 College Algebra 6A QM (3) AS MTH**
PR: C (2.0) or better in MAT 1033, or 490 or better SAT Math score, or 21 or better ACT Math score, or 90 or better Elementary Algebra CPT score, or 40 or better College-Level Math CPT score. No credit for students with prior credit for MAC 1140 or MAC 1147. Concepts of the real number system, functions, graphs, and complex numbers. Analytic skills for solving linear, quadratic, polynomial, exponential, and logarithmic equations. Mathematical modeling of real life applications. College Algebra may be taken either for General Education credit or as preparation for a pre-calculus course.
- MAC 1114 Precalculus Trigonometry 6A (2) AS MTH**
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math Score, or 24 or better ACT Math Score. CP: MAC 1140. Angles, trigonometric functions, properties and graphs of trigonometric functions, right triangles, laws of sines and cosines, polar coordinates.
- MAC 1140 Precalculus Algebra 6A QM (3) AS MTH**
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math Score, or 24 or better ACT Math Score. CP: MAC 1114. Review of functions and graphs. Analytic geometry including conic sections and rotation of axes, systems of equations including matrix algebra and determinants, sequences and series including Binomial Theorem.
- MAC 1147 Precalculus Algebra and Trigonometry 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 1105, or 550 or better SAT Math score, or 24 or better ACT Math score, or 60 or better College-Level Math CPT score. No credit for students with credit for either MAC 1140 or MAC 1114. This is an accelerated combination of MAC 1140 and MAC 1114; this course is best for students who have already seen some trigonometry. See the descriptions of MAC 1140 and MAC 1114.
- MAC 2233 Business Calculus 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 1105, or C (2.0) or better in MAC 1140, or C (2.0) or better in MAC 1147, or 590 or better SAT Math score, or 26 or better ACT Math score, or 78 or better College-Level Math CPT score. No credit for mathematics majors or students with credit for either MAC 2241, MAC 2281, or MAC 2311. Linear equations and functions, mathematics of finance, differentiation and integration of algebraic, exponential and logarithmic functions with applications to business, finance and economics.
- MAC 2241 Life Sciences Calculus I 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 1114, or C (2.0) or better in MAC 1147, or 650 or better SAT Math score, or 29 or better ACT Math score, or 90 or better College-Level Math CPT score, and knowledge of trigonometry. No credit for math majors or students with credit in MAC 2233, MAC 2281, or MAC 2311. Differentiation and integration of algebraic, trigonometric, exponential, and logarithmic functions with applications to life sciences.
- MAC 2242 Life Sciences Calculus II 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 2241. No credit for Mathematics majors or students with credit in MAC 2282 or MAC 2312. Techniques of integration, differential equations, functions of several variables, series and Taylor polynomials.
- MAC 2281 Engineering Calculus I 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 1114 and C (2.0) or better in MAC 1140, or C (2.0) or better in MAC 1147, or 650 or better SAT Math score, or 29 or better ACT Math score, or 90 or better College-Level Math CPT score, and knowledge of trigonometry. No credit for mathematics majors or for students with credit in MAC 2233, MAC 2241, or MAC 2311. Differentiation, limits, differentials, extremes, indefinite integral. No credit for mathematics majors or for students with credit in MAC 2233 or MAC 2243 or MAC 2311.
- MAC 2282 Engineering Calculus II 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 2281. No credit for students with credit in MAC 2242 or MAC 2312. Definite integral, trigonometric functions, log, exponential, series, applications.
- MAC 2283 Engineering Calculus III 6A (4) AS MTH**
PR: C (2.0) or better in MAC 2282 or CC. No credit for students with credit in MAC 2313. Techniques of integration, numerical methods, analytic geometry, polar coordinates, Vector algebra, applications.
- MAC 2311 Calculus I 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 1114 and C (2.0) or better in MAC 1140, or C (2.0) or better in MAC 1147, or 650 or better SAT Math score, or 29 or better ACT Math score, or 90 or better College-Level Math CPT score, and knowledge of trigonometry. No credit for students with credit in MAC 2233, MAC 2241, or MAC 2281. Differentiation, limits, differentials, extremes, indefinite integral. No credit for students with credit in MAC 2233 or MAC 2243 or MAC 2311.
- MAC 2312 Calculus II 6A QM (4) AS MTH**
PR: C (2.0) or better in MAC 2311 or CC. No credit for students with credit in MAC 2242 or MAC 2282. Antiderivatives, the definite integral, applications, series, log, exponential and trig functions.
- MAC 2313 Calculus III 6A (4) AS MTH**
PR: C (2.0) or better in MAC 2312 or CC. No credit for students with credit in MAC 2283. Integration, polar coordinates, conic sections, vectors, indeterminate forms and proper integrals.
- MAD 3100 Discrete Mathematics 6A (3) AS MTH**
PR: MAC 2281 or MAC 2311. No credit for Mathematics majors. An introduction to some of the aspects of discrete mathematics that are fundamental to digital computing. Topics include sets, numbers, algorithms, Boolean algebra, computer arithmetic, elementary combinatorics and an introduction to graph theory.
- MAD 4401 Numerical Analysis 6A (3) AS MTH**
PR: MAP 2302 and MAS 3105. Interpolation and quadrature, finite differences, numerical solution of algebraic and transcendental equations, numerical solution of differential equations, computer techniques.
- MAD 4504 Theory of Computation 6A (3) AS MTH**
PR: MGF 3301 or MAD 3100. Mathematical aspects of alphabets and languages. Chomsky's hierarchy. Grammars. Regular languages, grammars and finite states machines. Context-free languages and grammars. Turing machines and languages. Decidability. Inductive definition of functions and basic computable functions. Introduction to computational complexity.
- MAD 5101 LISP: Programming With Algebraic Applications (3) AS MTH**
PR: MHF 5306 or MAD 6510 or MAS 5311 or CI. Programming in LISP, functional languages, foundations of Lambda Calculus and algebraic applications (theorem proving and game playing).
- MAD 5305 Graph Theory (3) AS MTH**
PR: MAS 3105 or CI. Brief introduction to classical graph theory (4-color theorem, etc.), directed graphs, connected digraphs, condensations, incidence matrices, Polya's Theorem, networks.
- MAE 4310 Teaching Elementary School Mathematics I (3) ED EDE**
PR: Admission to College of Education and two college level mathematics courses. Methods for teaching number ideas, computation skills, and mathematical reasoning.
- MAE 4320 Teaching Mathematics in the Middle Grades (3) ED EDO**
PR: Admission to Mathematics Education program or DPR.

- Techniques and materials of instruction in middle grades mathematics topics. Students are expected to observe 15 hours in middle schools.
- MAE 4326 Teaching Elementary School Mathematics II (3) ED EDE**
PR: MAE 4310. Provides for the development of knowledge and skill necessary to prepare students to assume roles as teachers of mathematics in elementary and special education classes. Required in the undergraduate programs in Elementary Education.
- MAE 4330 Teaching Senior High School Mathematics (3) ED EDO**
PR: Admission to Mathematics Education program or DPR. Techniques and materials of instruction in mathematics. Students are expected to observe 20 hours in high schools.
- MAE 4551 Reading the Language of Mathematics (3) ED EDO**
PR: Admission to Mathematics Education program or DPR. The course provides the prospective secondary math teacher the opportunity to develop concepts, skills and instructional procedures for effectively integrating communication (reading, writing, listening, speaking) into the math curriculum. Required under Math Ed. program.
- MAE 4652 Technology for Teaching Secondary School Mathematics I (3) ED EDO**
PR: Admission to Mathematics Education Program or DPR. This course prepares secondary mathematics education majors to write computer programs in both QBASIC and Logo 4.0 that are appropriate for secondary school mathematics classrooms. A variety of uses of computers in mathematics instruction will also be covered.
- MAE 4653 Technology for Teaching Secondary School Mathematics II (3) ED EDO**
PR: Admission to Mathematics Education program or DPR. This course prepares secondary mathematics education majors to be proficient with hand-held technologies such as; graphing calculators, symbolic manipulators, calculator based laboratory systems and hand held geometric drawing tools.
- MAE 4909 Directed Study: Mathematics Education (1-3) ED EDO**
PR: Senior Standing and CI. To extend competency in teaching field.
- MAE 4936 Senior Seminar in Mathematics Education (2) ED EDO**
PR: Senior Standing; CR: MAE 4940. Synthesis of teacher candidate's courses in complete college program.
- MAE 4940 Internship: Mathematics Education (1-12) ED EDO**
CR: MAE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 semester hours.
- MAE 5875 Abstract Algebra for Teachers (3) AS MTH**
PR: MAS 3105 and MAS 4301 and Bachelor's degree or CI. No credit for Mathematics majors. Groups, fields, vector spaces as they relate to high school algebra and geometry.
- MAN 3025 Principles of Management (3) BA MAN**
PR: Junior standing. Examines intrapersonal, interpersonal, group/team, organizational, and environmental (both stakeholder and societal) factors influencing the management task.
- MAN 3240 Organizational Behavior Analysis (3) BA MAN**
PR: MAN 3025. The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, formal organization, structural variation, leadership, motivation, and communication.
- MAN 3301 Human Resource Management (3) BA MAN**
To develop a broad exposure to new approaches, techniques, and future trends in the management of personnel. A study of the major functions in personnel including job analysis, manpower planning, selection, performance evaluation, training, and wage and salary administration.
- MAN 3401 Industrial Relations (3) BA MAN**
Conceptualization of the administrative problems arising from unionization. Emphasis on the relationship between management and employee representatives in private and public employment.
- MAN 4120 Managerial Behavioral Laboratory (3) BA MAN**
PR: MAN 3240 or equivalent. Development of direct understanding of personal, interpersonal, and intergroup factors present in organizational interaction. Stress is on a series of experiential exercises and written application of results within a laboratory setting.
- MAN 4129 Theory and Practice of Management Skills (3) BA MAN**
This course involves the transference of management theories into practice. It requires the active involvement of students in developing and practicing the skills needed to be a successful manager.
- MAN 4280 Organizational Development and Change (3) BA MAN**
PR: MAN 3240 or CI. A lab course where students experimentally apply behavioral science techniques in an "action-research" framework to the cycle of planned change so as to build a more effective organization.
- MAN 4282 Organizational Assessment (3) BA MAN**
PR: MAN 3240. The analysis and measurement of factors which influence organizational effectiveness and the quality of work life. Data based cases will be used by students to assess managerial and supervisory skills and to measure organizational functioning and work design.
- MAN 4402 Employment Laws (3) BA MAN**
Federal and state regulation of the employment relationship, including wage and hour laws; EEO; affirmative action programs; employee benefits; insurance; workers' compensation, safety, health, employee's personal rights; collective bargaining legislation.
- MAN 4430 Seminar in Negotiations and Administration of Labor Agreements (3) BA MAN**
Case studies in contract negotiation, administration, grievance settlement, and arbitration. Assumes familiarity with industrial relations system.
- MAN 4504 Operations Management: A Systems Approach (3) BA QMB**
PR: ISM 3431 or equivalent. Studies the problems of "operations" in all types of enterprises in both the public and private sectors. Emphasis is placed on the application of various decision science methodologies to problem situations.
- MAN 4507 Operation Production Systems (3) BA QMB**
PR: MAN 4504 or CI. Study of closed loop production planning and control systems. Master production planning, inventory management, materials requirements planning, capacity, management, production activity. Relationship to organizational effectiveness.
- MAN 4600 International Management (3) BA MAN**
PR: MAN 3025, Senior Standing or CI. Examines the effects of international cultural differences on business practices within and outside the United States and provides methods to build synergies and establish/enhance competitive advantage via those differences.
- MAN 4802 Entrepreneurship and Small Business Management (3) BA MAN**
PR: ACG 2021, ACG 2071, MAR 3023, or CI. Study of the factors involved in starting and managing a small- to medium-sized business. Emphasis on conduct of pre-business feasibility study, start-up of business, successful management of the firm, and options for succession or termination.
- MAN 4804 Small Business Management Counseling (3) BA MAN**
PR: MAN 4802 or CI. Field application in small business settings by (a) analyzing an on-going small business and developing recommendations for making improvements; or (b) conducting a feasibility study for a new enterprise and developing a strategy for implementation if favorable.
- MAN 4905 Independent Study (1-3) BA MAN**
PR: CI. S/U only. Specialized independent study determined by the students needs and interests.
- MAN 4930 Selected Topics in Management (1-3) BA MAN**
Topics to be selected by instructor and department chairperson for pertinent Management issues.
- MAN 4931 Independent Research (1-4) BA MAN**
PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.
- MAP 2302 Differential Equations 6A (3) AS MTH**
PR: MAC 2283 or MAC 2313. First order linear and nonlinear differential equations, higher order linear equations, applications.
- MAP 5316 Ordinary Differential Equations I (3) AS MTH**
PR: MAP 2302 and MAA 4211, or CI. Existence and uniqueness theory, properties of solutions, linear systems, stability theory. Sturm-Liouville theory.
- MAP 5317 Ordinary Differential Equations II (3) AS MTH**
PR: MAP 5316 and MAA 5307 or CI. Topics selected from fixed point theory, comparison theory, oscillation theory, Poincare-Bendixson Theory, Lyapunov functions, eigenfunction expansions.
- MAP 5345 Applied Partial Differential Equations (3) AS MTH**
PR: MAP 5407 or CI. Separation of variables, the heat equation, wave equation, Laplace's equation, classification, Green's functions with emphasis on applications.
- MAP 5407 Methods of Applied Mathematics (3) AS MTH**
PR: MAP 2302 or CI. Sturm-Liouville theory, Fourier series, Green's functions, matrix methods for linear systems of ordinary differential equations, and topics from calculus of variations, control theory, numerical solutions of differential equations.

MAR 2931 Selected Topics in Marketing (1-4) BA MKT

Not available for credit to upper-level students who have been admitted to the College of Business. Topics to be selected by department chairman.

MAR 3023 Basic Marketing (3) BA MKT

PR: Junior standing. Survey of the marketing of goods and services within the economy. Attention is paid to the impact of marketing on other functional areas of business as well as society.

MAR 3400 Professional Selling (3) BA MKT

PR: MAR 3023 or CI. A study of the stages of the professional selling process, and the role of sales in today's marketing environment. Emphasis on learning adaptive selling techniques and developing effective interpersonal communications skills. Sales careers are examined.

MAR 3613 Marketing Research (3) BA MKT

PR: QMB 2100, MAR 3023. A study of research methods and techniques applicable to problem solving in marketing. Attention is also given to defining information needs, determining the value of information, interpreting and reporting information for use in marketing decision making.

MAR 3823 Marketing Management (3) BA MKT

PR: MAR 3023. An applications oriented study of the marketing function at an intermediate level. Emphasis upon techniques for analysis and problem-solving. Builds upon the principles and concepts learned in MAR 3023, and provides a strong foundation for the remaining courses in the marketing curriculum.

MAR 4156 International Marketing (3) BA MKT

PR: MAR 3023. A study of procedures and problems associated with establishing marketing operations in foreign countries. Includes the institutions, principles and methods involved in the solution of these business problems as well as the effects of national differences on business practices and buyer behavior.

MAR 4213 Logistics and Physical Distribution Management (3) BA MKT

PR: MAR 3023 or CI. A study of logistics in the marketing of goods and services. Includes a description and analysis of the logistics environment as well as components of the physical distribution system with emphasis on information flows and the application of quantitative techniques used in establishing and controlling customer service levels.

MAR 4231 Retailing Management (3) BA MKT

PR: MAR 3023. A comprehensive study of the retailing structure, institutions, and environment. Includes pertinent management theories and practices in analyzing, organizing, planning and controlling retail operations, both large and small.

MAR 4333 Promotion Management (3) BA MKT

PR: MAR 3023 or CI. A study of the role of promotion in the marketing program of the firm, including the promotional tools available to the marketing manager and the various types of decisions made in the promotional area. Decision making process in development of a promotional program is emphasized.

MAR 4403 Sales Management (3) BA MKT

PR: MAR 3023 or CI. A study of sales management and strategy as a subset of marketing management. Emphasis is placed on developing the problem-solving and decision-making skills required of the sales manager in the modern market-oriented company.

MAR 4453 Business to Business Marketing (3) BA MKT

PR: MAR 3023. A study of the marketing of goods and services to the industrial and institutional sectors. Includes characteristics of the markets and channels of distribution, sales, management, research and promotional practices, marketing policies and strategies.

MAR 4503 Buyer Behavior (3) BA MKT

PR: MAR 3023. A study of the basic concepts of buyer behavior, including pre- and post-purchase attitudes and behavior patterns, information processing relating to the functional areas of marketing and the buyer's decision-making process. Managerial applications to marketing are emphasized.

MAR 4824 Marketing Management Problems (3) BA MKT

PR: Senior Standing, MAR 3823, MAR 3613, MAR 4333. The integration of marketing knowledge applied to decision roles in managing the total marketing effort of firms, and coordination with other major functional areas on specific problems.

MAR 4903 Independent Research (1-3) BA MKT

PR: CI. Individual study contract with instructor and department chairperson required. The research project will be mutually determined by the student and instructor.

MAR 4905 Independent Study (1-3) BA MKT

PR: CI. S/U only. Specialized independent study determined by the students' needs and interests.

MAR 4933 Selected Topics In Marketing (1-3) BA MKT

Topics to be selected by instructor and department chairperson.

MAS 1100 Constructive Number Theory and Linear Algebra (3) US DEA

PR: Acceptance in USF-Hillsborough County Mathematics and Science Program. Computational and constructive aspects of number theory. Topics include: properties of integers, Diophantine Equations, congruence, quadratic residues polynomials over the integers, systems of linear equations, matrices and determinants.

MAS 3105 Linear Algebra 6A (4) AS MTH

CP: MGF 3301 and either MAC 2283 or MAC 2313. Linear systems, matrix algebra, vector spaces, linear independence, inner product spaces, Gram-Schmidt algorithm, linear transformations and matrix representations, determinants, eigenvalues, diagonalization, quadratic forms.

MAS 4156 Vector Calculus 6A (4) AS MTH

PR: MAS 3105 and either MAC 2313 or MAC 2283. Implicit function and inverse function theorems, parameterized surfaces, submanifolds on Euclidean space, exterior calculus of differential forms, differentiation of vector fields, line and surface integrals, Stokes' Theorem, elementary continuous groups.

MAS 4214 Elementary Number Theory 6A (3) AS MTH

PR: MAC 2312. No credit towards Mathematics major. Divisibility, prime numbers, Fundamental Theorem of Arithmetic, Diophantine equations, the algebra of congruencies, number functions and other selected topics.

MAS 4301 Elementary Abstract Algebra 6A (3) AS MTH

PR: MAS 3105. An introduction to the basic algebraic structures; groups, rings, integral domains, and fields; homeomorphisms and isomorphisms.

MAS 5107 Advanced Linear Algebra (3) AS MTH

PR: MAS 3105 and MAS 4301 CP: MAS 5311. Finite-dimensional vector spaces over arbitrary fields, dual spaces, canonical forms for linear transformations, inner product spaces, orthogonal, unitary, and self-adjoint operators and quadratic forms.

MAS 5215 Number Theory (3) AS MTH

PR: MAS 3105 and MAS 4301, or CI. Fundamental theorem of arithmetic, modular arithmetic, Chinese remainder theorem, Mersenne primes, perfect numbers, Euler-Fermat theorem, pseudo primes, primitive roots, law of quadratic reciprocity, factorization and primality testing algorithms.

MAS 5311 Algebra I (3) AS MTH

PR: MAS 3105 and MAS 4301 or CI. Group theory: Sylow theorems; classification of groups of small order. Ring theory: ideals, quotient rings, polynomial rings, Euclidean domains, principal ideal domains and unique factorization.

MAS 5312 Algebra II (3) AS MTH

PR: MAS 5311 or CI. Continuation of MAS 5311. Finitely generated modules over a principal ideal domain, basic field theory, finite fields, Galois theory.

MAT 2930 Selected Topics in Mathematics 6A (1-4) AS MTH

PR: CI. The course content will depend on the interest of faculty members and student demand.

MAT 2936 Technology Seminar 6A (1) AS MTH

S/U only. A two hour/week technology seminar to acquaint students majoring in mathematics, physics, and other sciences with the computer tools necessary in scientific communication and document preparation.

MAT 4906 Independent Study 6A (1-4) AS MTH

PR: CI. S/U only. Specialized independent study determined by the student's needs and interests. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.

MAT 4930 Selected Topics in Mathematics 6A (1-4) AS MTH

PR: CI. The course content will depend on the interest of faculty members and student demand.

MAT 4937 Mathematics Majors Seminar 6A (1) AS MTH

PR: MAS 4301.

MAT 4970 Mathematics Senior Thesis 6A (3) AS MTH

PR: Admission to Mathematics Honors Program and CC. S/U only. Course restricted to mathematics majors.

MAT 5932 Selected Topics (1-4) AS MTH

PR: CI. Each course covers a single topic outside the usual curriculum.

MCB 3020C General Microbiology (4) AS BIO

PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, and CHM 2210. Genetics is recommended. Introduction to the biology of microorganisms: structure, physiology, and ecology of bacteria, algae, viruses, protozoa and lower fungi. The laboratory involves preparation of culture media, staining, pure culture methodology, isolation of microbes from nature, enumeration techniques, resistance to infectious disease. Lec-lab.

MCB 4115 Determinative Bacteriology (5) AS BIO

350 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- PR: MCB 3020C. Survey of bacterial classification; detailed examinations of bacteria important to man in agriculture, in industry and as pathogens. Lec-lab.
- MCB 4404 Microbial Physiology and Genetics (4) AS BIO**
PR: MCB 3020C and CP: BCH 3023. A study of the physiological, metabolic, and genetic phenomena pertinent to understanding the growth, development, ecology, regulation, and reproduction of microorganisms. The course emphasizes the interdependence of physiological and genetic approaches to microbiology. Lec.
- MCB 4404L Microbial Physiology and Genetics Laboratory (1) AS BIO**
CR: MCB 4404C. Laboratory portion of Microbial Physiology and Genetics relating to biochemical characteristics and metabolic capabilities of bacteria.
- MCB 4502C Virology (3) AS BIO**
PR: MCB 3020C. The biology of viruses associated with plants, animals, and bacteria will be considered; the nature of viruses, mechanisms of viral pathogenesis, and interactions with host cells.
- MCB 4910 Microbiology Undergraduate Research (1-4) AS BIO**
PR: CC. For B.S. Microbiology majors only. S/U only. Individual investigation with faculty supervision.
- MCB 4934 Seminar in Microbiology (1) AS BIO**
PR: Senior or advanced junior standing. S/U only. Biology majors may take for elective credit.
- MCB 5206 Public Health and Pathogenic Microbiology (3) AS BIO**
PR: MCB 3020C, CI. A comprehensive survey of pathogenic microbes responsible for disease in man and other animals and the impact of these infectious agents on the public health. These pathogens will be studied with respect to their morphology, cultivation, mechanisms of pathogenicity, laboratory diagnosis, and epidemiology.
- MCB 5655 Applied and Environmental Biology (3) AS BIO**
PR: MCB 3020C. A Study of the applications of microbiology to the food/beverage industry, agriculture, public health and bioremediation. This course is a microbiology elective and has a mandatory field trip.
- MCB 5815 Medical Mycology (3) AS BIO**
PR: MCB 3020C or CI. A modern biological survey of the medically important fungi (yeasts and molds) important to microbiologists and environmental scientists.
- MET 4002 Climatology (4) AS GPY**
PR: GEO 3013 or CI. An introductory survey of climatology. A qualitative study of the dynamics and general circulation of the atmosphere. Surface and upper level atmosphere linkages in the mid latitudes will be examined. Discussion of the regional climatic patterns and anomalies throughout the world.
- MET 4010C Meteorology (4) AS GPY**
PR: GEO 3013 or CI. The earth's atmosphere and its processes; weather forecasting and analysis; instrumentation.
- MGF 1106 Finite Mathematics 6A QM (3) AS MTH**
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. Concepts and analytical skills in areas of logic, linear equations, linear programming, mathematics of finance, permutations and combinations, probability, and descriptive statistics.
- MGF 1107 Mathematics for Liberal Arts 6A QM (3) AS MTH**
PR: C (2.0) or better in MAT 1033, or SAT/ACT score, or Placement Exam score. This terminal course is intended to present topics which demonstrate the beauty and utility of mathematics to the general student population. Among the topics which might be included are: Financial Mathematics, Linear and Exponential Growth, Numbers and Number Systems, Elementary Number Theory, Voting Techniques, Graph Theory, and the History of Mathematics.
- MGF 1116 Mathematical Experience 6A (3) AS MTH**
PR: Two years of high school algebra. Introduction to some important and interesting basic ideas in mathematics with an emphasis on a mathematical way of thinking. Concepts such as definitions, axioms and proofs are explained. Topics from number theory, combinatorics, algebra and geometry are used. Some topics are presented in their historical context and their impact on the development of mathematics is discussed.
- MGF 1131 Chaos and Fractals 6A QM (3) AS MTH**
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. Computer experiments in the behavior of functions under iteration: periodicity, attractors, stability, complex numbers, Cantor set, fractional dimension, sensitive dependence.
- MGF 3301 Bridge to Abstract Mathematics 6A QM (4) AS MTH**
CP: MAC 2313 or MAC 2283. Techniques and logic of the construction of proofs. Topics will be selected from propositional logic, set theory, relations and functions, equivalence relations, Boolean algebra, cardinality, and limits.
- MHF 4403 The Early History of Mathematics 6A MW (3) AS MTH**
PR: MAC 2312 and upper-level standing. A study of the history and development of mathematics and its cultural impact from the formation of number systems to the Renaissance.
- MHF 4406 The History of Modern Mathematics 6A MW (3) AS MTH**
PR: MAC 2313. Traces the development of mathematical ideas in Western culture.
- MHF 5306 Mathematical Logic and Foundations I (3) AS MTH**
PR: MAS 4301 or CI. Two-course sequence covering; predicate calculus and classical model theory; transfinite set theory and the system ZFC; recursion theory and decidability.
- MHF 5402 The Early History of Mathematics (3) AS MTH**
PR: MAC 2312 A study of the history and development of mathematics and its cultural impact from the formation of number systems to the Renaissance.
- MHF 5405 History of Modern Mathematics (3) AS MTH**
PR: MAC 2313. Traces the development of mathematical ideas in Western culture. Special emphasis is placed on those concepts which led to the Calculus. This course is open to majors and non-majors alike.
- MHS 3411 Multidisciplinary Behavioral Healthcare Services (3) FM MHS**
PR: CI or Junior Standing minimum. Working in behavioral healthcare requires the application of specific knowledge and skills. This open enrollment course offers a practical multidisciplinary look at service delivery. Students will examine their career and educational goals in context.
- MHS 4002 Behavioral Health Systems Delivery (3) FM MHS**
PR: MHS 3411 This course is designed to provide students with an understanding of the significant issues and trends in behavioral health delivery systems in America. Four major areas will be emphasized: 1) history and legislation; 2) systems delivery; 3) programs and policies; 4) selected at-risk populations. This course is not repeatable for credit and is open to non-minors in behavioral healthcare.
- MHS 4052 Human Relations Skills in Counseling MW (4) ED EDG**
Introduction to the theory of human relations dynamics and development of skills required for effective interpersonal relations. Lecture sessions and experiential training.
- MHS 4407 Exemplary Practices in Behavioral Healthcare Treatment (3) FM MHS**
PR: MHS 3411 This course explores exemplary clinical practices in public behavioral health service delivery. Best or exemplary practices are defined as those that have both a track record and their efficacy has been empirically validated. Modules may begin with a historical perspective of the treatment of a specific population or a treatment strategy but will primarily focus on emerging methodologies.
- MHS 4829 Field Experience in Behavioral Healthcare (3) FM MHS**
PR: MHS 3411, MHS 4002, MHS 4407 This experiential class allows the student to observe and participate with multidisciplinary staff of a provider agency. The student will attend team meetings, observe individual, group, and case management services. Assignments will be made to maximize the student's time investment in the field. Observations and experiences will be discussed in biweekly class meetings.
- MHS 4904 Directed Study (1-4) FM MHS**
Directed study. Student must have a contract with an instructor.
- MHS 4905 Independent Study: Guidance and Counseling Education (1-4) ED EDG**
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.
- MHS 4931 Selected Topics (1-4) FM MHS**
The course content will depend on student demand and instructor's interest. The course may be repeated for different topics up to 8 hours.
- MLS 4031 Introduction to Medical Technology (2) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on principles and methods of medical technology, including professional ethics, safety regulations, quality control, phlebotomy, medical terminology, laboratory math, and computer applications.
- MLS 4860 Clinical Urinalysis and Body Fluids (2) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on laboratory methodology and diagnosis using urine and other fluids such as semen, spinal, pleural, peritoneal, and joint fluids.
- MLS 4861 Clinical Immunology (2) AS IAS**
PR: Senior standing and acceptance into an approved affiliated

- hospital. A hospital clinical course on the tissues, cells, and molecules of the human immune system, emphasizing the detection of serum antibodies and disease states.
- MLS 4862 Clinical Hematology (6) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on cellular components of the blood as related to laboratory diagnosis and disease, including blood coagulation and morphological and biochemical aspects of blood cells.
- MLS 4863 Clinical Microbiology (6) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course emphasizing pathogens responsible for diseases in man, including morphology, physiology, and laboratory diagnosis of bacteria, fungi, parasites, and viruses.
- MLS 4864 Clinical Chemistry (6) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on the analysis of chemical substances found in the body as related to the diagnosis of human disease, including topics such as instrumentation, electrophoresis, therapeutic drug-monitoring assays, tumor markers, and toxicology.
- MLS 4865 Clinical Immunohematology (6) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on blood and tissue typing, including blood group systems, transfusion associated diseases, HLA testing, and preparation of blood and blood components for transfusion therapy.
- MLS 4866 Clinical Laboratory Management and Education (1) AS IAS**
PR: Senior standing and acceptance into an approved affiliated hospital. A hospital clinical course on concepts of laboratory management, including personnel staffing, reimbursements, quality assurance, and regulatory issues, and clinical education techniques, including writing, lecture presentation, and evaluation.
- MMC 2100 Writing for the Mass Media (3) AS COM**
PR: Sophomore standing; 2.75 overall grade point average; grade of "C" in ENC 1101, ENC 1102, and passing score on English Diagnostic Test. An introduction to the basic skills of writing for the mass media with practice in library research, persuasive writing, and informational writing.
- MMC 3602 Mass Communications and Society SS HP (3) AS COM**
PR: Sophomore standing. A survey of the history, theory, processes, and philosophy of mass communications and the mass media in the United States, and their relationship to the other major institutions of American society.
- MMC 4123 Media Script Writing (3) AS COM**
PR: MMC 2100 and MMC 3602. An introduction to the techniques of writing scripts for electronic media. Emphasis is on documentary presentation.
- MMC 4200 History and Principles of Communications Law (3) AS COM**
PR: MMC 2100 and MMC 3602. Historical and constitutional backgrounds of freedom and control of expression, statutory enactments, major court decisions and administrative rulings which affect print media, telecommunications, advertising, public relations, and new media.
- MMC 4203 Communication Ethics (3) AS COM**
PR: MMC 2100 and MMC 3602 or CI. A study of the fundamental principles and philosophies of ethics and their application to the decision-making process in the various professions of mass communications.
- MMC 4420 Research Methods in Mass Communications (3) AS COM**
PR: MMC 2100 and MMC 3602. An introduction to the theory and practice of quantitative and historical research methods as applicable to the study of media and mass communications. Emphasis on survey research, evaluation of data, and report writing.
- MMC 4900 Directed Reading in Mass Communications (1-3) AS COM**
PR: Junior standing and CI. Reading and directed study in special topics.
- MMC 4910 Individual Research in Mass Communications (1-3) AS COM**
PR: Junior standing and CI. The course provides means for a student to do independent study in an area not covered by a numbered course.
- MMC 4936 Selected Topics in Mass Communications Studies (1-3) AS COM**
PR: MMC 2100, MMC 3602 and CI. Courses designed to meet current or specific topics of interest to instructors and students.
- MMC 4945 Media Internship-Seminar (3) AS COM**
PR: CI and 15 hours in Mass Comm. courses and completion of an 8-12 week paid media internship with newspaper, broadcast station, or other media-related agency approved by the School. S/U only. Reports on experiences for discussion and evaluation.
- MSL 1001C Foundations of Officership (2) US MIS**
Examines the unique duties and responsibilities of officers, organization and role of the Army, review skills pertaining to fitness and communication, analyze Army values and expected ethical behavior. Lec.-Lab.
- MSL 1002C Basic Leadership (2) US MIS**
Presents fundamental leadership concepts and doctrine, practice basic skills that underlie effective problem solving, examine the officer experience. Lec.-Lab.
- MSL 2101C Individual Leadership Studies (2) US MIS**
Develops knowledge of self, self-confidence, and individual leadership skills, develop problem solving and critical thinking skills, apply communication, feedback, and conflict resolution skills. Lec.-Lab.
- MSL 2102C Leadership and Teamwork (2) US MIS**
Focuses on self-development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills.
- MSL 2900 Army Physical Readiness (1) US MIS**
This course will train students in the unique role of Army physical readiness in sustaining military operations. It will also prepare students to plan, prepare, and conduct military fitness training. Repeatable for 8 semesters, but only 4 credit hours will be counted toward the program.
- MSL 2901 Basic Leader Training (4) US MIS**
PR: CI. A 35 day internship at Fort Knox, Kentucky that incorporates a wide range of military subjects designed to develop/evaluate leadership and officer potential. The course is intentionally stressful and designed to build individual confidence through the accomplishment of tough and demanding training. Students completing the course may qualify for entry into the ROTC Advanced Course.
- MSL 3201C Leadership and Problem Solving (3) US MIS**
Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.
- MSL 3202C Leadership and Ethics (3) US MIS**
Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, apply principles and techniques of effective written and oral communication.
- MSL 4301C Leadership and Management (3) US MIS**
Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply leadership and problem solving principles to a complex case study/simulation.
- MSL 4302C Officership (3) US MIS**
Capstone course to explore topics relevant to second lieutenants entering the Army, describe legal aspects of decision making and leadership, analyze Army organization from tactical to strategic level.
- MSL 4930 Advanced Directed Study and Research (1-3) US MIS**
PR: CI and permission of Professor of Military Science. Intensive individual study in a particular aspect of military science that is not covered in regular course offerings. Request for enrollment must be made prior to registration in the form of a written proposal.
- MTG 3212 Geometry 6A (3) AS MTH**
PR: MAC 2311. No credit towards Mathematics major. Emphasis on axiomatics, advanced Euclidean geometry, elements of projective geometry, non-Euclidean geometry.
- MTG 4214 Modern Geometry 6A (3) AS MTH**
CP MAS 4301 or CI. Topics will be selected from modern plane geometry. Mobius geometry, elliptic and hyperbolic geometry.
- MTG 4302 Introduction to Topology 6A (3) AS MTH**
PR: MAC 2313 and MAS 3105. Metric spaces, completeness, topological spaces, subspaces, product spaces, continuity, homeomorphisms, connectedness, compactness, separation axioms, countability axioms.
- MTG 5256 Differential Geometry (3) AS MTH**
PR: MAA 4211, MAS 3105. Exterior calculus, differentiable manifolds, integration of differential forms, surfaces in 3-space, covariant derivative, curvature, matrix groups.
- MTG 5316 Topology I (3) AS MTH**
PR: MAA 4211. Topological spaces, continuity, homeomorphisms, connectedness, compact spaces, separation axioms, product spaces.
- MTG 5317 Topology II (3) AS MTH**
PR: MTG 5316. The fundamental group; elements of homotopy theory and homology theory.
- MUC 2221 Composition (3) VP MUS**

- PR: MUT 1112 and DPR. Private instruction in original composition. Required of composition majors.
- MUC 2301 Introduction To Electronic Music (3) VP MUS**
History and repertory of electronic music; standard sound studio techniques; basic electronics as applied in electronic sound synthesis; mathematics for music, composition and electronic music.
- MUC 3231 Composition (3) VP MUS**
PR: Necessary competency at junior level determined by faculty jury. DPR. Private instruction in original composition. Required of composition majors.
- MUC 3401 Electronic Music-Analog Synthesis I (3) VP MUS**
PR: MUC 2301 and DPR. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.
- MUC 3402 Electronic Music-Analog Synthesis II (3) VP MUS**
PR: MUC 2301 and DPR. Composition for tape medium with analog synthesizers; use of sound recording studio; repertory or analog music synthesis; technical basis of analog systems design and construction.
- MUC 3441 Electronic Music-Digital Synthesis I (3) VP MUS**
PR: MUC 3401 or MUC 3402 and DPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.
- MUC 3442 Electronic Music-Digital Synthesis II (3) VP MUS**
PR: MUC 3401 or MUC 3402 and DPR. Computer assisted composition for conventional instruments; composition for tape medium with computer controlled analog synthesizers; direct digital synthesis; digital systems design and construction.
- MUC 4241 Composition (3) VP MUS**
PR: Necessary competency at senior level determined by faculty jury. DPR. Private instruction in original composition. Required of composition majors, a minimum of six semester hours.
- MUC 4403 Electronic Music-Real-Time Performance I (3) VP MUS**
PR: MUC 3402 and MUC 3442 or equivalent. DPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.
- MUC 4404 Electronic Music-Real-Time Performance II (3) VP MUS**
PR: MUC 3402 and MUC 3442 or equivalent. DPR. Composition for analog/digital equipment, performance applications; sound synthesis, interfacing electronics with conventional instruments.
- MUC 4620 Jazz Composition (3) VP MUS**
PR: MUT 3354 and/or DPR. Private instruction in original jazz composition. Required of All Jazz Studies Comp. majors, minimum six of hours.
- MUC 5625 Jazz Composition (2) VP MUS**
PR: CI. Required of all composition majors. Private instruction in original composition.
- MUE 2090 Theoretical Bases Of Music Education (3) VP MUS**
PR: DPR. The course is designed to investigate music education practices in the schools. Through the experience and information offered in this course a student will be able to determine his/her commitment to professional music education.
- MUE 3421 Choral Techniques and Pedagogy (1) VP MUS**
A study of choral materials in a laboratory setting appropriate to elementary and secondary school music programs. Course content will change each semester.
- MUE 3422 Wind Techniques and Pedagogy (2) VP MUS**
PR: MUG 3104 A two-semester sequence intended to equip music education students with basic performance, pedagogical, and rehearsal techniques, applicable to brass and woodwind instruments and ensembles.
- MUE 3423 String Techniques and Pedagogy (1) VP MUS**
PR: DPR. A study of orchestra materials, in a laboratory setting, appropriate to elementary and secondary school music programs. Course content will change each semester.
- MUE 3930 Music Education Forum (1) VP MUS**
PR: Status as a music education major; permission of the Music Advisor. Discuss MusEd professional organizations (MENC, CMENC, ISME, etc.). Students join CMENC and attend the FMEA conference. Add'l topics: classroom management, school safety, professional ethics, education law, and MusEd for special students. Required for MusEd majors 4 semesters @ 1 credit hour per term.
- MUE 4210 Music For The Child (3) VP MUS**
PR: Admission to the College of Education. DPR. Music fundamentals, the development of music skills and knowledge of music materials and teaching strategies for presenting music to children in the elementary school.
- MUE 4311 K-12 General Music Methods and Practicum (4) VP MUS**
PR: MUE 2090 This course will consist of theoretical and practical training in teaching General Music Education K-12. It will include the study of philosophies, strategies and methodologies in contemporary General Music Education used in the USA and internationally.
- MUE 4331 Choral Methods In The Secondary School (3) VP MUS**
PR: DPR. Junior standing. Development and implementation of methods techniques for teaching secondary school choral music.
- MUE 4332 Instrumental Music In The Secondary School (3) VP MUS**
PR: DPR. MUE 2450, MUE 2460, MVP 1211. Junior standing. Development and implementation of methods techniques for teaching secondary school instrumental music.
- MUE 4480 Special Ensemble Methods (2) VP MUS**
This course is restricted to majors and is repeatable for up to 6 credits.
- MUE 4936 Senior Seminar In Music (2) VP MUS**
CR: MUE 4940. DPR. Synthesis of teacher candidate's courses in complete college program. Required concurrently with internship.
- MUE 4940 Internship: Music Education (6-10) VP MUS**
CR: MUE 4936. S/U only. DPR. One full semester of internship in public or private elementary and secondary schools. Restricted to majors. May not be repeated for credit.
- MUG 3104 Basic Conducting (2) VP MUS**
PR: DPR. The study and practical application of basic conducting techniques. Development of skills related to the conducting of musical scores.
- MUG 4302 Instrumental Conducting (2) VP MUS**
PR: MUG 3404 and DPR. A study of those techniques of conducting unique to instrumental music ensembles: baton technique, score reading, terminology, rehearsal management.
- MUH 2051 Folk And Traditional Music Of World Cultures FA AF(3) VP MUS**
A comparative survey of the stylistic traits and functions of the folk and traditional music, both sacred and secular, of diverse Western and non-Western cultures. For non-majors; may be taken by majors as an elective with departmental approval.
- MUH 2632 Music In The United States FA (3) VP MUS**
Designed for majors and non-majors, this course will use live performances, videotapes, and recordings to illustrate music as practiced in America from Colonial to present times. Included in the course will be study of the contributions of various ethnic/minority groups, and discussions of the relevant social issues connected with these contributions.
- MUH 3016 Survey Of Jazz FA (3) VP MUS**
For non-music majors. Not repeatable. A study of the evolution of America's "classical" music: Jazz. In addition to presenting an overview of the most prominent artists and literature, the course will focus on the cultural dynamics involved in the development of jazz from 1890 to the present.
- MUH 3300 Music History/Medieval And Renaissance (2) VP MUS**
PR: DPR. Required of music majors; a study of the historical development of musical styles of the Medieval and Renaissance periods and of the music of those periods.
- MUH 3301 Music History/Baroque And Classic MW (3) VP MUS**
PR: MUL 2111, DPR. Required of music majors; open to non-majors with DPR. A study of the historical development of musical styles of the Baroque and Classic periods and of the music of those periods.
- MUH 3302 Music History/Romantic And 20th Century MW (3) VP MUS**
PR: MUL 2111, DPR. Required of music majors; open to non-majors with DPR. A study of the historical development of musical styles of the Romantic and Twentieth Century eras and of the music of those periods.
- MUH 4058 Intercultural Music In The Twentieth Century MW(3) VP MUS**
PR: MUH 2051 or MUL 2111, DPR. An in-depth investigation of composers born after c. 1880, from all parts of the world, who have attempted to integrate elements from two or more cultures into their compositions.
- MUH 4801 History Of Jazz (3) VP MUS**
PR: MUT 1112, DPR. An in-depth study of the historical development of Jazz, including the representative musical literature and sociological implications.
- MUL 2111 Introduction To Music Literature 6A HP FA (3) VP MUS**
PR: MUT 1112, DPR. A survey of representative music exemplars of the past and present with emphasis on the study of styles and form. Required for music majors.
- MUL 3001 Issues In Music FA AF(2-3) VP MUS**
Open only to non-music majors. Lectures and live performances

- by artist faculty of significant works from the literature for the piano; analysis and illustration in performance of the abstract and aesthetic elements in music which vitally concern the artist-performer.
- MUL 3012 Music in Your Life FA (3) VP MUS**
Open only to non-music majors. A study in the art of music and its materials, designed to develop an understanding of basic principles of music and a technique for listening to music.
- MUN 1100 University Pep Band (1-3) VP MUS**
This course provides performance experiences with the Pep Band. The course is open to any major area. Fall Term participation in Maching Band is required prior to enrollment.
- MUN 1110 University Marching Band (1) VP MUS**
This course provides performance experiences with the Marching Band. The course is open to any major area.
- MUN 3143 Wind Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3213 University Orchestra (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3313 University Singers (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3343 Chamber Singers (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3383 University-Community Chorus (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3411 String Quartet (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3420 Saxophone Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3421 Flute Choir (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3424 Woodwind Quintet (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3431 Brass Quintet (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3432 Horn Quartet (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3433 Brass Choir (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3443 Percussion Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3444 Marimba Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3453 Piano Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3473 Collegium Musicum (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUN 3713 Jazz Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUN 3714 Jazz Chamber Ensemble (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performance media; study and performance of music for small combinations of voices, string, woodwind, brass, or percussion instruments, and piano.
- MUO 3503 Opera Workshop (1) VP MUS**
PR: DPR. Open to all university students with the necessary proficiency in their performing media; study and performance of music for large combinations of voices, string, woodwind, brass, or percussion instruments.
- MUS 2010 Recital Attendance (0) VP MUS**
S/U only. This course is required whenever a student registers for applied music. The requirement for the successful completion of the course is attendance at ten (10) department-approved recitals/concerts throughout the semester.
- MUS 2201 Language Diction For Singers (1) VP MUS**
PR: DPR. Required of voice performance majors. Specialized study in Language Diction for Singers. Specific language varies, to be arranged at each course offering.
- MUS 4900 Directed Reading (1-3) VP MUS**
PR: DPR. Selection of topic and materials must be agreed upon and appropriate credit must be assigned prior to registration. A contract with all necessary signatures is required for registration.
- MUS 4905 Directed Study (1-4) VP MUS**
PR: DPR. Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.
- MUS 4930 Selected Topics In Music (1-4) VP MUS**
PR: DPR. The content of the course will be governed by student demand and instructor interest.
- MUS 4935 Music Senior Seminar (1) VP MUS**
PR: DPR. S/U only. To aid majors to understand, appraise and perfect their own art through critical and aesthetic judgments of their colleagues.
- MUS 5905 Directed Study (1-4) VP MUS**
PR: DPR. Independent studies in the various areas of music; course of study and credits must be assigned prior to registration.
- MUT 1001 Rudiments Of Music (2) VP MUS**
Open to non-music majors; development of skills in hearing and performing music and in basic notation. Will not count as degree credit for music majors.
- MUT 1111 Music Theory I (3) VP MUS**
PR: DPR. Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.
- MUT 1112 Music Theory II (3) VP MUS**
PR: MUT 1111, DPR. Required of music majors; development of skills in perceiving and writing music through the use of aural and visual analysis and examples from all historical periods of music literature.
- MUT 1241 Aural Theory I (1) VP MUS**
PR: DPR. To be taken concurrently with MUT 1111, MUT 1112. Course designed to begin training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.
- MUT 1242 Aural Theory II (1) VP MUS**
PR: MUT 1241, DPR. Course designed to begin training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.
- MUT 2116 Music Theory III (3) VP MUS**
PR: MUT 1112, DPR. Required of music majors, continuation of MUT 1111 and 1112.

MUT 2117 Music Theory IV (3) VP MUS

PR: MUT 2116, DPR. Required of music majors, continuation of MUT 1111, 1112, and 2116.

MUT 2246 Aural Theory III (1) VP MUS

PR: MUT 1242. To be taken concurrently with MUT 2116, MUT 2117, DPR. Course designed to continue training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.

MUT 2247 Aural Theory IV (1) VP MUS

PR: MUT 2246. To be taken concurrently with MUT 2116, MUT 2117, DPR. Course designed to continue training in aural recognition and vocal realization of materials used in music composition. Includes rhythmic, melodic and harmonic dictation, and sight singing.

MUT 2641 Jazz Theory And Improvisation I (2) VP MUS

PR: MUT 1112 and/or DPR. A study of jazz improvisational techniques and related jazz theory.

MUT 2642 Jazz Theory And Improvisation II (2) VP MUS

PR: MUT 2641 or DPR. A study of jazz improvisational techniques and related jazz theory.

MUT 3353 Jazz Composition and Arranging I (3) VP MUS

PR: MUT 1112 and DPR. Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic, and melodic practices.

MUT 3354 Jazz Composition And Arranging II (3) VP MUS

PR: MUT 3353 and DPR. Course designed to develop arranging and/or compositional skills in the jazz idiom through the study of jazz orchestration, harmonic and melodic practices.

MUT 3663 Advanced Jazz Improvisation I (2) VP MUS

PR: MUT 2642 or DPR. A studio course study of the improvised solos of the major innovators in jazz. Oriented toward the continuing development of students' soloing ability. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.

MUT 3664 Advanced Jazz Improvisation II (2) VP MUS

PR: MUT 3663, DPR. A continuation of Jazz Styles and Analysis I with the emphasis on contemporary jazz artists. Students are required to enroll in Jazz Chamber Ensemble as a lab. Open to majors and non-majors.

MUT 4310 Orchestration I (2) VP MUS

PR: DPR. Intensive study and practice in scoring music for various combinations of instruments, including symphony orchestra, band, and smaller ensembles of string, woodwind, brass, and percussion instruments.

MUT 4311 Orchestration II (2) VP MUS

PR: MUT 4310, DPR. Intensive study and practice in scoring music for various combinations of instruments, including symphony orchestra, band, and smaller ensembles of string, woodwind, brass, and percussion instruments.

MUT 4421 Eighteenth Century Practice (3) VP MUS

PR: MUT 2117, DPR. An intensive study of the contrapuntal practice of the 18th century; development of skills in perceiving and writing music in the style of the period through the use of aural and visual analysis.

MUT 4571 Twentieth Century Practice (3) VP MUS

PR: MUT 2117, DPR. A study of 20th century theoretical concepts; development of skills in perceiving and writing music in contemporary styles through the use of aural and visual analysis.

MUT 5051 Graduate Review Of Music Theory (2) VP MUS

PR: DPR. A graduate level review of basic theoretical concepts with emphasis on the common practice period. The course serves to satisfy deficiencies in music theory and does not count toward the graduate degree requirements.

MVB 1211 Applied Trumpet (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1212 Applied French Horn (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1213 Applied Trombone (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had

prior musical training.

MVB 1214 Applied Euphonium (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1215 Applied Tuba (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVB 1311 Trumpet Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1312 French Horn Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1313 Trombone Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1314 Euphonium Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1315 Tuba Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1411 Trumpet Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1412 French Horn Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1413 Trombone Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1414 Euphonium Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 1415 Tuba Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2321 Trumpet Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2322 French Horn Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2323 Trombone Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2324 Euphonium Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis.

Private and class instruction.

MVB 2325 Tuba Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 2421 Trumpet Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2422 French Horn Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2423 Trombone Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2424 Euphonium Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 2425 Tuba Major (3) VP MUS
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3331 Trumpet Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3332 French Horn Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3333 Trombone Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3334 Euphonium Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3335 Tuba Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 3431 Trumpet Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3432 French Horn Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3433 Trombone Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3434 Euphonium Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 3435 Tuba Major (3) VP MUS
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4341 Trumpet Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4342 French Horn Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4343 Trombone Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4344 Euphonium Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4345 Tuba Principal (2) VP MUS
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVB 4441 Trumpet Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4442 French Horn Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4443 Trombone Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4444 Euphonium Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 4445 Tuba Major (3) VP MUS
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVB 5251 Applied Trumpet (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVB 5252 Applied French Horn (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVB 5253 Applied Trombone (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVB 5254 Applied Euphonium (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVB 5255 Applied Tuba (2) VP MUS
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVJ 1210 Applied Jazz Piano (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVJ 1213 Applied Jazz Guitar (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVJ 1214 Applied Jazz Bass (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVJ 1219 Jazz Percussion (1) VP MUS
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had

- MVJ 5951 Applied Jazz Performance (2) VP MUS**
PR: Necessary competency determined by faculty jury audition. Required of all applied music majors. Required registration in major performance ensemble. Private and class instruction.
- MVK 1111 Keyboard Skills I (2) VP MUS**
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 1121 Keyboard Skills II (2) VP MUS**
PR: MVK 1111 or DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 1211 Applied Piano (1) VP MUS**
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.
- MVK 1311 Piano Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVK 1411 Piano Major (3) VP MUS**
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVK 1811 Beginning Piano I (2) VP MUS**
Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 1821 Beginning Piano II (2) VP MUS**
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 2111 Keyboard Skills III (2) VP MUS**
PR: MVK 1121 or DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 2121 Keyboard Skills IV (2) VP MUS**
PR: MVK 2111 or DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 2321 Piano Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVK 2421 Piano Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVK 3111 Music Majors, Level V (2) VP MUS**
PR: DPR. Class is elementary piano and music fundamentals designed for students with limited keyboard experience. Primary emphasis is placed on sight-reading, accompanying, transposition, harmonization, basic technique, and appropriate literature.
- MVK 3331 Piano Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVK 3431 Piano Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVK 4341 Piano Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVK 4441 Piano Major (3) VP MUS**
PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVK 4640 Piano Pedagogy I (4) VP MUS**
PR: DPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.
- MVK 4641 Piano Pedagogy II (4) VP MUS**
PR: MVK 4640, DPR. May be elected by undergraduate music majors; emphasis on the business management of the music studio, and the musical responsibilities of the studio teacher, the techniques of private instruction.
- MVK 5251 Applied Piano (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- MVP 1211 Applied Percussion (1) VP MUS**
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.
- MVP 1311 Percussion Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVP 1411 Percussion Major (3) VP MUS**
PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVP 2321 Percussion Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVP 2421 Percussion Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVP 3331 Percussion Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVP 3431 Percussion Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVP 4341 Percussion Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVP 4441 Percussion Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVP 5251 Applied Percussion, Secondary (2) VP MUS**
PR: DPR. Necessary competency determined by faculty jury audition. Required registration in major performance ensemble. Required of all applied music majors. Private and class instruction.
- MVS 1211 Applied Violin (1) VP MUS**
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.
- MVS 1212 Applied Viola (1) VP MUS**
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.
- MVS 1213 Applied Violoncello (1) VP MUS**
PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVS 5253 Applied Cello (2) VP MUS

PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVS 5254 Applied Double Bass (2) VP MUS

PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVV 1211 Applied Voice (1) VP MUS

One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1311 Voice Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1411 Voice Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2321 Voice Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2421 Voice Major (3) VP MUS

PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVV 3331 Voice Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 3431 Voice Major (3) VP MUS

PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVV 4341 Voice Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 4441 Voice Major (3) VP MUS

PR: DPR. Necessary competency at senior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.

MVV 5251 Applied Voice (2) VP MUS

PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.

MVV 1211 Applied Flute (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1212 Applied Oboe (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1213 Applied Clarinet (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1214 Applied Bassoon (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1215 Applied Saxophone (1) VP MUS

PR: DPR. Course is open by audition only. One half-hour private

lesson or one hour class per week for music students wishing to gain proficiency in an area other than their applied performance major and for a limited number of nonmusic majors who have had prior musical training.

MVV 1311 Flute Principal (2) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1312 Oboe Principal (2) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1313 Clarinet Principal (2) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1314 Bassoon Principal (2) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1315 Saxophone Principal (2) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1411 Flute Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1412 Oboe Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1413 Clarinet Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1414 Bassoon Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 1415 Saxophone Major (3) VP MUS

PR: DPR. Required of all applied music majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2321 Flute Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2322 Oboe Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2323 Clarinet Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2324 Bassoon Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2325 Saxophone Principal (2) VP MUS

PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.

MVV 2421 Flute Major (3) VP MUS

PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors.

- Private and class instruction.
- MVW 2422 Oboe Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 2423 Clarinet Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 2424 Bassoon Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 2425 Saxophone Major (3) VP MUS**
PR: DPR. Necessary competency at Sophomore level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 3331 Flute Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 3332 Oboe Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 3333 Clarinet Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 3334 Bassoon Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 3335 Saxophone Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 3431 Flute Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 3432 Oboe Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 3433 Clarinet Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 3434 Bassoon Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 3435 Saxophone Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 4341 Flute Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 4342 Oboe Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 4343 Clarinet Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 4344 Bassoon Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis.
- Private and class instruction.
- MVW 4345 Saxophone Principal (2) VP MUS**
PR: DPR. Required of all music education and composition majors. Open to a limited number of non-music majors by audition only. Applied music courses are NOT available on S/U basis. Private and class instruction.
- MVW 4441 Flute Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 4442 Oboe Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 4443 Clarinet Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 4444 Bassoon Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 4445 Saxophone Major (3) VP MUS**
PR: DPR. Necessary competency at junior level determined by faculty jury examination. Required of all applied music majors. Private and class instruction.
- MVW 5251 Applied Flute (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- MVW 5252 Applied Oboe (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- MVW 5253 Applied Clarinet (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- MVW 5254 Applied Bassoon (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- MVW 5255 Applied Saxophone (2) VP MUS**
PR: DPR. Open to senior and advanced undergraduate students who have completed recital requirements, special non-degree seeking students, and students who have a secondary applied music requirement. Private and class instruction.
- NGR 5871 Informatics in Nursing and Healthcare (3) NU NUR**
PR: CI. Foundations course with emphasis on essential content and applications in healthcare informatics and clinical systems. Provides understanding of the interdisciplinary issues in medical and nursing informatics and a foundation for those seeking expertise in healthcare informatics. Focus on technologies in healthcare, nomenclatures and classification systems, health care documentation, electronic medical records, and web-based technologies for healthcare.
- NSC 1110 Introduction to Naval Science (3) US NAVY**
Emphasis on the mission, organization, regulations and components of the Navy and Marine Corps.
- NSC 1110L Naval Science Laboratory (0) US NAVY**
A weekly two-hour laboratory covering professional and military subject matter. Attendance is mandatory for all midshipmen.
- NSC 1140 Seapower and Maritime Affairs (3) US NAVY**
This course deals with the importance of seapower in historical events, including emphasis on worldwide political-military confrontations following the cold war.
- NSC 2121 Naval Ships Systems I (3) US NAVY**
Types, structures and purpose of naval ships. Hydrodynamic forces, stability, compartmentalization, electrical, and auxiliary systems. Theory of design and operation of steam, gas turbine, and nuclear propulsion. Shipboard safety and firefighting.
- NSC 2212C Navigation/Naval Operations I: Navigation (3) US NAVY**
Piloting and celestial navigation theory, principles, and procedures. Tides, currents, weather, use of navigation instruments and equipment, and practicum. Laboratory required.
- NSC 2221 Evolution of Warfare (3) US NAVY**
A survey of military history emphasizing principles of warfare, strategy and tactics, and significant military leaders and

- organizations.
- NSC 2231 Principles of Naval Management I (3) US NAVY**
Theory and principles of management, focusing on the officer-manager as an organizational decision maker. Includes interpersonal skills, behavior factors, group dynamics.
- NSC 2931 Directed Study in Naval ROTC (1-3) US NAVY**
PR: Permission of Professor of Naval Science. Intensive individualized study in particular aspects of Naval Science that are not covered in regular course offerings. Enrollment is recommended for NROTC students who are anticipating attending the Naval Science Institute in Newport, RI, during sophomore/junior summer. Course content and title may vary from term to term.
- NSC 3123 Naval Ships Systems II (3) US NAVY**
PR: NSC 2121. Fire control systems, weapons types, capabilities, and limitations. Physical aspects of radar and underwater sound for target acquisition, threat analysis, tracking, weapons selection, delivery, and guidance. Explosives, fusing, and Naval ordance.
- NSC 3214C Navigation/Naval Operations II: Seamanship and Ship Operations (3) US NAVY**
PR: NSC 2213. International and inland rules of the road; relative motion-vector analysis; ship handling, employment, and tactics, afloat communications; and operations analysis. Laboratory required.
- NSC 4224 Amphibious Warfare (3) US NAVY**
History of amphibious warfare emphasizing doctrine and techniques as well as an understanding of the interrelations of political, strategic, operational, tactical, and technical levels of war from the past.
- NSC 4232 Principles of Naval Management II (Leadership and Ethics) (3) US NAVY**
PR: NSC 2231. Integration of professional competencies and qualities of effective leadership with emphasis on moral and ethical responsibilities, accountability, communications and military law for the junior officer.
- NUR 3064 Physical Examination and Assessment (2) NU NUR**
PR: Admission to nursing major or CI. Focuses on the techniques of physical assessment and examination of infants, children and adults. Emphasizes assessment phase of nursing process using critical thinking to enable the student to perform evaluations of health status throughout the lifespan.
- NUR 3064L Clinical Experience in Health Assessment - RN (1) NU NUR**
PR: Admission to nursing major or CI. CR: NUR 3064 Clinical experience on history taking, physical assessment skills basic to biopsychosocial assessment and physical examination of adults and children. Emphasizes diagnostic reasoning and identification of alteration in functional health patterns.
- NUR 3076 Fundamentals of Communication and Psycho-social Nursing (2) NU NUR**
PR: Admission to the nursing major or CI. Focus on basic communication, interviewing, and psychosocial assessment skills essential for professional nursing practice. Emphasis on developing nurse relationships with individuals across the lifespan within the context of the family.
- NUR 3114 Fundamentals of Nursing Practice and Foundations for Clinical Judgment (2) NU NUR**
PR: Admission to the nursing major or CI; CR: NUR 3114L Fundamentals and foundations of nursing practice. Focus on developing critical thinking in applying concepts health to meet the basic needs of the individual across the life span.
- NUR 3114L Nursing Fundamentals Clinical (3) NU NUR**
PR: Admission to the nursing major or CI; CR: NUR 3114 Clinical experiences in the fundamentals of clinical nursing practice. Focus on developing critical thinking applying nursing process, physical assessment, and concepts of health and illness to meet the basic needs of the individual across the life span.
- NUR 3125 Pathophysiology for Nursing Practice (3) NU NUR**
PR: Admission to the nursing major or CI. Central concepts of pathophysiology: cells, tissues, organs and systems. Provides essential knowledge base in pathophysiology across the lifespan for professional nursing practice.
- NUR 3145 Pharmacology in Nursing Practice (3) NU NUR**
PR: Admission to the nursing major or CI. Focus on the basic and clinical concepts of pharmacology in nursing practice. Examines pharmacotherapeutics; pharmacodynamics; pharmacokinetics; adverse reactions and contraindications; therapeutic indications and nursing implications.
- NUR 3215 Medical Surgical Nursing I (3) NU NUR**
PR: NUR 3064, NUR 3125, NUR 3114, NUR 3114L Focuses on the nursing assessment, prevention, and management of selected health care problems in adults of all ages. Critical thinking is used to analyze the effects of changes in health status and impact of nursing intervention for: patients with alteration in Fluid and Electrolyte Balance, Hematologic System, Cardiovascular System, Pulmonary System, Renal System, Endocrine, Cancer, Multisystem Dysfunction.
- NUR 3215L Medical Surgical Nursing Clinical I (3) NU NUR**
PR: NUR 3064, NUR 3125, NUR 3114, NUR 3114L. Clinical intervention for patients with selected health problems. Emphasize clinical judgment in implementing therapeutic nursing interventions for patients with selected health problems related to specific abnormalities in functional patterns.
- NUR 3284C Gerontological Nursing (2) NU NUR**
PR: NUR 3113, NUR 3114, NUR 3114L, NUR 3064. Nursing Majors. Focuses on theories of aging and human development; assessment of functional health patterns; and planning health promotion and disease prevention activities with older adults. Critical thinking is used to analyze the effects of interventions on individuals and groups.
- NUR 3525 Psychiatric/Mental Health Nursing (3) NU NUR**
PR: NUR 3076, NUR 3064, NUR 3125, NUR 3114 and NUR 3114L. CR: NUR 3525L. Explores mind, body, and spirit alterations in functional health patterns experienced by patients with acute and chronic mental illness. Examines psychopathology, psychopharmacologic therapies and community resources and the role of the nurse in psychiatry.
- NUR 3525L Psychiatric/Mental Health Nursing Clinical (3) NU NUR**
PR: NUR 3076, NUR 3064, NUR 3125, NUR 3114 and NUR 3114L. CR: NUR 3525. Focus on clinical intervention using critical thinking and communication skills with patients who require complex psychiatric rehabilitative care. Opportunities are offered to apply knowledge of psychopathology and psychopharmacologic therapies across the lifespan.
- NUR 3805 Education Transitions for Registered Nurses (3) NU NUR**
PR: Admission to the nursing major. Transition to professional nursing for the registered nurse, its theoretical perspective and empirical bases and essential skills for success in nursing education. Focus on developing a variety of learning strategies and approaches to academic achievement.
- NUR 3829 Ethical Legal Aspects in Nursing and Health Care MW(3) NU NUR**
PR: CI. Nursing Majors. Introduction to contemporary bioethical and legal issues confronting health care providers in a variety of settings. Focuses on identification of legal and ethical principles underlying the decision-making process in nursing and health care.
- NUR 4041 Culture In Nursing Practice (2) NU NUR**
PR: CI. Nursing Majors. Introduces knowledge and skills needed to give culturally congruent nursing care to people from diverse cultural groups. Compares and analyzes health-related practices, values, beliefs among major cultural groups.
- NUR 4165 Nursing Inquiry (3) NU NUR**
PR: Admission to the nursing major or CI. An introductory course in statistics is recommended. An analysis of the research process. Emphasis on identification of researchable nursing problems and evaluations of research that is applicable to nursing practice. Focus on evidence-based practice for nursing.
- NUR 4194 An Interdisciplinary Perspective in HIV Disease 6A MW LW(3) NU NUR**
Provides an interdisciplinary perspective on HIV disease. Topics include the etiology, spectrum, and treatment of HIV disease; international perspectives; issues of race, gender, and ethnicity; values, ethics, and their influences on responses to HIV; and how the media has shaped the epidemic.
- NUR 4216 Medical Surgical Nursing II (4) NU NUR**
PR: NUR 3215, NUR 3215L, NUR 3145. CR: NUR 4216L. Focus on the nursing assessment, prevention, and management of multiple health care problems. Critical thinking is used to analyze the effects of changes in health status and the impact of nursing intervention for patients with alterations in Visual and Auditory systems, Neurological systems, Musculoskeletal systems, Gastrointestinal systems, and Reproductive systems.
- NUR 4216L Medical Surgical Nursing Clinical II (5) NU NUR**
PR: NUR 3215, NUR 3215L, NUR 3145. CR: NUR 4216. Clinical intervention for patients with selected health problems. Emphasizes clinical judgment in implementing therapeutic nursing interventions for patients with complex health problems related to alterations in multiple functional health patterns.
- NUR 4355 Child and Adolescent Health Nursing (3) NU NUR**
PR: NUR 4216, NUR 4216L. CR: NUR 4653L, NUR 4636, NUR 4455. Nursing care of children and adolescent in the context of the family. Focus on health promotion, risk factor identification, disease

- prevention, and health restoration in children and adolescents.
- NUR 4455 Women's Health Nursing (2) NU NUR**
PR: NUR 4216, NUR 4216L. CR: NUR 4635L, NUR 4636, NUR 4355. Focus on health promotion, identification of risk factors, illness care, and health restoration related to the physiological and psychological changes occurring during a woman's life cycle including pregnancy.
- NUR 4635L Integrated Nursing Clinical: Community/Public Health, Children and Adolescent Health, and Women's Health (7) NU NUR**
PR: NUR 4216, NUR 4216L. CR: NUR 4455, NUR 4636, NUR 4355. Provides clinical learning experiences in diverse community and hospital settings. Focuses on nursing care designed to prevent and/or reduce risk of disease and injury, promote health and wellness, and treat illness and injury in children, adolescents, adults and families, and diverse community populations across the age spectrum.
- NUR 4636 Community/Public Health: Population-Focused Nursing (3) NU NUR**
PR: NUR 4216, NUR 4216L or CI. In-depth examination of community health nursing, public health, epidemiology, culture, and environment essential to preventing illness and injury and promoting and preserving health among diverse populations at risk.
- NUR 4636L Community/Public Health Nursing Clinical for the RN (3) NU NUR**
CR: NUR 4636 or CI. Provides clinical learning experiences in community-based sites in both urban and rural settings. Focus on nursing care designed to prevent and/or reduce risk of disease and injury, and promote health and wellness to diverse populations across the age spectrum.
- NUR 4643 Nursing Interventions into the Acute Effects of Drug and Alcohol Abuse (2) NU NUR**
Focuses on the assessment and treatment of individuals and families who are in the acute phases of addiction. Emphasis will be placed on treatment outcomes for designated populations with consideration for cultural, socioeconomic, political and ethical/legal factors.
- NUR 4644 Nursing Interventions into the Rehabilitation of Clients who Abuse Substance (2) NU NUR**
Focuses on models of treatment and interventions for clients and families who are in the rehabilitation and relapse prevention phases of treatment for addictions. Emphasis will be placed on rehabilitation outcomes for designated populations with consideration for criminal socioeconomic, political and legal/ethical factors.
- NUR 4645 Substance Abuse Across the Lifespan 6A MW LW(3) NU NUR**
Introduction to concepts of substance abuse and theories of addiction. The applicability of theories and concepts to clinical assessment, diagnosis and intervention with client populations across the lifespan is explored.
- NUR 4692 Occupational Health Nursing (2) NU NUR**
Focuses on the historical, legal, cultural, scientific, and professional foundations of occupational and environmental health nursing; the occupational health nurse role in the delivery of health services to workers and worker aggregates; business, social, economic, and legal forces influencing that role; standards and characteristics of practice; and settings for occupational health nursing practice.
- NUR 4765C Rehabilitation Across the Life Span (2) NU NUR**
PR: Nursing Majors or CI. Basic concepts of rehabilitation related to human responses. Analysis of the changes in health status and nursing implications.
- NUR 4766 Critical Care (2) NU NUR**
PR: Nursing Majors or CI. Basic concepts of critical care nursing, focusing on selected health problems to analyze the affects of changes in health status.
- NUR 4838 Leadership and Management in Professional Nursing Practice (3) NU NUR**
PR: NUR 4455, NUR 4355, NUR 4636, NUR 4636L or CI. Principles of nursing leadership and management with an emphasis on decision-making, priority setting, delegating, and managing nursing care. Focus on preparation of the professional nurse to work collaboratively in the interdisciplinary health care environment. Clinical experience for registered nurse students will be designed to build upon a practice background.
- NUR 4895 Educational Role of the Nurse in Healthcare (3) NU NUR**
This course provides the learner with an opportunity to gain knowledge and skills to facilitate the teaching role of the nurse.
- NUR 4905C Independent Study (1-5) NU NUR**
PR: Permission of faculty. Open to majors and non-majors. Individual or group investigation of problems relevant to the health of individuals or groups. Project requirements individually planned with faculty preceptor.
- NUR 4935 Selected Topics In Nursing (2-8) NU NUR**
PR: Junior or senior standing or permission of faculty. Content will depend upon student demand and faculty interest and may focus on any area relevant to nursing practice. May involve class, seminar, and/or clinical laboratory.
- NUR 4948L Preceptorship (5) NU NUR**
PR: NUR 4216, NUR 4216L, NUR 4355, NUR 4455, NUR 4636, NUR 4636L. Individually contracted 150 hours of clinical practicum collaboratively planned by students, faculty, and agency personnel. Opportunity to synthesize theory and clinical practice for professional nursing.
- OCE 2001 Introduction to Oceanography NS (3) MS MSC**
Overview of biological, chemical, geological, and physical oceanography. Also listed under Geology.
- OCE 4930 Selected Topics in Marine Science (1-4) MS MSC**
Selected topics in the marine sciences including marine biology, marine chemistry, marine geology and geophysics, physical oceanography, and interdisciplinary topics relating to marine environments.
- ORI 2000 Introduction to Communication As Performance (3) AS SPE**
Designed to develop proficiency in the understanding and oral communication of literary and other written materials.
- ORI 3950 Communication As Performance Laboratory (1-3) AS SPE**
PR: ORI 2000 or CI. The study, rehearsal, and performance of literature for Readers Theatre and Chamber Theatre productions.
- ORI 4120 Performance of Poetry (3) AS SPE**
PR: ORI 2000 or CI. Critical appreciation of lyric and narrative poetry and communication of that appreciation to audience. Study of poetic theory and prosodic techniques.
- ORI 4310 Group Performance of Literature (3) AS SPE**
PR: ORI 2000 or CI. Designed to introduce the student to and give experience in various forms of group approaches to performance.
- ORI 4931 Performance and Video (3) AS SPE**
PR: ORI 2000. CR: ORI 3950. This course features adaptation, direction, and performance of literature for video productions.
- ORI 5930 Topics in Performance Genres (3) AS SPE**
Variable topics course.
- PAD 3003 Introduction to Public Administration SS (3) AS PAD**
Examination of organizational behavior and change, policy process, public management, financial administration, and personnel management from the perspective of public and social delivery.
- PAD 4144 Nonprofit Organizations and Public Policy MW (3) AS PAD**
Role and importance of third sector (voluntary) organizations in American society; focus on public policy through service in a voluntary organization.
- PAD 4204 Public Financial Administration (3) AS PAD**
Analysis of problems in the growth and development of public budgetary theory and Federal budgetary innovations.
- PAD 4419 Personnel & Supervision in Today's Organizations (3) AS PAD**
Introduces students to concepts, principles and practices of personnel management and supervision that influence the attainment of desired performance goals in today's public and not-for profit organizations. Course participants will explore issues that influence the successful management of human resources in dynamic employment settings.
- PAD 4712 Managing Information Resources in the Public Sector (3) AS PAD**
Introduces students to the fundamental concepts, theories, principles and practices in public information management. Internet access is required.
- PAD 4930 Selected Topics in Public Administration and Public Policy (3) AS PAD**
Selected issues and topics in Public Administration and Public Policy with course content based on student demand and instructor's interest. May be repeated for up to 6 credits as topics vary.
- PAD 5035 Issues in Public Administration and Public Policy (3) AS PAD**
Sr. & GS only. Selected issues and topics in Public Administration and Public Policy.
- PAD 5044 Environment of Public Administration (3) AS PAD**
Examination of the legal, political, and ethical environment in which public managers work.
- PAD 5333 Concepts and Issues in Public Planning (3) AS PAD**
PR: URP 4050 or URP 6056, GS or Sr. Analysis of basic concepts,

- issues, and strategies of planning, policy determination, collection of information, and decision-making.
- PAD 5605 Administrative Law and Regulation (3) AS PAD**
An examination of the constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. An examination of the Constitutional and statutory base and limitations of the administrative process, administrative adjudication, rule-making, and the judicial review of such actions. Attention is also directed to regulatory commissions, their functions, powers, management and relationship with other branches of government.
- PAD 5700 Research Methods in Public Administration (3) AS PAD**
This course provides the student with the fundamental skills and knowledge of how research is designed, implemented, analyzed, and utilized in public sector agencies. Available to majors and non-majors.
- PAD 5807 Urban and Local Government Administration (3) AS PAD**
GS or Sr. Analysis of the role of the administrator at the municipal level, the division of functions, policy formation, alternative governmental structures, effects on the administrative process.
- PAD 5836 Comparative Public Administration (3) AS PAD**
GS or Sr. How organizations and managers perform within a particular environment, potential impact of innovation, and how service is accomplished in a variety of socio-economic environments.
- PCB 1511 Molecular and Human Genetics (3) US DEA**
PR: Acceptance in USF-Hillsborough County Biomedical and Life Science Program. Molecular genetics with applications to biomedical science; genetic engineering; chromosomes, their molecular architecture, abnormalities, and other topics. Laboratory included.
- PCB 1910 Topics in Biomedical Science (3) US DEA**
PR: Acceptance in USF-Hillsborough County Biomedical and Life Science Program. Designed to initiate high school students to the fundamentals of scientific research. Students are given lectures and perform laboratory exercises in pathogenic microbiology, immunology, marine biology, and plant biochemistry. Most of their time is spent working on individual research projects.
- PCB 3023 Cell Biology (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L. A discussion of the concept and significance of the cell to biology; biological molecules and metabolic processes within the cell; cellular energy conversion systems; and control of cellular metabolism. Lec.
- PCB 3023L Cell Biology Laboratory (1) AS BIO**
CP: PCB 3023. Laboratory portion of Cell Biology. Metabolic processes within the cell.
- PCB 3043 Principles of Ecology (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L. An introduction to the basic principles and concepts of ecology at the ecosystem, community, and population level of organization. Lec.
- PCB 3043L Principles of Ecology Laboratory (1) AS BIO**
CP: PCB 3043. Laboratory portion of PCB 3043, Principles of Ecology.
- PCB 3063 General Genetics (3) AS BIO**
PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L, CHM 2045, CHM 2045L, CHM 2046, CHM 2046L. Introduction to genetics including the fundamental concepts of Mendelian, molecular and population genetics. Lec.-dis.
- PCB 3063L General Genetics Laboratory (1) AS BIO**
CP: PCB 3063. Laboratory investigation techniques in general genetics including Mendelian and non-Mendelian relationships, and gene interactions.
- PCB 4674 Organic Evolution (3) AS BIO**
PR: PCB 3063. An introduction to modern evolutionary theory. Lecture on population genetics, adaptations, speciation theory, phylogeny, human evolution and related areas. Lec.-dis.
- PCB 4723 Animal Physiology (3) AS BIO**
PR: PCB 3023, PCB 3043, PCB 3063 or ZOO 3323 and CHM 2211. Advanced presentation of mechanisms employed by animals to interact with their environment and to maintain their organization. Lec.
- PCB 4723L Animal Physiology Laboratory (1) AS BIO**
CR: PCB 4723. Laboratory portion of Animal Physiology.
- PCB 5235 Principles of Immunology (3) AS BIO**
PR: PCB 3023 or MCB 3020C, CI. Course will emphasize the biological principles involved in the vertebrate immune response. It will present the homeostatic, defense, and detrimental aspects of the immune system in terms of basic cellular and molecular mechanisms. Techniques will be described to familiarize the student with the types of immunological tools available to the cellular and molecular biologist.
- PCB 5256 Developmental Biology (5) AS BIO**
PR: PCB 3023, CI. Topics in modern developmental biology to be covered in lecture and through readings so as to gain a working knowledge and understanding of the cellular and molecular mechanisms of cell differentiation in both plants and animals.
- PCB 5306 Limnology (3) AS BIO**
PR: PCB 3043, CHM 2046, PHY 2053, CI. An introduction to the physical, chemical, and biological nature of fresh-water environments. Lec.
- PCB 5306L Limnology Laboratory (1) AS BIO**
PR: CI. CP: PCB 5306. Laboratory portion of Limnology. Laboratory and field experience in the area of aquatic ecology.
- PCB 5415 Behavioral Ecology (3) AS BIO**
PR: PCB 3043 or PCB 4674, CI. An emphasis on the evolutionary mechanisms that influence an organisms behavioral responses to environmental events. The theoretical framework is presented and analyzed.
- PCB 5525 Molecular Genetics (3) AS BIO**
PR: PCB 3063, CI. Detailed examination of DNA, RNA and protein synthesis; the effects of mutations on proteins, cellular control; selected aspects of viral, bacterial, and fungal genetics.
- PCB 5835 Neurophysiology (3) AS BIO**
PR: CI. A comparative analysis of the physiochemical basis and evolution of nervous systems and sensory mechanisms.
- PCB 5845C Principles of Neuroscience (4) AS BIO**
PR: PCB 4723, CI. Study of the mammalian brain's structure and function, with an emphasis on the neuroanatomy, neuropharmacology, and neurophysiology of the human brain. Topics include brain imaging, dementia, and mechanisms of learning/memory. Brain research techniques are also discussed, as are basic neuropathological processes that result in abnormal brain function.
- PEL 1121 Golf I (2) ED EDJ**
S/U only. Introductory experience in the sport of golf. Fundamental skills, information, strategy, and participation.
- PEL 1341 Tennis I (2) ED EDJ**
S/U only. Introductory experiences in the sport of tennis. Basic skills, playing strategies, lecture, demonstration, and participation.
- PEL 2122 Golf II (2) ED EDJ**
S/U only. Continuation of PEL 1121. Emphasis on course play and refinement of strokes.
- PEL 2342 Tennis II (2) ED EDJ**
S/U only. Continuation of PEL 1314L. Refinement of basic skills, supplementary strokes, greater emphasis on tactics and playing strategies.
- PEL 2441 Racquetball (2) ED EDJ**
S/U only. Development and refinement of the skills and strategies of racquetball with opportunity for competition and tournament play.
- PEM 2131 Weight Training (2) ED EDJ**
S/U only. Knowledge and techniques necessary for increasing muscle function. Assessment of status and development of a personal program
- PEM 2441 Karate (2) ED EDJ**
S/U only. Introductory experiences in the sport of Karate. Fundamental skills, strategy, information, and participation.
- PEM 2930 Selected Topics (1-2) ED EDJ**
S/U only. DPR. Activities offered are selected to reflect student need and faculty interest.
- PEN 1121 Swimming I (2) ED EDJ**
S/U only. Development and refinement of the essential skills and information necessary for enjoying swimming. Emphasis on personal safety.
- PEN 2113 Lifeguard Training (2) ED EDJ**
PR: PEN 2122 or equivalent. S/U only. Knowledge and skills necessary for saving the lives of others in the event of aquatic emergency. ARC certification offered.
- PEN 2136 Skin & Scuba Diving (2) ED EDJ**
PR: PEN 2172 or equivalent. S/U only. Development of the essential skills and knowledge necessary for enjoying the sport of Skin & Scuba Diving. Correct utilization and care of equipment; emphasis on personal safety.
- PEP 3940 Practicum in Health Promotion/Wellness (4) ED EDP**
PR: Completion of Semesters I and II and admission to the College of Education. S/U only. Practical experience as a professional in a community or worksite health promotion or wellness program.
- PEP 3951 Communication Skills For Wellness Leaders (3) ED EDP**

- Wellness majors only. Designed to develop knowledge and skills in communication and counseling that is specific to wellness and health promotion.
- PEQ 3170 Aquatic Exercise (2) ED EDP**
An instructor training course in aquatic exercise. Focuses on teaching aerobic, strength, flexibility, and weight control exercises performed in swimming pools. Open to non-majors.
- PET 2622C Care and Prevention of Physical Injuries (3) ED EDP**
DPR. Principles and techniques of conditioning athletes for competition; prevention and care of injuries in physical education and athletic activities.
- PET 3031 Motor Development and Assessment (3) ED EDP**
Study of the assessment, evaluation and motor development performance of children and adolescents and application of principles of motor skills acquisition in physical education instruction. Open to non-majors.
- PET 3080 Survey of Wellness Program (3) ED EDP**
Wellness majors only. An analysis of various types of wellness programs in the public and private sector including community-based programs, commercial health and fitness enterprises, government-based programs, corporate-based programs, and hospital health and fitness centers.
- PET 3252 Issues in Sport MW (3) ED EDP**
PR: Junior, Senior standing. A study of organized sport as a pervasive part of contemporary society. By increasing understanding of some of the issues and controversies based in the structure of sport and society, individuals will be able to understand and improve sport experiences for themselves and others.
- PET 3310 Kinesiology (3) ED EDP**
A study of the structure and function of the skeletal and muscular systems and of mechanical principles related to psycho-motor performance. Open to non-majors.
- PET 3351 Exercise Physiology I (3) ED EDP**
A study of the effects of physical activity on the body. Topics include acute and chronic adaptation of the cardiovascular, muscular, metabolic, hormonal, and energy systems to exercise. Open to non-majors.
- PET 3421 Curriculum and Instruction in Physical Education (3) ED EDP**
Physical Education majors only. Development of knowledge and skills related to the instruction process of physical education. Preparation of materials and planning instruction.
- PET 3422 Instructional Design and Content: Movement Experiences (3) ED EDP**
PR: CC. Physical Education majors only. This course develops a variety of motor skills and includes the study of systems for analyzing movement. It prepares students to plan and conduct movement experiences in a wide variety of educational settings.
- PET 3441 Instructional Design and Content: Middle School Physical Education (3) ED EDP**
Physical Education majors only. The development of physical education content and instructional practices for middle school students. The focus is upon matching appropriate content and learning experiences to the unique needs of the pre- and early adolescent learner.
- PET 3617C Orthopaedic Physical Assessment I (Upper Extremity) (3) ED EDP**
Athletic Training majors only. The study and practice of techniques used when assessing athletic injuries to the upper extremity, head and spine.
- PET 3618C Orthopaedic Physical Assessment II (Lower Extremity) (3) ED EDP**
Athletic Training majors only. The study and practice of techniques used when assessing athletic injuries to the lower extremity, hip, pelvis and gait.
- PET 3621C Prevention of Athletic Injuries (3) ED EDP**
Athletic Training majors only. Advanced principles in the selection, fabrication and application of protective equipment, tape, splints, casts, braces and other orthotic devices commonly used in athletic training and sports medicine settings. Theory and practice in risk management and injuries related to environmental factors.
- PET 3624C Emergency Management of Athletic Trauma & Illness (3) ED EDP**
Athletic Training majors only. Theory and practice of basic emergency management techniques dealing with trauma resulting from injuries and illnesses suffered by an athletic population.
- PET 3630C Techniques in Therapeutic Exercise (3) ED EDP**
Athletic Training majors only. Theory and practical applications of therapeutic exercise and movement science. Includes techniques in Feldenkrais movement patterns, aquatic exercise, lifting protocols, plyometric training, isokinetic testing, stability ball training, and a variety of common exercise equipment.
- PET 3640 Adapted Physical Education (3) ED EDP**
Physical Education majors only. A study of characteristics, programming needs and teaching of physical education for students with disabilities.
- PET 3660 Athletic Training Administration and Policy (3) ED EDP**
Athletic Training majors only. Analysis and application of organizational skills and administrative structure of the athletic training profession, including current theory about budget management, medical record keeping, drug testing, facility design and maintenance, legal aspects of sports medicine, athletic physical examinations, medical ethics, current educational concepts, and administrative policy.
- PET 3670L Clinical Instruction in Athletic Training I (3) ED EDP**
Athletic Training majors only. Observation and performance of basic athletic training skills under the direct supervision of an NATABOC certified/state licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory athletic training skills. Clinical experiences are obtained in the university's sports medicine facilities and will be accompanied by a one-hour seminar each week.
- PET 3671L Clinical Instruction in Athletic Training II (3) ED EDP**
PR: PET 3670L. Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer. This course provides students with the opportunity to develop competence in a variety of introductory and mid-level athletic training skills. Clinical experiences are obtained in the university's sports medicine facilities and/or approved affiliates and will be accompanied by a one-hour seminar each week.
- PET 3931 Selected Topics (1-3) ED EDJ**
DPR. Topics offered are selected to reflect student need and faculty interest.
- PET 3943 Physical Education Internship: Middle School (4) ED EDP**
Physical Education majors only. A part-time internship in middle school physical education. Focus on the relationship of physical education to the needs of the pre- and early adolescent learner, the organization and purpose of the middle school, and application appropriate content and methodologies.
- PET 4141 Trends and Tasks- Elementary Physical Education (3) ED EDP**
Taken concurrently with PET 4942 Physical Education Internship: Elementary. Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluate and continue personal-professional development plan developed in previous semesters.
- PET 4142 Trends and Tasks - Secondary Physical Education (1) ED EDP**
Taken concurrently with PET 4944 Physical Education Internship: Secondary. Physical Education Majors only. Current trends are evaluated from a historical and philosophical perspective. Non-teaching tasks are identified as part of the professional role. Evaluate and continue personal-professional development plan developed in previous semesters.
- PET 4304 Principles and Issues in Coaching (3) ED EDP**
Physical Education majors only. The application of principles from philosophy, psychology, sociology, and physiology to competitive athletics and coaching.
- PET 4353 Exercise Physiology II (3) ED EDP**
PR: PET 3351. A study of Exercise Physiology focusing on the adult. Includes specific populations such as the obese, heart patients, arthritics, elderly, and high performance athletes. Open to non-majors.
- PET 4384 Health-Fitness Appraisal & Exercise Prescription (3) ED EDP**
PR: PET 3351. Techniques in conducting health-fitness test and exercise prescription for adults. Includes cardiovascular strength, flexibility, body composition, health risk testing, exercise prescribing, and monitoring. Open to non-majors.
- PET 4401 Organization & Administration of Physical Education Programs (3) ED EDP**
Physical Education majors only. A study of organizational and administrative procedures for physical education programs in elementary and secondary schools. Includes scheduling, budget, facilities, extra-curricular programs, and the selection and supervision of staff.
- PET 4404 Organization & Administration of Wellness Programs (3) ED EDP**
Wellness majors only. Design and implementation of various

- types of wellness programs with emphasis on assessment and evaluation, management, staffing, participant adherence, program design, budgeting, legal liability, and marketing.
- PET 4432 Instructional Design and Content: Physical Education Elementary (3) ED EDP**
Physical Education majors only. This is the second of a three-course sequence in which students study movement forms and instructional processes suitable for elementary age students.
- PET 4433 Instructional Design and Content: Physical Education Elementary II (3) ED EDP**
Physical Education majors only. This course prepares students to select, plan, conduct complex movement experiences for students K-6.
- PET 4442 Instructional Design and Content: Physical Education Secondary (3) ED EDP**
Physical Education majors only. Development of knowledge and skills related to the teaching of selected movement activities such as team sports, gymnastics, and physical fitness. Focus is on understanding mechanical principles utilized within those activities as well as on instructional progression and the preparation of materials for instruction at the secondary school level.
- PET 4443 Instructional Design and Content: Physical Education Secondary II (3) ED EDP**
Physical Education majors only. In this course, students are prepared to plan, conduct, and evaluate complex movement experiences in games, dance, gymnastics and physical fitness appropriate for students.
- PET 4627 Management of Athletic Injuries (3) ED EDP**
Athletic Training majors only. Advanced theory of pathology in injury, management of tissue and bone healing environments, disease, internal illness and injury and other general medical conditions. Issues related to radiology and pharmacology are also discussed.
- PET 4632C Therapeutic Modalities (3) ED EDP**
Athletic Training majors only. This course provides an introduction to the theoretical and practical applications of modalities for the prevention, management and rehabilitation of physically active individuals. Concepts pertaining to the use of pharmacology, thermotherapy, cryotherapy, electrical stimulation, hydrotherapy, fluidotherapy, ultrasound, biofeedback and manual techniques will be emphasized.
- PET 4633C Therapeutic Rehabilitation (3) ED EDP**
Athletic Training majors only. Theories and applications methods of comprehensive therapeutic treatment and rehabilitation programs for injuries commonly sustained by the physically active.
- PET 4672L Clinical Practice in Athletic Training (3) ED EDP**
Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I and II students.
- PET 4673L Clinical Practice in Athletic Training II (3) ED EDP**
Athletic Training majors only. Continuation of clinical experience utilizing new skills under the direction of an NATABOC certified/state licensed athletic trainer accompanied by a one-hour seminar each week. This course provides students with the opportunity to develop competence in a variety of mid-level and advanced athletic training skills. Students may be assigned to a USF athletic team and/or one or more off-campus clinical affiliations. Students at this level will develop instruction skills by acting as peer-supervisors for level I, II and III students.
- PET 4905 Independent Study: Professional Physical Education (1-4) ED EDP**
PR: DPR. S/U only. Specialized independent study determined by the student's needs and interests.
- PET 4933 Seminar in Sports Medicine (2) ED EDP**
Athletic Training majors only. The advanced study and discussion of specialized topics and contemporary issues related to the field of athletic training. Emphasis on the roles and responsibilities of medical and allied health professionals comprising the sports medicine team.
- PET 4935 Case Studies in Athletic Health Care (3) ED EDP**
Athletic Training majors only. Capstone course intended to provide a unifying opportunity to utilize concepts, principles and skills learned from other athletic training courses.
- PET 4942 Physical Education Pre-Internship: Elementary (4) ED EDP**
S/U only. Physical Education majors only. A part-time internship in elementary school physical education. Focus on the nature of the total elementary school curriculum, characteristics of students, and application of appropriate content and instructional competencies.
- PET 4944 Physical Education Pre-Internship: Secondary (4) ED EDP**
S/U only. Physical Education majors only. A part-time internship in high school level physical education with focus on the relationship of physical education to the needs of the early adolescent and the implementation of appropriate content and methodology.
- PET 4946 Associate Teaching Physical Education: Elementary (12) ED EDP**
S/U only. Physical Education majors only. A full-time internship in the elementary school in which the student undertakes the full range of teaching responsibilities in elementary physical education.
- PET 4947 Associate Teaching Physical Education: Secondary (12) ED EDP**
S/U only. Physical Education majors only. A full-day internship in middle, junior or senior high school physical education programs with focus on the implementation of appropriate content and methodology to meet the needs of secondary students.
- PGY 2110C Color Photography (3) ART**
Development of knowledge and skills of color photography for publication and presentation. Emphasis is on the use of transparency and negative color materials in their application to the media.
- PGY 2401C Beginning Photography (3) VP ART**
Introduction to the expressive possibilities of photographic media. Projects and assignments will introduce students to both traditional and experimental ways of working with light-sensitive materials with an emphasis on the interdependence of form, technique, and concept. The course will also provide an overview of significant trends and directions in contemporary art photography.
- PGY 3000 Photography in American Culture (3) AS AMS**
A survey of photography as an art and a craft in America since the mid-nineteenth century. Attention devoted to technological innovations, leading personalities, major movements, and memorable icons. Open to majors and non-majors.
- PGY 3410C Intermediate Photography (3) VP ART**
A mid level course expanding the student's visual and technical skills while establishing the beginning of a personal artistic direction. Repeatable up to 9 hours.
- PGY 3610C Photojournalism I (3) AS COM**
PR: MMC 2100 and MMC 3602. Laboratory required. Fundamentals of news and feature photography. Camera operation, picture composition, darkroom techniques, editing in digital format with introduction to software applications. History, ethics and law of photojournalism.
- PGY 3620 Photojournalism II (3) AS COM**
PR: PGY 3610C. Laboratory required. Advanced process and practice of photography for publication.
- PGY 3801C Digital Media I (3) VP ART**
Restricted to majors. This course builds upon the concepts introduced in Introduction to Multimedia Systems and focuses upon digital photographic creation and editing.
- PGY 3930C Special Topics: Photography (3) VP ART**
A mid-level course expanding the student's visual and technical skills while establishing the beginning of a personal artistic direction by exposing the student to new ideas, technical skills and genres, including, but not limited to: color photography, digital photography, non-silver and documentary photography. Repeatable up to 9 hours.
- PGY 4420C Advanced Photography (3) VP ART**
PR: PGY 3410C Continued problems in photography. May be repeated.
- PGY 4802C Digital Media II (3) VP ART**
Restricted to majors. This course builds upon the concepts introduced in Digital Media I and focuses upon digital photographic, web and digital video creation.
- PGY 5425C Art Photography III (4) VP ART**
PR: CI. Advanced work in photography and related media leading to development of personal/expressive statements.
- PHC 4542 Stress, Health and College Life (3) PH CFH**
The purpose of this course is to examine the relationship between stress, as a multi-causal concept, health and disease. Focus areas include: the historical evolution and current theories of stress as they relate to types of stressors, physiological reactions and predisposition to disease, and techniques related to the recognition and prevention of an unhealthy level of stress.
- PHH 2000 Introduction to Philosophy 6A HP (3) AS PHI**
An introduction to selected philosophical problems and traditions.

- PHH 3062 History of Philosophy: Ancient and Medieval (3) AS PHI**
A survey of Western philosophy from the pre-Socratics to the end of the Middle Ages.
- PHH 3420 History of Philosophy: Modern (3) AS PHI**
A survey of Western philosophy from the end of the Middle Ages to the nineteenth century.
- PHH 4440 Continental Philosophy (3) AS PHI**
A study of developments in post-Kantian European philosophy.
- PHH 4600 Contemporary Philosophy 6A MW (3) AS PHI**
Selected schools of twentieth century thought such as idealism, positivism, pragmatism, realism, and existentialism.
- PHH 4700 American Philosophy 6A MW (3) AS PHI**
Major traditions in American thought, Puritanism, the Enlightenment, Transcendentalism, Idealism, Pragmatism, and Analytic Philosophy in relation to American culture.
- PHH 4820 Chinese Philosophy (3) AS PHI**
A survey of Confucianism, Taoism and other aspects of Chinese thought. The course is available to both majors and non-majors and does not have laboratory sections associated with it.
- PHI 1103 Critical Thinking SS (3) AS PHI**
Methods of thinking that lead to reliable conclusions, with emphasis on concrete cases in ordinary thinking and the sciences.
- PHI 1401 Science and Society 6A NS SS (3) AS PHI**
This class teaches students to become a better "Scientific Citizen," i.e. to be able to better understand and participate in the process by which we come to conclusions about the natural and social world that matter to us as a society.
- PHI 1600 Introduction to Ethics HP SS (3) AS PHI**
A study of ethical theories, concepts, problems and methods.
- PHI 2101 Introduction to Formal Logic 6A QM (3) AS PHI**
An elementary study of propositional, predicate, class and syllogistic logic with some attention to basic problems of logical theory.
- PHI 2631 Ethics and Business SS (3) AS PHI**
An application of traditional ethical theories to contemporary problems in business.
- PHI 3404 Scientific Method (3) AS PHI**
Probability, inductive inference, the hypothetico-deductive method, experimentation, and selected topics in the philosophy of science.
- PHI 3630 Contemporary Moral Issues SS (3) AS PHI**
Open to all students. A study of contemporary moral issues concerning racism, sex, sexism, abortion, poverty, crime, war, suicide, and human rights in general.
- PHI 3633 Biomedical Ethics (3) AS PHI**
This course will focus on the ethical issues arising from advances in medical practice, delivery of health care, and scientific research.
- PHI 3636 Professional Ethics (3) AS PHI**
An examination of the ethical problems that professionals will face in the complex, global society of the next few decades: confidentiality, divided loyalty, racism/sexism, etc.
- PHI 3640 Environmental Ethics SS (3) AS PHI**
A study of alternative theories of environmental ethics, including the application of these theories to contemporary environmental problems, such as pollution, resource depletion, species extinction, and land use.
- PHI 3700 Philosophy of Religion 6A SS (3) AS PHI**
Analysis of religious experience and activity and examination of principal religious ideas in light of modern philosophy.
- PHI 3905 Directed Study (1-4) AS PHI**
PR: Cl. Approval slip from instructor required. Individual study directed by a faculty member.
- PHI 3930 Selected Topics (1-4) AS PHI**
PR: Cl. Selected topics according to the needs of the student.
- PHI 4073 African Philosophy MW (3) AS PHI**
A descriptive and analytical study of African philosophical thought, featuring reflective comparisons of African and Western categories of thought.
- PHI 4300 Theory of Knowledge 6A MW (3) AS PHI**
An examination of human knowledge; its scope and limits, and an evaluation of evidence, criteria of truth, the nature of belief, conditions for meaningfulness, theories of perception, and a study of memory and sense perception in the four major fields of nature, history, personal experience, and the a priori.
- PHI 4320 Philosophy of Mind 6A MW (3) AS PHI**
A study of historical and current issues in philosophy of mind, including the nature and status of mind, mind/body dualism, the relationship of mind and body, the problems of other minds, the physical basis for intelligence.
- PHI 4632 Feminist Ethics MW (3) AS PHI**
A study of the varied approaches to moral reasoning taken by feminist ethical writers such as Wollstonecraft, Mill, Gilligan, Daly, Hoagland and others.
- PHI 4670 Contemporary Ethical Theory (3) AS PHI**
A survey of contemporary ethical theory, focusing both on the literature about the status of ethical theorizing—moral scepticism, moral nihilism, narrative ethics—and on specific types of theories—deontological theories, consequentialist theories, rights-based theories, virtue theories.
- PHI 4800 Aesthetics 6A MW (3) AS PHI**
A study of traditional and contemporary aesthetic theories with emphasis on creative process, the nature of the art work, the aesthetic response, expressiveness, form and content, as well as art and morality.
- PHI 4905 Directed Study (1-4) AS PHI**
PR: Cl. Approval slip from instructor required. Individual study directed by a faculty member.
- PHI 4930 Selected Topics (1-3) AS PHI**
PR: Cl. Approval slip from instructor required. Selected topics according to the needs of the senior students.
- PHI 5135 Symbolic Logic (3) AS PHI**
PR: PHI 2100 or Cl. Study of topics such as the following: Metatheory of propositional and predicate logic, related metatheoretic results, alternative logic.
- PHI 5225 Philosophy of Language (3) AS PHI**
PR: Eight hours of philosophy, major in linguistics, or Cl. An examination of semantically, syntactical, and functional theories of language with special attention given to the problems of meaning, linguistic reference, syntactical form, and the relations between scientific languages and ordinary linguistic usage. Seminar format.
- PHI 5913 Research (1-4) AS PHI**
PR: Cl. Approval slip from instructor required. Individual research supervised by a faculty member.
- PHI 5934 Selected Topics (1-3) AS PHI**
PR: Cl. Approval slip from instructor required. Selected topics according to the needs of the student.
- PHM 3020 Philosophies of Love and Sex (3) AS PHI**
Discussion of Philosophies of Love/Sex of Plato, Aristotle, Epicurus, Aquinas, Hume, Kant, Schopenhauer, Russell, Sartre, Marx, etc.
- PHM 3100 Social Philosophy 6A SS HP (3) AS PHI**
An analysis of rival theories of social order and their philosophical foundations.
- PHM 3400 Introduction to Philosophy of Law (3) AS PHI**
A study of the fundamental concepts of law from a philosophical standpoint including crime, justice, punishment, free speech, insanity.
- PHM 4120 Major Black Thinkers (3) AS AFA**
PR: Junior or Senior standing. Survey of major themes and issues in African/African-American intellectual and political thought with an emphasis on theories of nationalism. Works of individuals such as Martin Delany, Booker T. Washington, W. E. B. DuBois, Marcus Garvey, Malcolm X, and Angela Davis are considered.
- PHM 4322 Ancient and Medieval Political Philosophy MW (3) AS PHI**
A survey of Political philosophy from 6 B.C. until 1600 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.
- PHM 4331 Modern Political Philosophy 6A MW (3) AS PHI**
A survey of political philosophy from 1600 A.D. until 1900 A.D., including an examination of the ethical, metaphysical, and epistemological bases of these philosophies.
- PHM 4340 Contemporary Political Philosophy 6A MW (3) AS PHI**
A survey of political philosophy in the twentieth century, including an examination of the ethical, metaphysical and epistemological bases of these philosophies.
- PHM 5125 Topics in Feminist Philosophy (3) AS PHI**
A study of recent feminist philosophical approaches to epistemology, aesthetics and political philosophy. May also be taken for credit in Women's Studies.
- PHM 5126 Social Issues in Biomedical Ethics (3) AS PHI**
An examination of the social and political issues arising from rapid changes in medicine and technology. Topics covered may include social issues related to the just distribution of health care, reproductive technologies, HIV and AIDS, eugenics, genetic testing, and maternal-fetal relations.
- PHP 3786 Existentialism 6A HP (3) AS PHI**
A study of the religious and atheistic existentialists and the bearing of their views on religion, ethics, metaphysics, and theory of knowledge.
- PHP 4000 Plato 6A MW (3) AS PHI**
The examination of Plato will include the dialogues Protagoras, Georgias, Meno, Republic.
- PHP 4010 Aristotle 6A MW (3) AS PHI**
Study of Aristotle's philosophy.
- PHP 4410 Kant (3) AS PHI**
Lecture and discussion of Kant's philosophy, especially the Critique

- of Pure Reason.
- PHP 4740 The Rationalists 6A MW (3) AS PHI**
A careful study of the metaphysics and epistemologies of Descartes, Spinoza, Leibniz, and Malebranche.
- PHP 4745 The Empiricists 6A (3) AS PHI**
A careful study of the metaphysics and epistemologies of Locke, Berkeley, Hume, and Thomas Reid.
- PHP 4784 Analytical Philosophy 6A (3) AS PHI**
A study of the method devoted to clarifying philosophical problems through analysis of the language in which these problems are stated.
- PHP 4788 Philosophy of Marxism 6A MW (3) AS PHI**
A critical survey of Marxist philosophy from Marx and Engels to Mao Tse-Tung and Herbert Marcuse. Hegelian foundations of Marxist philosophy analyzed in detail.
- PHT 5021 Professional Issues I (2) MD PHT**
Foundations of systems thinking, decision making, professional expression, responsibility, and accountability (including legal/ethical concepts), culture and argumentation for the roles of the physical therapist in administration, consultation, critical inquiry, education and patient/client management. Restricted to majors.
- PHT 5022 Professional Issues II (2) MD PHT**
An introduction to critical injury and educator roles and responsibilities; explores the concepts of decision-making, evaluation of research, theories of learning, research and clinical pathways. Restricted to majors.
- PHT 5023 Professional Issues III (3) MD PHT**
Focus on legal, ethical, and professional responsibility and accountability of the physical therapist. Learners will further develop their abilities to make legal and ethical decisions. The class will examine state laws governing the practice of physical therapy and other health care services. Restricted to majors.
- PHT 5171C Foundational Science I (3) MD PHT**
Introduction to the peripheral neuromuscular, skeletal, integumentary, and circulatory systems in normal and pathological states. Includes the anatomy and physiology of bones, joints, skin, nerves, and blood vessels, as well as the response of these tissues to injury and their potential for healing. Restricted to majors.
- PHT 5172C Foundational Science II (1) MD PHT**
Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.
- PHT 5173C Foundational Science III (2) MD PHT**
Emphasis on physiology of the peripheral sensorimotor and cardiopulmonary systems. Restricted to majors.
- PHT 5271 Patient/Client Management I (3) MD PHT**
Foundational principles of histology, pathology, histopathology, applied biomechanics, pharmacology and clinical medicine are introduced and applied to the physical therapy management of individuals with musculoskeletal disorders involving the limbs. Restricted to majors.
- PHT 5272 Patient/Client Management II (2) MD PHT**
Application of principles of patient/client management to patients with cardiopulmonary disease or dysfunction and diabetes in order to identify and write plans of care for related movement dysfunction. Restricted to majors.
- PHT 5273 Patient/Client Management III (3) MD PHT**
Learners apply principles of patient/client management to patients with progressive, non-progressive diseases and injuries of the nervous system. Restricted to majors.
- PHT 5275C Physical Therapy Science I (4) MD PHT**
Introduction to physical therapy skills in examination, evaluation, and diagnosis for clients with uncomplicated musculoskeletal impairments involving the extremities. Emphasis on obtaining a history and performing physical therapy tests and measures leading to a differential diagnosis by application of principles of movement. Restricted to majors.
- PHT 5276C Physical Therapy Science II (4) MD PHT**
Introduction to physical therapy skills used in examination, evaluation, diagnosis of and intervention for clients with activity limitations associated with cardiovascular, hematological, or pulmonary disorders. Major emphasis on selecting, justifying, administering, and interpreting physiological responses to physical agents and therapeutic exercises. Restricted to majors.
- PHT 5277C Physical Therapy Science III (3) MD PHT**
Examination, evaluation, diagnosis, and intervention for movement-related problems secondary to impairments of the nervous system. Contemporary theories of motor development, motor learning and motor control will be introduced. Student knowledge will be demonstrated with clinical problem-solving scenarios. Restricted to majors.
- PHT 5822 Clinical Education I (3) MD PHT**
Initial clinical practice experience for the development of patient care skills. The course is graded Satisfactory/Unsatisfactory. Restricted to majors.
- PHT 5906 Directed Independent Study (1-10) MD PHT**
Directed independent stud, content to be decided. Restricted to majors.
- PHY 2020 Conceptual Physics NS (3) AS PHY**
No credit for Physics or Mathematics majors. A qualitative, non-mathematical investigation of physics, emphasizing its influence on life today.
- PHY 2038 Energy and Humanity NS (3) AS PHY**
Social, economic, and political aspects of energy. Includes energy conservation, environmental impact, energy-source alternatives, changing lifestyles, and personal use of solar energy. the relevant basic laws of physics and the scientific method are emphasized. Field trips and audiovisual presentations play important roles.
- PHY 2048 General Physics I NS (3) AS PHY**
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY 2048 courses. First semester of a two semester sequence of calculus-based general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) for physics majors and engineering students.
- PHY 2048L General Physics I Laboratory (1) AS PHY**
PR: MAC 2281 or MAC 2311. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two-semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students.
- PHY 2049 General Physics II NS (3) AS PHY**
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY2054 PHY 2054 and PHY 2049 courses. Second semester of general physics and laboratory for physics majors and engineering students.
- PHY 2049L General Physics II Laboratory (1) AS PHY**
PR: MAC 2282 or MAC 2312, PHY 2048, PHY 2048L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY2054L PHY 2054L and PHY 2049L courses. Second semester of general physics and laboratory for physics majors and engineering students.
- PHY 2053 General Physics I NS (3) AS PHY**
PR: MAC 1140 and MAC 1114, or MAC 1147. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053 and PHY2048 PHY 2048 courses. First semester of a two semester sequence of non-calculus-based general physics (mechanics, heat, wave motion, sound, electricity, magnetism, optics, modern physics) for science students.
- PHY 2053L General Physics I Laboratory (1) AS PHY**
Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2053L and PHY 2048L courses. First semester of a two semester sequence of general physics (mechanics, heat, wave motion, sound, electricity, magnetism, optics, modern physics) laboratory for science students.
- PHY 2054 General Physics II NS (3) AS PHY**
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lab and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054 and PHY 2049 courses. Second semester of non-calculus-based general physics for science students.
- PHY 2054L General Physics II Laboratory (1) AS PHY**
PR: PHY 2053, PHY 2053L. Must be taken concurrently with lecture and, if dropped, then dropped simultaneously. May not receive credit for both the PHY 2054L and PHY 2049L courses. Second semester of general physics lab for science students.
- PHY 3101 Modern Physics (3) AS PHY**
PR: PHY 2049, MAC 2283 or MAC 2313. Special relativity. Interaction of radiation with matter. Particle-wave duality. Atomic and x-ray spectra and Bohr model of atom. Schrodinger wave equation. Introduction to solid state physics.
- PHY 3221 Mechanics I (3) AS PHY**
PR: PHY 2048. CR: MAC 2283 or MAC 2313. First semester of a two-semester sequence. Review of vector algebra and vector calculus. Dynamics of single particles and systems of particles; central forces; rotation about an axis; statics; and virtual work.
- PHY 3323 Electricity and Magnetism I (3) AS PHY**
PR: PHY 2049, MAC 2283 or MAC 2313. Electrostatic fields and

- potentials, dielectrics, classical conductivity, RC circuits, Fourier and finite element methods. First semester of sequence PHY 3323, PHY 4324.
- PHY 3424 Optics (4) AS PHY**
PR: PHY 2049; CR: MAC 2283 or MAC 2313. Reflection, refraction, dispersion, interference, diffraction, polarization, and laboratory.
- PHY 3822L Intermediate Laboratory (3) AS PHY**
PR: PHY 2049 or equivalent; CR: PHY 3101. Experiments in modern physics, including the areas of atomic, nuclear, solid state and wave phenomena.
- PHY 4031 Great Themes in Physics 6A MW (3) AS PHY**
Origins/early history of physics, and quantum physics. Conservation of energy. Second Law of Thermodynamics. Special Relativity. Exponential dynamics. Outside reading, writing; maintenance of a logbook/journal.
- PHY 4222 Mechanics II (3) AS PHY**
PR: PHY 3221; CR: MAP 2302. Continuation of PHY 3221. Coupled oscillators and normal modes; moving coordinate systems; Lagrange's and Hamilton's equations; inertia tensor; general rotation of rigid bodies.
- PHY 4324 Electricity and Magnetism II (3) AS PHY**
PR: PHY 3323. Introduction to special relativity, magnetic fields and potentials, magnetic materials, RL and RLC circuits, Maxwell's equations and applications.
- PHY 4523 Statistical Physics (3) AS PHY**
PR: PHY 3101, senior status. Statistical approach to thermodynamics and kinetic theory and introduction to statistical mechanics.
- PHY 4604 Introduction to Quantum Mechanics (3) AS PHY**
PR: PHY 3101, or CI. Basic concepts of quantum mechanics with applications in atomic, nuclear, and condensed matter Physics.
- PHY 4744C Introduction to Electronics and Test Instrumentation (3) AS PHY**
PR: General Physics or CI. Not for major credit. Introduces the fundamentals of analog and digital electronics used in measurements and instrumentation. Weekly labs give hands-on experience in breadboarding electronic circuits and using test instrumentation (oscilloscopes, digital multimeters, etc.)
- PHY 4823L Advanced Laboratory (3) AS PHY**
PR: PHY 3822L. Experimental work primarily related to modern physics. Emphasis on experimental techniques used in current research.
- PHY 4905 Independent Study (1-3) AS PHY**
PR: CI. S/U only. Specialized, independent study determined by the student's need and interest. The written contract required by the College of Arts and Sciences specifies the regulations governing independent study.
- PHY 4910 Undergraduate Research (1-4) AS PHY**
PR: Senior or advanced junior standing and CC. S/U only. An individual investigation in the laboratory or library or both, under the supervision of the instructor. Credit hours and other contractual terms, are to be determined by student/instructor agreement.
- PHY 4930 Undergraduate Seminar (1) AS PHY**
PR: Senior or advanced junior standing or CC. S/U only. All undergraduate physics majors must enroll in this course at least once. Regular attendance is required. This course introduces students to the research areas in the Physics Department.
- PHY 4936 Selected Topics in Physics (1-4) AS PHY**
PR: Senior or advanced junior standing and CC. Each topic is a course in directed study and under the supervision of a faculty member.
- PHY 5937 Selected Topics in Physics (1-4) AS PHY**
PR: Senior or advanced standing and CC. Each topic is a course in directed study under the supervision of a faculty member.
- PHZ 2102 Problems in General Physics I (1) AS PHY**
CR: PHY 2048 or PHY 2053. First semester of a two-semester sequence on solving problems in General Physics I. A course designed to be taken with the lecture course and to help students with developing problem-solving skills.
- PHZ 2103 Problems in General Physics II (1) AS PHY**
CR: PHY 2049 or PHY 2054. Second semester of a two-semester sequence on solving problems in General Physics II. A course designed to be taken with the lecture course and to help students with developing problem-solving skills.
- PHZ 4151C Computational Physics (3) AS PHY**
Introduction to computer applications in physics. Emphasis on numerical modeling and simulation of physics problems using linear algebra, differential equations and Monte Carlo methods. No prior programming experience required.
- PHZ 4731 Applications of Physics to Biology and Medicine I (4) AS PHY**
PR: PHY-2054, PHY-2054L or PHY-2049, PHY 2049L The first semester of a two-semester sequence, to discuss the applications of the physical concepts introduced in the General Physics sequence to biological systems and for medical applications. Restricted to non-majors.
- PHZ 4732 Applications of Physics to Biology and Medicine II (4) AS PHY**
PR: PHY-2054, PHY-2054L or PHY-2049, PHY 2049L; PHY 2053 or CI. The second semester of a two-semester sequence, to discuss the applications of the physical concepts introduced in the General Physics sequence to biological systems and for medical applications. Restricted to non-majors.
- PHZ 5115 Methods of Theoretical Physics I (3) AS PHY**
PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Vector spaces including Hilbert space, orthogonal functions, generalized functions, Fourier analysis, transform calculus, and variational calculus.
- PHZ 5116 Methods of Theoretical Physics II (3) AS PHY**
PR: MAP 2302 or CI. Applications of mathematical techniques to classical and modern physics. Selected topics in complex analysis, differential and integral equations, numerical methods, and probability theory.
- PHZ 5156C Computational Physics I (3) AS PHY**
PR: CGS 5420 or CI. C programming applied to real science and engineering problems. Data analysis, numerical algorithms, modeling, parallel computation. Subjects selected from current research may include neurobiology, quantum magnetism, chaos, finance, materials science.
- PHZ 5304 Nuclear Physics (3) AS PHY**
PR: PHY 4604 or CI. Nuclear forces, nuclear models, nuclear structure, decay, nuclear reactions, and high energy physics.
- PHZ 5405 Solid State Physics I (3) AS PHY**
PR: PHY 3101, MAP 2302, CI. Crystal structure, x-ray and electron diffraction, mechanical and thermal properties of solids, electrical and magnetic properties of metals, band theory of metals, insulators, and semiconductors. First semester of sequence PHZ 5405, PHZ 6426.
- PHZ 5505 Plasma Physics I (3) AS PHY**
PR: PHY 4324 or CI. Introduction to Boltzmann, magnetohydrodynamic and orbit approaches to plasmas. Longitudinal and electromagnetic waves in plasmas. Collisions and radiation. Instabilities.
- POL 1120 Beginning Polish I (4) AS WLE**
CR: POL 1120L. This course features all four major skills: listening, reading, speaking, and writing. Grammar exercises, dictation, readings and vocabulary-building are central in this first course. Knowledge of Russian can help. S/U available.
- POL 1120L Beginning Polish I Laboratory (1) AS WLE**
CR: POL 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- POL 1121 Beginning Polish II (4) AS WLE**
PR: POL 1120 or equivalent. CR: POL 1121L. This course continues the four basic skills of POL 1120, with continued emphasis on structures, dialogues, readings, dictation, and vocabulary-building. Knowledge of Russian can help. S/U available.
- POL 1121L Beginning Polish II Laboratory (1) AS WLE**
CR: POL 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- POL 4905 Directed Study (1-5) AS WLE**
Departmental approval required. S/U only. Permits study options in Polish not available in regularly scheduled curriculum at departmental discretion.
- POR 1120 Beginning Portuguese I (4) AS WLE**
CR: POR 1120L. Development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.
- POR 1120L Beginning Portuguese I Laboratory (1) AS WLE**
CR: POR 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- POR 1121 Beginning Portuguese II (4) AS WLE**
PR: POR 1120 or equivalent. CR: POR 1121L. Continued development of basic skills in listening and reading comprehension, speaking and writing of Brazilian Portuguese.
- POR 1121L Beginning Portuguese II Laboratory (1) AS WLE**
CR: POR 1121. Concurrent enrollment with a lecture session is

- required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- POR 2200 Intermediate Portuguese I (3) AS WLE**
 POR 2200 builds upon the four language skills (speaking, comprehension, reading, and writing) introduced in POR 1120 and POR 1121.
- POR 2201 Intermediate Portuguese II (3) AS WLE**
 For language students who intend to attain basic proficiency.
- POS 2041 American National Government (3) AS POL**
 Analysis of basic principles and procedures of the American governmental system with emphasis on current issues and trends.
- POS 2080 The American Political Tradition SS HP (3) AS POL**
 This course is an introductory survey of the historical developments and changes in American political institutions, processes, and thought.
- POS 2112 State and Local Government and Politics (3) AS POL**
 Analysis of the structure and function of state and local governments, of the social and political influences that shape them, and of the dynamics of their administrative processes.
- POS 3142 Introduction to Urban Politics and Government (3) AS POL**
 Governmental and political structures and processes as they function in urban areas, with special focus on municipalities and locally based public services.
- POS 3173 Southern Politics (3) AS POL**
 Examines changes in electoral politics in the South, and the role of interest groups and the state and federal government in facilitating change.
- POS 3182 Florida Politics and Government (3) AS POL**
 A study of Florida political culture, political parties and elections, the legislative, executive, and judicial systems, and policy patterns.
- POS 3283 Judicial Process and Politics (3) AS POL**
 The organization, development, and functioning of American court systems and the causes and consequences of judicial behavior from an empirical perspective.
- POS 3453 Political Parties and Interest Groups (3) AS POL**
 Analysis and understanding of role, functions, structure, and composition of such, and their impact on American governmental institutions.
- POS 3691 Introduction to Law and Politics (3) AS POL**
 Nature of law, legal process, relationship to political life of constitutional law, administrative law, the judicial process, and private law.
- POS 3697 Environmental Law (3) AS POL**
 Examines some of the major issues involving environmental law. Specially, the course provides a survey and analysis of statutes, both state and federal, regulating water, air, soil pollution, and resource conservation and recovery. It will also address questions pertaining to problems of implementation, interpretation, enforcement, and development of environmental laws.
- POS 3713 Empirical Political Analysis (3) AS POL**
 Fundamentals of empirical political inquiry: systematic data collection and quantitative analysis techniques. Laboratory exercises using the computer are required.
- POS 3931 Selected Topics (3) AS POL**
 Selected topics in political science with course content based upon student demand and instructor's interest.
- POS 4204 Political Behavior, Public Opinion, and Elections (3) AS POL**
 Analysis of economic and socio-psychological factors influencing mass and elite political behavior; voting behavior, public opinion, and political activism.
- POS 4413 The American Presidency 6A (3) AS POL**
 The presidency as a political institution; analysis of powers; legislative, administrative, political, and foreign policy leadership; crisis management and decision making; White House staffing; limits on power.
- POS 4424 The American Congress (3) AS POL**
 Organization, procedures, committee system, party leadership, relations with governmental and non-governmental organizations and agencies, oversight, decision-making processes, House/Senate comparisons.
- POS 4614 Constitutional Law I (3) AS POL**
 PR: POS 2041. Leading social problems, principle institutions, and the scope of powers. Analysis of Supreme Court decisions, scholarly commentaries, and the writings of leading public figures.
- POS 4624 Constitutional Law II (3) AS POL**
 PR: POS 2041. Analysis of Supreme Court decisions and scholarly commentaries on the constitutional rights of individuals.
- POS 4693 Women and Law I (3) AS WST**
 Introduction to issues concerning the legal aspects of sex and sex-based discrimination as embodied in statutory and case law, focusing on constitutional and family law and reproductive freedom issues.
- POS 4694 Women and Law II 6A MW (3) AS WST**
 PR: POS 4693 or CI. Legal position of women in American society and remedies available to challenge current laws and practices, with specific emphasis on employment and education issues as they relate to both women and men.
- POS 4905 Independent Study (1-3) AS POL**
 PR: 3.0 average in Political Science and CI. S/U only. Specialized study determined by the student's needs and interests.
- POS 4910 Individual Research (1-3) AS POL**
 PR: 3.0 average in Political Science and CI. Investigation of some aspect of political science culminating in the preparation of an original research paper.
- POS 4936 Senior Seminar (3) AS POL**
 PR: Senior standing and CI. An opportunity to work with others in a seminar format, exploring specialized topics.
- POS 4941 Field Work (3-15) AS POL**
 PR: 3.0 average in Political Science and CI. Opportunity for students to obtain practical experience as aides to agencies of government and political parties.
- POS 4970 Honor Thesis (3) AS POL**
 PR: Admission to Honor option. Writing of honor thesis under direction of faculty members.
- POS 5094 Issues in American National and State Government (3) AS POL**
 Selected topics of study in American government.
- POS 5155 Issues in Urban Government and Politics (3) AS POL**
 Selected issues and topics in Urban Government and politics.
- POS 5159 Urban Policy Analysis (3) AS PAD**
 Application of policy framework for urban government & policies. Examine forms of government and how policies such as economic development, law enforcement, community policing, neighborhood policies (with non-profit groups) can be analyzed.
- POT 3003 Introduction to Political Theory (3) AS POL**
 Examines various kinds of theory used in political science for understanding political life: normative theory, empirical theory, historicism theory, analytical theory, and critical theory.
- POT 3013 Classical Political Theory (3) AS POL**
 Analysis of basic ideas of Plato, Aristotle, Cicero, St. Thomas, and other leading pre-modern political philosophers.
- POT 4054 Modern Political Theory (3) AS POL**
 Analysis of basic political ideas of Machiavelli, Hobbes, Locke, Rousseau, Burke, and other modern philosophers.
- POT 4064 Contemporary Political Thought (3) AS POL**
 Examines various political views and political phenomena in the nineteenth and twentieth centuries. Diverse theoretical types and salient political phenomena will be presented.
- POT 4109 Politics and Literature 6A LW (3) AS POL**
 Critical examination of the connections between politics and literature.
- POT 4204 American Political Thought (3) AS POL**
 Examines political writings in the U.S. and responses to critical periods in history, beginning with the Founding Fathers, and culminating in recent contributions and understanding contemporary political problems and solutions.
- POT 4661 The Politics of Identity, Difference and Inequality MW(3) AS POL**
 PR: POT 3003. An analysis of how relationships of social identity and difference become the basis of social, political and economic inequality in modern society. It incorporates both contemporary and classical discussions of inequality.
- POT 4936 Selected Topics in Political Theory (3) AS POL**
 Selected topics or thinkers in political theory.
- PPE 4004 Personality (3) AS PSY**
 PR: PSY 3213 with a grade of C or better or CI. Methods and findings of personality theories and an evaluation of constitutional, biosocial, and psychological determinants of personality.
- PSB 4013C Physiological Psychology (3) AS PSY**
 PR: PSY 3213 with a grade of C or better or CI. Gross neural and physiological components of behavior. Structure and function of the central nervous system and theory of brain functions.
- PSY 2012 Psychological Science I SS (3) AS PSY**
 A broad survey of psychology for both majors and non-majors with special emphasis on the more applied areas of psychology (e.g., social psychology, abnormal psychology, personality, and developmental psychology.).
- PSY 3044 Psychological Science II SS (3) AS PSY**
 PR: PSY 2012, psychology major or CI. Designed as an in-depth examination of the basic principles and concepts of psychological science. Extensive coverage will be given to the areas of learning,

370 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

- perception, physiological psychology, and cognition.
- PSY 3213 Research Methods in Psychology (4) AS PSY**
PR: PSY 2012 with a grade of C or better or CI. This course considers the logic of experimental design, concept of control and the analysis of experimentally obtained data. The laboratory section provides experience applying the concepts discussed in lecture. Two lectures plus two-hour lab. May be taken concurrently with PSY 3044.
- PSY 4205 Experimental Design and Analysis (3) AS PSY**
PR: PSY 3213 with grade of C or better or CI. Detailed coverage of those research designs and statistical techniques having the greatest utility for research problems in psychology. Emphasis on topics from analysis of variance.
- PSY 4604 History and Systems of Psychology (3) AS PSY**
PR: PSY 3213 with a grade of C or better or CI. The historical roots of modern psychological theories, investigation of the various schools of psychology such as behaviorism, Gestalt psychology, psychoanalysis, and phenomenological psychology.
- PSY 4913 Directed Study (1-3) AS PSY**
PR: CI. S/U only. A maximum of 3 credits of either PSY 4913 or PSY 4970 may count toward the major. The student plans and conducts an individual research project or program of directed readings under the supervision of a faculty member.
- PSY 4931 Selected Topics: Seminar (3) AS PSY**
PR: Upper-level standing, psychology major and CI. Graduate-type seminar designed to provide the advanced undergraduate student with an in-depth understanding of a selected sub-area within psychology.
- PSY 4932 Honors Seminar (3) AS PSY**
PR: Admission to honors program in psychology and CI. May not count for major credit. The student, under supervision of a faculty member, will formalize, conduct, analyze, and report in writing a research project in psychology.
- PSY 4933 Advanced Topics in Applied Behavior Analysis (4) AS PSY**
PR: EXP 4404 and CLP 4414. Restricted to Psychology majors admitted to the Concentration in Applied Behavioral Analysis. Advanced seminar in the effective and ethical application of behavior analysis to human problems. Includes theoretical and conceptual issues; assessment and treatment procedures; legal, ethical and socio-cultural issues.
- PSY 4970 Honors Thesis (1-3) AS PSY**
PR: Admission to honors program in psychology and CI. A maximum of 3 credits of either PSY 4913 or PSY 4970 may count toward the major. The student under supervision of a faculty member will formalize, conduct, analyze, and report in writing a research project in psychology.
- PUP 4002 Public Policy (3) AS POL**
Examines the formation and implementation of public policy in areas such as the economy, health, etc.
- PUP 4203 Environmental Politics and Policy (3) AS POL**
Examines the politics of environmental issues, formation and implementation of environmental policy.
- PUP 4323 Women and Politics 6A MW (3) AS WST**
An analysis of the impact of gender on power and influence in American society, and women's changing role in the political process.
- PUP 5607 Public Policy and Health Care (3) AS POL**
The study of health care policy as it relates to the policy process in the American setting.
- PUR 3000 Principles of Public Relations (3) AS COM**
PR: MMC 2100 and MMC 3602. The underlying theory and professional practice of public relations within corporate and institutional structures and its vital role in society; ethical standards of practice, and relationships of the practice to the public media; public relations problem-solving process.
- PUR 3500 Public Relations Research (3) AS COM**
PR: PUR 3000 and LIS 2002. The theory and practice of quantitative and qualitative research methods as applicable to the study of public relations and public relations campaigns. Emphasis is on the scope of research methods available to public relations practitioners, evaluation of data and report writing.
- PUR 4100 Writing For Public Relations (3) AS COM**
PR: JOU 2100 and PUR 3000. Techniques for creating effective written public relations communications to achieve organizational goals, including news releases, proposal letters, broadcast scripts, and memos. Exercises based on case study scenarios.
- PUR 4101 Public Relations Design and Production (3) AS COM**
PR: MMC 2100 and MMC 3602. Theoretical and practical applications of design for public relations publications. Design software. Study of visual design, page architecture, typography, color and illustrations. Integration of design elements in the design of different types of public relations publications.
- PUR 4401 Public Relations: Issues, Practices and Problems (3) AS COM**
PR: PUR 3000. The theory of public relations practice and its application in the real world. The role of the public relations practitioner in business, government, and social institutions, and the nature of specialized areas of the practice. Identification of public issues, analysis of potential impact on organizations and development of strategies to deal with them successfully and responsibly. Communication techniques and trends.
- PUR 4700 Public Relations Practicum (1) AS COM**
PR: Senior standing and CI. For public relations sequence majors. S/U. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- PUR 4801 Advanced Public Relations (3) AS COM**
PR: PUR 3500, PUR 4100 and PUR 4401 As final course in Public Relations sequence, it involves intensive study of counseling and problem-solving techniques used in professional practice. Analysis of case studies and preparation of complete Public Relations program. Extensive reading in the literature of contemporary practice.
- QMB 2100 Business And Economic Statistics I 6A QM (3) BA QMB**
PR: MAC 1105. Data description; exploratory data analysis; introduction to probability; binomial and normal distributions; sampling distributions; estimation with confidence intervals; tests of hypotheses; control charts for quality improvement.
- QMB 3200 Business And Economic Statistics II (3) BA QMB**
PR: MAC 2233 or MAC 2241, QMB 2100. Simple linear regression and correlation; multiple regression and model building; forecasting models; analysis of variance; chi-square tests; nonparametric methods.
- RCS 3030 Rehabilitation Counseling Issues in Alcoholism and Other Addictions (3) AS REH**
PR: CI. An overview of alcohol and other drug abuse. Explores the extent and rate of abuse in the United States, causes, biology, psychosocial aspects, legal aspects, and treatment.
- RCS 5020 Foundations of Mental Health Counseling (3) AS REH**
PR: CC. A skill-building course on the utilization of one's self in mental health counseling relationships. Includes study of the origin, history, professional functions and current issues in the discipline of mental health counseling.
- RCS 5035 Rehabilitation Counseling: Concepts and Applications (3) AS REH**
PR: CC. Introduction to the profession of Rehabilitation Counseling and current issues in the field. Coverage includes rehabilitation history, legislation, case management and related services for Americans with disabilities.
- RCS 5080 Medical Aspects of Disability (3) AS REH**
PR: RCS 5780 or CP. A survey of medical conditions and disabilities encountered by rehabilitation and mental health counselors. Examines the relationship of client handicaps, physical and mental, to rehabilitation and mental health programming.
- RCS 5450 Substance Abuse I (3) AS REH**
PR: CI. An overview of alcohol and other drug abuse. Explores the extent and rate of abuse in the United States, causes, biology, psychosocial aspects, legal aspects, and treatment.
- RCS 5480 Human Growth and Development (3) AS REH**
PR: RCS 5780, RCS 5020, Majors only. Human development theory as applied in psychotherapy and case management rehabilitation, mental health, and addiction settings.
- RCS 5780 Legal, Ethical, Professional Standards and Issues in Counseling (3) AS REH**
PR: CC. An overview of all aspects of professional functioning including history, roles, organizational structures, ethics, standards and credentialing. Contemporary and developing issues in the field of professional counseling will also be addressed.
- RCS 5905 Directed Studies (1-4) AS REH**
PR: CI. Supervised rehabilitation studies under the direction of a faculty member.
- REA 1105 Critical Reading and Writing 6A (3) US REA**
This course offers a systematic approach to the development of literal and critical reading skills and the related writing skills to enhance student success at the university level.
- REA 1605 Learning Strategies Within Academic Disciplines (2) US REA**
To provide within any academic discipline the necessary learning

strategies needed for success related to academic coursework. Practice of learning strategies will be within the framework of the student's course work, providing direct transfer to academic area material. Will not be counted toward the English major.

REA 2505 Vocabulary (3) AS ENG

A practical course in rapid vocabulary improvement for students in all areas. Stress is on words in context. Will not be counted toward the English major.

REA 2930 Selected Topics: Learning Strategies (1-4) US REA

Topics will vary to meet the needs of students. Will not be counted toward the English major.

RED 4310 Reading and Learning to Read (3) ED EDE

PR: Admission to College of Education. This course will prepare pre-service teachers to understand the foundations of reading and the inherent learning principles to produce successful readers. The course focuses on appropriate instructional strategies to enhance reading development and reading across the curriculum.

RED 4511 Linking Literacy Assessment to Instruction (3) ED EDR

PR: RED 4310. This course will prepare pre-service teachers to use multiple assessment measures to assess and diagnose students' strengths and needs in literacy learning. Based on individual student profiles, teachers will design instruction to enhance literacy development.

REE 3043 Real Estate Decision Making (3) BA FIN

PR: FIN 3403. Acquaints students with the range of knowledge required to engage in real estate decision-making in the United States. Integrates the institutional framework with which decisions are made, the elements of financial analysis, deal structuring and marketing, and the pricing, financing, and allocation of real property in the real estate markets.

REE 4303 Real Estate Investment Analysis (3) BA FIN

PR: FIN 4504. A comprehensive study of the determinants of the market and financial feasibility of the real estate investment decision. The development of market and site analyses, theories of urban development patterns, and the role of taxation will be studied along with the application of analytical techniques for decision making.

REL 2210 Hebrew Bible/Old Testament (4) AS REL

An introduction to the critical study of the Hebrew Scriptures against the background of the ancient Near East, with attention to the history and religion of the Hebrew people.

REL 2240 Introduction to the New Testament (3) AS REL

An introduction to the critical study of the New Testament in context of Christian beginnings in the first century A.D.

REL 2300 Introduction to World Religions 6A HP (4) AS REL

A cross-cultural exploration of the major religions of the world through lectures, films, and the reading of key religious texts. Religions covered include Judaism, Christianity, Islam, Taoism, Confucianism, Hinduism, and Buddhism.

REL 2306 Contemporary World Religions HP (4) AS REL

This course will explore the unity and diversity of religious traditions in our contemporary global context in order to understand the mutual interactions between religions and cultures. Emphasis will be placed on the role of religions in shaping human values which can either create or resolve social conflicts, and the impact these values can have on issues of race, ethnicity and religious diversity in a multicultural world.

REL 3000 Ancient Religions in Context (4) AS REL

Study of the religions in their cultural setting of the peoples of the Ancient Middle East and Mediterranean.

REL 3003 Introduction to Religion (3) AS REL

This course examines the phenomenon of religion to answer the question: Religion, what is it? Religious thought (mythology and theology) and religious behavior (ritual and morality) are closely examined from a variety of methodological perspectives.

REL 3101 Religion and Popular Culture SS HP (3) AS REL

An exploration and analysis of the relationship between religion and popular culture, which will include inquiry into the definition and meaning of both religion and popular culture, the impact of secularization on traditional religious systems, and the widely diverse expressions of religion in contemporary popular culture.

REL 3111 The Religious Quest in Contemporary Films 6A SS HP (4) AS REL

This course will use contemporary films such as Gandhi, Malcolm X, the Long Walk Home, the Color Purple, the Leap of Faith, the Chosen, and Grand Canyon, to explore the personal and social dimensions of religion in modern secular societies, with an emphasis on issues of racism, sexism and human liberation and reconciliation.

REL 3112 Religion and Contemporary American Holidays HP SS (3) AS REL

Introduces students to the academic study of religion through an

exploration of issues and questions related to the character and function of holidays in contemporary America. Open to majors and non-majors.

REL 3114 Comedy, Tragedy, and Religion 6A MW (3) AS REL

Examines the visions of life in comedy and tragedy, and relates both to Judaism, Christianity, and Zen Buddhism.

REL 3120 Religion in America (3) AS REL

To examine the movement from state church to pluralism in American religious institutions, the religious results of non-Protestant immigration; the Jewish factor; the effect of home missions and social concern programs upon American life; political entanglements and the concept of church/state separation.

REL 3131 New Religions in America (3) AS REL

A course designed to allow the student to survey the wide spectrum of contemporary sects and cults in America and learn what motivates their development.

REL 3132 Witchcraft and Paganism in America (3) AS REL

A study of contemporary witchcraft and paganism, including theories, methods, history, myths and symbols, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.

REL 3140 Religion, Culture, and Society (3) AS REL

Introductory scholarly survey of religion in its complex relationship to culture and society, including definitions and theories of religion, research methods, becoming religious, social organization, and interconnections with other social institutions. Open to non majors.

REL 3145 Women and Religion 6A (3) AS REL

Analysis of the status and roles of women as compared to men in the Judeo-Christian tradition. Contemporary issues of feminist theology, and the controversies surrounding them.

REL 3146 Womanist Vision in Religion MW (3) AS REL

This course examines the works of Black Womanist writers in religion for their contributions to and insights into the phenomena of religion in America and the world.

REL 3155 Life After Death MW (3) AS REL

An exploration of ideas about life after death and its relations to this life in Judaism, Christianity, Islam, Hinduism, and Buddhism.

REL 3170 Religion, Ethics and Society Through Film 6A SS HP (4) AS REL

An ethical analysis of contemporary social issues through contemporary films such as Wall Street and Crimes and Misdemeanors, drawing on religious narrative traditions from Eastern and Western cultures which have contributed to the development of an ethic of human dignity, human rights and human liberation after Auschwitz and Hiroshima.

REL 3280 Biblical Archaeology MW (3) AS REL

An in depth examination of the archaeological data relating to the background and content of the Bible, including ancient customs, Biblical sites and cities, Biblical history, and material culture of the Biblical period. Special attention will also be given to excavation methods and interpretation of archaeological evidence.

REL 3303 Comparative Religion: Judaism and Islam MW (3) AS REL

This course is framed within the academic study of religion, and it does not concern itself with contemporary political difference in the Middle East. It treats as Islam the normative statements of the Quarn and related traditions, and as Judaism the authoritative statements of the Torah, oral and written.

REL 3310 World Religions (3) AS REL

A comparison of the ideas, the literature and institutions of the major religions of the world including Judaism, Christianity, Islam from the Near East and Hinduism, Taoism, Confucianism, and Buddhism from the Far East. General comparison of Western and Eastern beliefs.

REL 3315 Introduction to Chinese Religion AF HP SS (3) AS REL

The course is for majors and nonmajors, and may not be repeated for credit. The course introduces the history and present state of the religious thoughts and practices in mainland China and the geographical areas in which the Chinese language is spoken.

REL 3330 The Religions of India AF (3) AS REL

All religions of the world came to India and all became Indian. What is this "Indianness" which stems from Hinduism, Buddhism, Jainism and Sikhism, but extended itself to include Judaism, Christianity, Islam, Zoroastrianism and Baha'i. Readings from classical texts and modern literature.

REL 3362 Introduction to Islam HP AF (3) AS REL

This course introduces the basic elements of Islamic belief and practice, placing the rise of Islam in its historical context in the Middle East, and stressing issues of diversity (including ethnicity and gender).

REL 3367 Islam in the Modern World 6A HP AF (3) AS REL

Examines the major developments in Islamic thought since the

- 13th century, with emphasis on the 19th and 20th century Islamic resurgence. Issues of diversity, gender, and social values will be stressed.
- REL 3375 Issues in Caribbean Religions MW (3) AS REL**
This course concentrates on major social and cultural issues in Caribbean religions mainly in Cuba, Haiti, Jamaica, and Trinidad, with emphasis on African-derived religions and Western and Eastern religious encounters.
- REL 3380 Native American Religions (3) AS REL**
Introduction to and survey of Native American Religions. A variety of multiplicity of perspectives, including anthropological, historical, social psychological, sociological, and philosophical.
- REL 3420 Contemporary Religious Thought (3) AS REL**
An examination of the central ideas of recent religious thinkers; such as Gandhi, Martin Luther King, Jr., Elie Wiesel, Thich Nhat Hanh, Dorothy Day, Dorothee Soelle, Howard Thurman, Thomas Merton and others.
- REL 3465 Religion and the Meaning of Life 6A MW (3) AS REL**
What is the meaning of life? An exploration of answers to this question in Eastern and Western religions, and in humanistic philosophies of life.
- REL 3500 History of Christianity 6A HP (4) AS REL**
Historical development of Western Christianity, its ideas and institutions, from the first century to the rise of religious modernism in the 19th century.
- REL 3561 Roman Catholicism 6A MW (3) AS REL**
An examination of the history, doctrine, and ethics of the Roman Catholic Church.
- REL 3600 Introduction to Judaism 6A SS HP AF (3) AS REL**
An introduction to Judaism: its religious tenets; its codes of ethics; its rites and customs. This course is intended as a description of what it means to be a Jew.
- REL 3602 Classics of Judaism 6A MW (3) AS REL**
PR: One course in Religious Studies. How to read the principal documents of Judaism beyond the Old Testament, particularly the Mishnah, Talmuds, and Midrash.
- REL 3611 History of Judaism (3) AS REL**
A study of the evolution of the religion of ancient Israel from the Eodus to the end of the second century of our era, seen against the background of its historical, geographical, political, social and spiritual setting.
- REL 3613 Modern Judaism 6A MW LW (3) AS REL**
A study of Jewish life in the West since 1789, emphasizing Jewish beliefs, practices, and institutions.
- REL 3801 History of Writing (2) AS REL**
Study, in reasonable detail, of the history and evolution of writing within its societal context. We will stress the development of writing in Mesopotamia, Egypt, and the Mediterranean World, looking at the transition from oral to written literature and its impact on religion.
- REL 3900 Directed Readings (1-4) AS REL**
PR: Cl. Individual guidance in concentrated reading on a selected topic.
- REL 3936 Selected Topics (1-4) AS REL**
Course contents depend on students' needs.
- REL 4113 The Hero and Religion MW (3) AS REL**
A study of the way in which embedded religious models help to fashion the representation of a heroic protagonist. The focus of the course will be on the relationship between the hero and the "other," as differentiated by race, gender, ethnicity, or merely inner being.
- REL 4133 Mormonism in America MW (3) AS REL**
A study of Mormonism in America as an example of a new religion. Includes the study of history, myths and symbols, texts, beliefs, rituals and practices, believers, recruitment, socialization, and organizations.
- REL 4161 Religion, Technology and Society (3) AS REL**
An exploration of the way in which religion and technology have interacted in Western civilization so as to both express and transform human values and identity. Special emphasis will be given to the value questions raised by modern technology.
- REL 4171 Contemporary Christian Ethics 6A MW (4) AS REL**
PR: Jr. standing or Cl. A survey of representative approaches to contemporary Christian ethics and their application to a number of ethical issues peculiar to personal and social life in contemporary society, with an emphasis on issues of race and gender and of violence and non-violence.
- REL 4177 Comparative Religious Ethics 6A MW LW (4) AS REL**
A comparative study of religious ethics emphasizing how 20th century social activists, such as Ghandi and M. L. King Jr. and eco-feminists such as Rosemary Ruether and Joanna Macy, have drawn upon and transformed traditional religious stories and spiritual practices in order to create a cross-cultural and inter-religious ethic for a multi-cultural world.
- REL 4193 Comparative Mysticism (4) AS REL**
A course designed to acquaint the student with the nature of mystical experience, and some of the varieties of mystical experience recorded in the writings of the mystics, East and West.
- REL 4215 Ancient Israel and the Development of the Hebrew Bible 6A HP AF MW LW (3) AS REL**
An exploration of the formation and composition of the Hebrew Bible in light of the religious, social, political, and historical developments in antiquity.
- REL 4218 Women and the Bible 6A HP AF MW LW (3) AS REL**
How the redactors of Genesis through 2 Kings viewed women; the role women played in the society of the time in which they are portrayed and in that of the redactors; and, an attempt to find the "women's voices," however muted, within the biblical text.
- REL 4221 Who Wrote the Bible (Genesis-Kings) 6A MW LW (4) AS REL**
A critical examination of Genesis through 2 Kings. This course focuses on the history of the formation of the text and the development of the religious traditions represented therein. Special attention will be paid to Israelite Law, Covenant Theology, and the history of the religion(s) of the Children of Israel in their Ancient Near Eastern context.
- REL 4245 New Testament I: Gospels, Acts (4) AS REL**
An exploration of the Gospels and Acts, including their backgrounds in Judaism and pagan religion, literary and form criticism, historical Jesus research, and the social history of earliest Christianity.
- REL 4250 Jesus' Life and Teachings (4) AS REL**
An examination of the various historical studies made in the quest of identifying Jesus as an historical figure. The concern is to make a reasonable assessment of who Jesus was and what he was saying to the Jews in Palestine at the beginning of the common era.
- REL 4252 New Testament II: Pauline Letters (4) AS REL**
The purpose is to examine the text of the thirteen "Pauline Letters" in the New Testament, to compare them with the Pauline sections of Acts, and to ascertain possible theological development of Paul and the "Pauline wing" of Christianity.
- REL 4333 Hinduism (4) AS REL**
The philosophy of the saints; the complex rituals of the Brahmins; the art of its temples; the psychology and physiology of yoga; the social rigidity of the caste system; the esoteric science of meditation; the ascetic activism of Mahatma Gandhi—all of these are Hinduism, and more. Close readings of classical texts, philosophic systems and medieval poems.
- REL 4343 Buddhism in India, Sri Lanka, and South East Asia (4) AS REL**
The life and teachings of the Buddha; the order of monks and nuns; the Buddhist Emperor Ashoka; schisms; the rise of the Great Vehicle and the philosophy of emptiness; Buddhist missions; Buddhist art and culture; Buddhism and national liberation; contemporary social and political issues.
- REL 4344 Buddhism in China, Japan, and Tibet (4) AS REL**
Mahayana Buddhism followed the silk routes to China and Japan, and later it crossed the Himalayas into Tibet. An overview of the variety of schools and practices of Buddhism and its adaptation by these ancient cultures.
- REL 4626 Reason in Religion: Talmudic Logic MW (3) AS REL**
Analyzes the modes of thought and of logical analysis of the Talmud of Babaylonia; the way in which applied logic and practical reason work in a religious definition of the social order; the dialectical argument.
- REL 4670 Judaism and Christianity After the Holocaust 6A MW LW (4) AS REL**
This course will explore the impact of the Holocaust on Jewish and Christian thought and identity in the light of the history of religious and cultural anti-Semitism in Western civilization.
- REL 4910 Undergraduate Research (1-4) AS REL**
PR: Junior standing and Cl. Individual investigations with faculty supervision.
- REL 4911 Undergraduate Research (1-4) AS REL**
PR: Junior standing and Cl. Individual investigations with faculty supervision.
- REL 4930 Selected Topics (3) AS REL**
Course contents depend on student demand and instructor's interest and may range over the whole field of Ancient Religions. Offerings on a semi-regular basis include the Bible as History 3.
- REL 4931 Seminar in Religion (3) AS REL**
PR: Majors and minors only or Cl A course required for Religious

- Studies majors and minors, whose prior religious studies have prepared them for a cooperative creative and/or research effort in the area of religion.
- REL 4936 Selected Topics (1-4) AS REL**
PR: Junior standing. Individual investigations with faculty supervision.
- REL 4937 Selected Topics: Fall Honors Seminar (2) AS REL**
PR: Acceptance into the Religious Studies Honors Program. The course content will depend upon student demand and instructor's interest.
- REL 4938 Selected Topics: Spring Honors Seminar (2) AS REL**
PR: Acceptance into the Religious Studies Honors Program. The course content will depend upon student demand and instructor's interest.
- REL 4939 The Development of Religious Studies (3) AS REL**
Course designed for senior majors and minors in religious studies. Discussion of key figures and methodological advances in the development of the field from the 18th century to present, with readings of classics in the development.
- RMI 3011 Principles of Insurance (3) BA FIN**
Analysis of insurable risks of both businesses and individuals. An examination of the characteristics of those areas of risk and uncertainty where the mechanisms of insurance are effective alternatives. The concept, contracts, and institutions involved in insurance are examined in relation to the socio-economic environment.
- RMI 4115 Life, Health, And Disability Insurance (3) BA FIN**
PR: QMB 3200, RMI 3011. The course will analyze the use of life, health, and disability insurance contracts as a method of dealing with the financial risks of death, sickness, and disability. It will include an analysis of cost determination of the various types of coverage.
- RMI 4210 Property Insurance (3) BA FIN**
PR: RMI 3011. Course dealing with recognition of personal and business property risks, and coverage that can be used in dealing with these risks. Considers the underwriting, marketing, and social problems associated with these coverages. Topics include commercial and residential fire insurance, inland marine and transportation coverages, and multiperil contracts. Not limited to Finance majors.
- RMI 4220 Casualty Insurance (3) BA FIN**
PR: RMI 3011. Course dealing with recognition of personal and business casualty risks and coverages that can be used in dealing with these risks. Considers the underwriting, marketing, and social problems associated with these coverages. Topics include workmen's compensation, public liability, auto liability, suretyship, and crime insurances. Not limited to Finance majors.
- RTV 2100 Writing For Radio and TV (3) AS COM**
PR: CRW 2100 or ENC 3310 and RTV 3001. The art and practice of script planning and writing for radio and television and for corporate videos.
- RTV 3001 Introduction to Telecommunications (3) AS COM**
PR: MMC 2100 and MMC 3602. A survey of the organization, structure, and function of the broadcasting industry.
- RTV 3301 Broadcast News (4) AS COM**
PR: MMC 2100 and MMC 3602. Methods in gathering, writing, and editing newscasts for radio and television.
- RTV 3941 Radio Practicum (1) AS COM**
PR: RTV 3001 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- RTV 4220 TV Production and Direction (3) AS COM**
PR: RTV 3001, RTV 3301, and RTV 4320. A basic course in the techniques of producing and directing TV programs.
- RTV 4304 TV News (3) AS COM**
PR: RTV 4320. Advanced television reporting, integrating broadcast news writing, ENG production and television performance.
- RTV 4320 Electronic Field Production (3) AS COM**
PR: RTV 3001 and RTV 3301. Advanced producing, scripting, lighting, camera, and editing for video and news production. Introduction to computer editing and graphics.
- RTV 4500 Telecommunications Programming and Management (3) AS COM**
PR: RTV 3001. Program and management concepts, resources, costs, selection, and scheduling. Analysis of programming and management in terms of structures, appeals and strengths.
- RTV 4942 TV Practicum (1) AS COM**
PR: RTV 4220 and CI. For telecommunications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- RUS 1120 Beginning Russian I (4) AS WLE**
CR: RUS 1120L. The first course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.
- RUS 1120L Beginning Russian I Laboratory (1) AS WLE**
CR: RUS 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- RUS 1121 Beginning Russian II (4) AS WLE**
PR: RUS 1120 or CI. CR: RUS 1121L. The second course in the study of elementary Russian. Emphasis on the development of basic skills in comprehension, speaking and reading.
- RUS 1121L Beginning Russian II Laboratory (1) AS WLE**
CR: RUS 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- RUS 2200 Russian III (4) AS WLE**
PR: First year Russian or equivalent. Review and development of basic skills in conversation, composition, and reading.
- RUS 2201 Russian IV (4) AS WLE**
PR: RUS 2200 or equivalent. Review and development of basic skills in conversation, composition, and reading.
- RUS 2270 Overseas Study (1-6) AS WLE**
Intensive study of the Russian language in Russia involving at least 20 hours per week of classroom instruction and cultural excursions conducted in Russian around Moscow and other parts of Russia.
- RUS 3240 Conversation I (4) AS WLE**
PR: Second year Russian or equivalent. Development of basic conversational skills.
- RUS 3470 Overseas Study (1-6) AS WLE**
Must be enrolled in the USF Summer Study in Moscow program. Two years Russian required. Intensive Russian at Moscow Linguistic University with excursions in Moscow and Russia. Students from other institutions eligible.
- RUS 3500 Russian Civilization 6A MW (3) AS WLE**
A survey of the cultural history of Russia.
- RUS 4241 Conversation II (4) AS WLE**
PR: Previous course in series or equivalent. Development of conversational skills.
- RUS 4402 Advanced Russian Conversation & Composition I (4) AS WLE**
PR: RUS 4241 or CI. Third year Russian.
- RUS 4403 Advanced Russian Conversation & Composition II (4) AS WLE**
PR: RUS 4241 or CI. Third year Russian.
- RUS 4471 Advanced Overseas Study (1-6) AS WLE**
Must be enrolled in the USF Summer Study in Moscow program. Three years Russian required. Intensive Russian at Moscow Linguistic University with excursions in Moscow and Russia. Students from other institutions eligible.
- RUS 4900 Selected Topics (1-3) AS WLE**
Study of an author, movement or theme.
- RUS 4905 Directed Study (1-3) AS WLE**
Departmental approval required.
- RUT 3110 Russian Classics in English 6A MW LW (3) AS WLE**
Masterpieces of 19th century Russian literature in English. The major works of Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Elective for all students in all departments.
- RUT 3111 Twentieth-Century Russian Literature in English 6A MW LW (3) AS WLE**
Masterpieces of 20th century Soviet literature in English. The major works of Bely, Olesha, Babel, Zamyatin, Bulgakov, Pasternak, and Solzhenitzyn. Elective for all students in all departments.
- SCE 4236 Science, Technology, Society Interaction 6A MW (4) ED EDN**
Achieve an historical and philosophical understanding of (1) the nature of the scientific enterprise: interaction of science, technology, and society (STS), (2) how to teach STS including the use of computers and related technologies, and (3) intricacies of sample STS topics.
- SCE 4305 Communication Skills in the Science Classroom (3) ED EDN**
Reading and communication skills important in understanding scientific and science education literature and communicating

findings to others.

SCE 4310 Teaching Elementary School Science (3) ED EDE

PR: Admission to College of Education and completion of General Distribution Requirements in the Natural Science area. Techniques and materials for teaching science in the elementary school.

SCE 4320 Teaching Methods in Middle Grade Science (3) ED EDN

PR: Completion of 25 semester hours of Science or CC. Not designed for high school certification purposes. Survey techniques and materials unique to science, grades 5-9.

SCE 4330 Teaching Methods in the Secondary School-Sciences (3) ED EDN

PR: Completion of 26 hours in approved science areas, EDG 4620 or CP, and CC. Techniques and materials of instruction in secondary school sciences.

SCE 4936 Senior Seminar in Science Education (1-2) ED EDN

PR: Senior standing; CR: SCE 4940. Synthesis of teacher candidate's courses in complete college program.

SCE 4940 Internship: Science Education (1-12) ED EDN

CR: SCE 4936. One full semester of internship in a public or private school.

SCE 5937 Selected Topics in Science Education (1-4) ED EDN**SDS 4040 Introduction to Student Personnel Work in Higher Education (2) ED EDG**

PR: DPR. Study of student personnel services in institutions of higher education. Identification of the needs of students and of the ways to respond to meet these needs. Survey of service units on a campus in terms of structure, organization, funding, etc.

SLS 1101 The University Experience (2) ED EDG

PR: Freshman only. An extended introduction to USF. Topics include purposes of higher education, structure and function of USF, career planning, selecting a major, study skills, managing time, academic advising, computer resources, and decision-making.

SLS 2260 Leadership Fundamentals (3) US STL

Covers a broad range of leadership topics from self-development and understanding of self, to group behavior, organizational design, ethics and teamwork. The potential of every individual to develop effective leadership skills is examined.

SLS 2401 Career Development Process (2) US STL

Students will study vocational choice theories and participate in career decision processes. Development of self-awareness and knowledge of career opportunities and requirements necessary for decision making. Available to lower level majors or non-majors.

SLS 3948 Community Leadership Practicum (3) US STL

PR: SLS 2260, PR: SLS 4272. This course involves the transference of leadership theories into practice. It provides a practical forum for students to examine and develop personal leadership skills.

SLS 4271 Organizational Theories and Processes (3) US STL

PR: SLS 2260 and SLS 4272. Participants will delve into the nature of organizational dynamics, they will utilize concepts, generalizations, theories, and frames of reference to analyze organizations and leadership to understand and improve their function.

SLS 4272 Survey of Leadership Readings (3) US STL

PR: SLS 2260. Survey of historical and contemporary writings on leadership skills and practices. Examines the contextual manner in which the leader functions.

SLS 4273 Theories of Leadership (3) US STL

PR: SLS 2260, PR: SLS 4272. Course focuses on historical and modern views of leadership. Designed to assist students in establishing a general understanding of leadership theories and styles as well as the effects of various leadership theories in specific settings.

SLS 4274 Ethics and Power in Leadership (3) US STL

PR: SLS 2260, PR: SLS 4272. Course reviews arguments for ethics in leadership as proposed by both contemporary and ancient leadership theories. It also examines theories of power and authority, and seeks answers to the apparent dilemmas through applied moral theory and psychology.

SLS 4276 Images of Leadership in Print and Film (3) US STL

PR: SLS 2260, PR: SLS 4272. This course examines the historical development of leadership theory through contemporary times. Surveys literature and other media relevant to role of the leader and to the development and application of leadership skills.

SOP 3742 Psychology of Women SS (3) AS WST

An examination of theories of female personality in historical perspective. Current research on sex differences, socialization, sexuality, psychology of reproduction. Emerging roles of women as related to social change and developmental tasks of the life cycle.

SOP 4004 Social Psychology (3) AS PSY

PR: PSY 3213 with a grade of C or better or CI. Survey of methods,

empirical findings, and theoretical interpretations in the study of an individual's behavior as it is affected by others.

SOP 4330 Social Psychology of HIV/AIDS (3) AS PSY

PR: PSY 2012, PSY 3044, PSY 3213 Students study social psychology theory and research while working at an AIDS service organization. They use the research as a framework for understanding, and developing solutions to, problems confronting the organization's staff and clients.

SOP 4514 The Holocaust, Social Prejudice, and Morality (3) AS PSY

PR: PSY 2012. Examines the Holocaust from social, psychological, and communication/language perspectives. Reviews root causes of prejudice, the manifestations of hatred in language, relationships, and the ultimate impacts on victims and survivors and rescuers.

SOP 4714C Environmental Psychology (3) AS PSY

PR: PSY 3213 with a grade of C or better or CI. Explores the influences of environment on behavior. Topics considered include crowding, privacy, territorial behavior, environmental design, and pollution effects. Designed for both psychology majors and non-majors.

SOW 3101 Human Behavior and the Social Environment I (4) AS SOK

PR: All provisional major courses. Restricted to full Social Work majors, others by School permission. An integrating human behavior-social environment course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with individuals, and families.

SOW 3102 Human Behavior And The Social Environment II (4) AS SOK

PR: SOW 3101, SOW 4522, SOW 4341. Restricted to full Social Work majors; others by School permission. An integrating course emphasizing dynamics of behavior and environmental factors as they relate to social work practice with families, groups, organizations and communities.

SOW 3203 The American Social Welfare System SS (3) AS SOK

A general education introductory course which provides students with a framework for understanding the historical development of American social welfare, its value base, and its response to minorities, women, children, the elderly, and the disabled.

SOW 3302 Introduction to Social Work (3) AS SOK

An introductory course tracing the development of social work as a profession including an examination of the knowledge, skill and attitudinal base of the profession and professional roles and functions.

SOW 3401 Research and Statistics For Social Work (4) AS SOK

PR: All provisional major courses. Restricted to full Social Work majors, others by School permission. The purpose of this course is two-fold: to familiarize the student with research as it is practiced in the profession of Social Work; and to equip the student with those theoretical understandings necessary to be a critical consumer of social work research.

SOW 4233 Social Welfare: Policy & Program (4) AS SOK

PR: All provisional major courses, SOW 3101, SOW 3401, SOW 4341, SOW 4522, SOW 3102, SOW 4343. CR: SOW 4510, SOW 4510L. Restricted to full Social Work majors, others by School permission. An advanced policy course taking an analytical approach to contemporary social welfare policy issues and current social welfare programs.

SOW 4341 Multi-Methods of Social Work Practice I: Micro-System Intervention (5) AS SOK

PR or CR: SOW 3101; SOW 4522. All provisional major courses. Restricted to full Social Work majors; others by School permission. First practice course emphasizing development of skills and interventive methods with individuals, families and small groups. Course includes both didactic and experiential learning components.

SOW 4343 Multi-Methods of Social Work Practice II: Macro-System Intervention (5) AS SOK

PR: All provisional major courses, SOW 3101, SOW 4522, SOW 4341; must be taken as PR. CR: SOW 3401, and SOW 3102. Restricted to full Social Work majors, others by School permission. Second practice course emphasizing intervention at the community and organizational level. Builds upon theoretical and practical content of SOW 4341. Course includes both didactic and experiential learning components.

SOW 4510 Integrative Seminar (3) AS SOK

PR: SOW 3302, SOW 3203, SOW 3101, SOW 3401, SOW 4341, SOW 3102, SOW 4343, SOW 4522. CR: SOW 4233, SOW 4510L. Restricted to full Social Work majors in senior year. Integrates content and theory from core classes with practice experiences students are having in field placement.

SOW 4510L Field Placement (6) AS SOK

PR: SOW 3302, SOW 3203, SOW 3101, SOW 3401, SOW 4341,

- SOW 3102, SOW 4522, SOW 4343. CR: SOW 4233, SOW 4510. SU only. Supervised field placement in a social welfare organization consisting of 32 hours per week in the field with a total of 480 clock hours per semester.
- SOW 4522 Multicultural America (3) AS SOK**
PR: All provisional major courses. The course focuses on the students' understanding of multicultural and intergenerational issues.
- SOW 4900 Directed Readings (1-9) AS SOK**
PR: Completion of four social work courses including SOW 3401, upper level standing, and School permission. Content dependent upon student interest and ability. A contract will be jointly developed by student and instructor specifying nature of work to be completed.
- SOW 4910 Directed Research (1-6) AS SOK**
PR: Completion of four social work courses including SOW 3401, upper level standing and school permission. Majors only. Directed Research is intended to provide students with research experience in areas of specific interest in social work. A contract will be developed between student and instructor specifying nature of work to be completed.
- SOW 4930 Variable Topics in Social Work (1-3) AS SOK**
Restricted to Social Work majors; others by School permission. Variable title courses to expand on the four sequence areas in the Social Work core curriculum. Allows focus on areas relevant to student's educational interest.
- SOW 5930C Selected Topics in Social Work (1-4) AS SOK**
PR: CC. Restricted to Social Work majors, both graduate and undergraduate; other by School permission. Course is taken as an elective. Various title course will selectively expand specific social work content areas.
- SPA 3002 Introduction to Disorders of Speech and Language SS (3) AS CSD**
PR: Junior standing and DPR. The scope of speech-language pathology as a profession and a field of study. An introduction to speech and language disorders, etiologies, major treatment approaches, and research findings.
- SPA 3004 Introduction to Language Development and Disorders (3) AS CSD**
PR: SPA 3002, SPA 3112 or DPR. This course introduces theoretical concepts and research findings concerning the normal developmental process of language learning as a basis for differentiating developmental delay or disorder of language.
- SPA 3011 Introduction to Speech Science (3) AS CSD**
PR: SPA 3030, SPA 3101 and SPA 3112. Concentrated study of the acoustic, physiological and perceptual aspects of sound as related to normal and pathological speech communication. Introduction to instrumentation and measurement procedures.
- SPA 3030 Introduction to Hearing Science (3) AS CSD**
PR: Junior standing, SPA 3101, SPA 3112, SPA 3310. Introduction to the field of hearing including: physics of sound, auditory anatomy and physiology, and psychophysics of hearing.
- SPA 3101 Anatomy and Physiology of the Speech and Hearing Mechanism (3) AS CSD**
PR: Junior standing. The neurological and anatomical basis of communication disorders. Comparisons of normal and pathological organic structures and their functional dynamics.
- SPA 3112 Applied Phonetics in Communication Disorders (3) AS CSD**
PR: Junior standing. Introduction to phonetic analysis of normal and disordered speech, including extensive training in transcription using the International Phonetic Alphabet.
- SPA 3310 Introduction to Disorders of Hearing (3) AS CSD**
PR: SPA 3030 and SPA 3101. The etiology, pathology, and management of disorders of the outer ear, middle ear, inner ear, retrocochlear, and central auditory systems.
- SPA 3612C Basic American Sign Language (4) AS CSD**
PR: DPR. Introduction to American Sign Language (ASL) as used in the deaf community. General discussion of ASL structure and introduction to various manual communication systems and philosophies. Emphasis on building a basic vocabulary. One hour of laboratory course work is included. Open to all majors.
- SPA 3633 American Deaf Culture (3) AS CSD**
PR: SPA 4614C. An overview to American Deaf Culture, including its norms, values and belief systems. This course will also provide insight to deaf history in North America, and the importance of ASL to the culturally Deaf community.
- SPA 3650 Fundamentals of Interpreting (3) AS CSD**
PR: SPA 4615C. An overview of the profession of interpreting, its standards and settings is provided. It provides a basic practical experience component of interpreting and transliterating skills.
- SPA 3651 Intermediate Interpreting/Transliterating (3) AS CSD**
PR: SPA 3650. This course reinforces skill development and the principles of interpreting through drill, practice, and role-play activities. The principles of transliteration will also be demonstrated and practiced through classroom activities. Students will practice from audio taped, and live voice materials, and will learn the techniques of self-assessment through videotaping.
- SPA 3653 Overview of Language Learning in Deaf Children (3) AS CSD**
PR: Admission to ITT Program. CR: SPA 3653L. This course is restricted to majors only. Overview of language development of deaf children from infancy through young adulthood, including various theories of language development in the deaf and communication/language of the deaf assessment techniques, and interpreting skills relating to learning processes.
- SPA 3653L Overview of Language Learning in Deaf Children Lab (1) AS CSD**
PR: Admission to ITT Program. CR: SPA 3653. This course is restricted to majors only. An exploration and overview of communication modes and language used in public school settings by deaf children. Includes a study of how systems overlap and a development of flexibility in using different modes and languages, and the implications for interpreters.
- SPA 3660 Introduction to Interpreting in Public Schools (3) AS CSD**
PR: Admission to ITT Program. CR: SPA 3660L. This course is designed for ISI majors but may be elected by non-majors. This course introduces the overview of the roles and responsibilities of interpreters for the deaf working in public school classes grades K - 12 and the overview of historical and current public school practices in educational interpreting in the U.S.
- SPA 3660L Introduction to Interpreting in Public Schools Lab (1) AS CSD**
PR: Admission to ITT Program. CR: SPA 3660. The lab assists students in assessing and improving their interpreting and transliterating skills through videotapes of simulated interpreting assignments.
- SPA 3673 Introduction to Auditory Functions (3) AS CSD**
PR: Admission to ITT Program. This course is restricted to majors. An overview of hearing science and speech science relating to the educational environment. This course orients the student to the variables extent in oral-aural communication among children who have hearing impairment. It addresses techniques and methods of hearing measurement and amplification of sound as well as the interpreter's role in audiological evaluation and speech language therapy.
- SPA 4000 Communication Disorders in the Public Schools (3) AS CSD**
PR: DPR. (Non-major course only). An examination of the speech, language and hearing problems affecting school-age children and the classroom teacher's role in the detection, prevention and amelioration of communication disorders.
- SPA 4050 Introduction to the Clinical Process MW (3) AS CSD**
PR: SPA 3004 and SPA 3310. Observation and participation in speech-language pathology and audiology practicum in the University clinical laboratory. Ethical issues, multicultural concerns, and creativity are stressed through clinical and practical projects.
- SPA 4201 Phonological Development and Disorders (3) AS CSD**
PR: SPA 3004, SPA 3011. An examination of normal and deviant articulatory and phonological acquisition and behavior. Presentation of major theoretical orientations and the therapeutic principles based upon them.
- SPA 4210 Vocal Disorders (3) AS CSD**
PR: SPA 3011 and SPA 3310. A comprehensive study of the medical and physical aspects of voice disorders. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be stressed.
- SPA 4222 Fluency Disorders (3) AS CSD**
PR: SPA 4201. A comprehensive study of disfluent speech behavior. Differential diagnosis, principles of therapeutic intervention, and procedures for children and adults will be studied. Major theories and models of the development and origin of stuttering are also presented.
- SPA 4335 Sign Language Codes (3) AS CSD**
PR: DPR. A review of the sign systems (SEE I, SEE II, L.O.V.E., and Signed English) used to code messages through the use of sign. The student will have the opportunity to practice one of the sign systems.
- SPA 4555 Counseling of Communicatively Handicapped and Family (3) AS CSD**
PR: SPA 3011 and SPA 3310. Discussion of role of counseling in the treatment of communication disorders. Based on exploration of theoretical constructs, this course demonstrates application of therapeutic methodologies to reduction of communication handicaps.

SPA 4613C Intermediate American Sign Language (4) AS CSD
PR: SPA 3612C, DPR. A continuation of the basic course which expands the student's signing skills and introduces American Sign Language (ASL) idioms. Provides a greater opportunity for skill development in ASL structure and idiomatic usage. One hour of laboratory course work is included.

SPA 4614C Advanced American Sign Language (4) AS CSD
PR: SPA 4613C, DPR. A continuation of the study of American Sign Language (ASL) at the advanced skill level. Added emphasis on idioms, body language, and facial expression as an integral part of ASL. An hour of laboratory course work is included.

SPA 4615C American Sign Language 4 (4) AS CSD
PR: SPA 4614C. This course is a continuation of the study of American Sign Language (ASL) at the highly advanced level. It provides added emphasis on skill development of the language, including storytelling and poetry. One-hour laboratory course work is included.

SPA 4617C Structure of Sign Language (4) AS CSD
PR: SPA 3612C and SPA 4613C. This course is a basic introduction of semiotic and linguistic consideration of American Sign Language (ASL). It includes aspects of phonology, morphology, syntax, semantics, and discourse of ASL. A one-hour laboratory is incorporated into the coursework.

SPA 4626 Fundamentals of Fingerspelling (2) AS CSD
PR: DPR. A concentrated study of technique in fingerspelling emphasizing clarity and rhythm in expression as well as receptive understanding.

SPA 4632 Nature and Needs of the Deaf and Hard of Hearing (3) AS CSD
A study of the effects of auditory disorders upon the organization and expression of behavioral patterns as they relate to motivation, adjustment and personality.

SPA 4652 Legal, Ethical, and Technical Issues of Working with Deaf (3) AS CSD
Restricted to majors. Provides the discussion of ethical, procedural, communication, as well as legal issues and activities that apply their interpreting skills in educational situations. Focuses on the professionalism and integration of their roles into educational settings.

SPA 4654 ASL to English Interpreting (3) AS CSD
PR: SPA 3651. This course focuses on skills development and the principles of sign to voice interpreting and transliterating through drill practice, role-play, and projects. Students will practice from video taped and live materials, and will learn the techniques of self-assessment through videotaping.

SPA 4662 Interpreting in Public Schools I (3) AS CSD
PR: Admission to ITT Program. CR: SPA 4386L. This course is restricted to majors only. This course provides techniques for interpreting instructional/non-instructional activities and the development of communication modes and languages used by deaf children. Includes interpreting practices and understanding teaching methods.

SPA 4662L Interpreting in Public Schools I Lab (1) AS CSD
PR: Admission to ITT Program. CR: SPA 4386. This course is restricted to majors only. This course provides practical application of interpreting the subjects taught in the public school classes. Discussion includes class goals, instructional style, interpreter roles and ethics, language or mode choice, and analysis of the classroom for accessibility and appropriateness for interpreting.

SPA 4663 Interpreting in Public Schools II (3) AS CSD
PR: SPA 4386, SPA 4386L. CR: SPA 4662L. This course is restricted to majors only. This course provides advanced techniques for interpreting instructional/non-instructional activities and the development of communication modes and languages used by deaf children. Includes interpreting practices and understanding teaching methods.

SPA 4663L Interpreting in Public Schools II Lab (1) AS CSD
CR: SPA 4662. This course is restricted to majors only. This course provides advanced assessment of interpreting skills and interpreting integration of targeted school classes and activities. Selection criteria for using a particular sign system, mode, or language will be assessed and discussed in individualized meetings.

SPA 4685 Practicum: Interpreting in Schools (1-8) AS CSD
This course is restricted to ITT majors. This course provides practice sessions in school settings under supervision of an experienced interpreter and course instructor. Each practicum student will shadow an interpreter, and participate in discussion about the overall performance.

SPA 4930 Selected Topics (1-6) AS CSD
PR: DPR. Intensive study of topics in Speech-Language Pathology, Audiology, and/or Aural Rehabilitation conducted under the

supervision of a faculty member.

SPA 5132 Audiology Instrumentation (2) AS CSD
PR: DPR. Calibration, usage, and specific applications of specialized instruments available for dealing with the identification and measurement of hearing disorders.

SPA 5150 Advanced Speech Science (3) AS CSD
PR: SPA 3011 or equiv., SPA 5150L, and DPR. Advanced study of the acoustics, production, and perception of normal and disordered speech.

SPA 5150L Speech Science Instrumentation (3) AS CSD
PR: DPR or SPA 3011 or equivalent. Underlying principles and laboratory exercises in the use of audio recording, acoustic analysis, and clinical instrumentation.

SPA 5204 Advanced Clinical Phonology (3) AS CSD
The principles of generative phonology will be applied to the assessment and treatment of phonological disorders. Emphasis is placed on making a child's phonology more functional for communication purposes.

SPA 5303 Advanced Hearing Science (3) AS CSD
PR: DPR. The study of the physiological acoustics of the auditory periphery; the neuroanatomy and electrophysiology of the central auditory system; and psychoacoustic principles as they relate to clinical audiology measurement paradigms.

SPA 5312 Peripheral and Central Auditory Tests (4) AS CSD
PR: DPR. The study of behavioral and electrophysiologic clinical tests designed to assess the functions of the peripheral and the central auditory system. Tests that incorporate nonspeech stimuli and those that utilize speech stimuli will be included.

SPA 5328 Aural Rehabilitation: Adults (3) AS CSD
PR: DPR. This course is designed to provide information about and strategies for aural rehabilitation intervention with hearing-impaired adults. Topics covered include: speech reading, auditory training, hearing and assistive listening devices.

SPA 5408 Language-Learning in the School-Age Years (3) AS CSD
PR: SPA 4201 and DPR. Metalinguistic and metacognitive development are linked to the interactional demands of classroom and clinical discourse; observational tools are applied to evaluation and intervention planning.

SPA 5506 Speech-Language Pathology and Audiology Practicum (1-8) AS CSD
PR: DPR. Participation in speech-language pathology and audiology practicum in the University Communication Disorders Center and selected field settings.

SPA 5552 Diagnostic Principles and Practices (3) AS CSD
PR: Admission to the graduate program or DPR. The administration, evaluation, and reporting of diagnostic tests and procedures used in assessment of speech and language disorders.

SPC 2541 Persuasion SS (3) AS SPE
Examines the role of persuasion in public and social life. Students will be introduced to key concepts and theories of persuasion from a variety of historical and contemporary perspectives. Students will use these concepts to create, analyze, and respond to persuasive messages.

SPC 2600 Public Speaking SS (3) AS SPE
The nature and basic principles of human communication; emphasis on improving speaking and listening skills common to all forms of oral communication through a variety of experience in public discourse.

SPC 3212 Communication Theory (3) AS SPE
PR: Junior standing or CI. The study of source, message, and receiver variables in human communication; communication settings; descriptive and predictive models of communication; communication as a process.

SPC 3230 Rhetorical Theory HP (3) AS SPE
This course surveys the foundations and historical evolution of major concepts, issues, theorists, and approaches to the study of rhetoric from Plato to recent contemporary theorists.

SPC 3301 Interpersonal Communication SS (3) AS SPE
A study of interpersonal communication in informally structured settings with emphasis on the understanding, description, and analysis of human communication.

SPC 3425 Group Communication 6A (3) AS SPE
PR: Junior standing or CI. A survey of theory and research in group communication. Group discussions and communication exercises to increase awareness of the dynamics of human communication in small group settings.

SPC 3513 Argumentation and Debate (3) AS SPE
PR: Junior standing or CI. Study of principles of argumentation as applied in oral discourse, analysis of evidence and modes of reasoning. Practice in debate preparation and delivery.

- SPC 3602 Advanced Public Speaking (3) AS SPE**
PR: SPC 2600 or CI. Study and application of communication strategies in speaking extemporaneously and from manuscript. The course includes study of selected public addresses as aids to increased understanding of speaking skills.
- SPC 3631 Rhetoric of the Sixties HP (3) AS SPE**
Survey of the rhetorics associated with the civil rights movement, the Great Society, the anti-Vietnam War movement, the counterculture, the black power movement, and the women's movement.
- SPC 3653 Popular Forms of Public Communication (3) AS SPE**
PR: Junior standing or CI. Analysis of public communication with emphasis on various presentational forms.
- SPC 3680 Rhetorical Analysis (3) AS SPE**
This course introduces students to fundamentals of message analysis. Student examines persuasive strategies and language in oral and written discourse.
- SPC 3710 Communication and Cultural Diversity SS (3) AS SPE**
Examination of communication and cultural diversity within the United States. Cultural groups include racial and ethnic (e.g., African American, Latino American, Asian American), social class, age and generation, religious (e.g. Jewish) and gender.
- SPC 4201 Oral Tradition MW (3) AS SPE**
Study of orality, its forms, functions, and transformations, in traditional and literate societies from folkloric and psychological traditions and from contemporary communication and cultural studies perspectives.
- SPC 4305 Communicating Emotions 6A (3) AS SPE**
PR: Junior/Senior standing or CI. Study of emotional experience, what emotions mean to us, how we talk about them, and the ways group and cultural membership influence them. Focus on attachment and loss in romantic, family and group relationships.
- SPC 4310 Relationships on Film (3) AS SPE**
Examination of the ways in which cinema inscribes conceptions and meanings of romance, love, intimacy and sexuality. Focus on systems of interpretation fostered by cinema representations of intimacy, sexuality, emotional, subjectivity, and betrayal.
- SPC 4431 Family Communication (3) AS SPE**
Examines the processes and functions of communication in family relationships. Examination of scholarly and popular literature on family structure, family systems, family development, and family stories. Analysis of families in fiction and cinema.
- SPC 4632 Rhetoric and Social Change 6A MW (3) AS SPE**
PR: SPC 3230 or SPC 3681. This course examines how social change is symbolized and motivated in the rhetorics of institutions, campaigns, social movements and individuals.
- SPC 4683 Rhetorical Analysis of Mass Media (3) AS SPE**
PR: SPC 3230 or SPC 3681; Open to non-majors with CI. An introduction to the criticism of media forms and effects. Contemporary perspectives of the aesthetic and persuasive dimensions of mass media are examined. Students will engage in critical study of media artifacts.
- SPC 4714 Communication, Culture and Community MW(3) AS SPE**
Examines the relationships among culture, communication, institutions, and public and private life. Students explore the possibilities and problems of contemporary forms of community through service in a volunteer organization.
- SPC 4900 Directed Readings (1-3) AS SPE**
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and CI. Maximum 6 hours.
- SPC 4903 Honors Readings (3) AS SPE**
PR: Admission to Communication Honors Program. Focused readings directed toward preparation of a proposal for an undergraduate honors thesis.
- SPC 4905 Undergraduate Research (1-3) AS SPE**
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and CI. Maximum 6 hours. Individual investigations with faculty supervision.
- SPC 4930 Selected Topics (1-3) AS SPE**
PR: Senior standing, minimum GPA 2.5, 15 hours of core requirements and 9 elective hours completed, and CI. Variable topics.
- SPC 4932 Senior Seminar in Communication (3) AS SPE**
PR: Senior standing, minimum GPA 3.0, 15 hours of core requirements and 9 elective hours completed, and CI. Communication major. Exploration of selected topics of current significance to the several areas of communication through group discussion and research.
- SPC 4970 Honors Thesis (3) AS SPE**
PR: Admission to Communication Honors Program. Involves individual research and preparation of an undergraduate honors thesis.
- SPC 5238 Topics in Rhetorical Analysis (3) AS SPE**
Introduces a variety of critical perspectives applied to rhetoric in specialized contexts. Topics vary depending upon interest of students and faculty.
- SPC 5930 Topics in Discourse (3) AS SPE**
Variable topics course.
- SPN 1120 Beginning Spanish I (4) AS WLE**
CR: SPN 1120L. Not open to native or near-native speakers of Spanish. Development of basic skills in listening and reading comprehension, speaking and writing of Spanish.
- SPN 1120L Beginning Spanish I Laboratory (1) AS WLE**
CR: SPN 1120. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- SPN 1121 Beginning Spanish II (4) AS WLE**
PR: SPN 1120 or equivalent. CR: SPN 1121L. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.
- SPN 1121L Beginning Spanish II Laboratory (1) AS WLE**
CR: SPN 1121. Concurrent enrollment with a lecture session is required, and, if dropped, then dropped simultaneously. Not open to native or near-native speakers of Spanish. S/U only. A laboratory designed to offer additional practice using various instructional technologies and media.
- SPN 1130 Accelerated Spanish For Near-Native Speakers and Others (1-6) AS WLE**
PR: CI. Accelerated course for near-native speakers and others with some knowledge of Spanish capable of making rapid progress.
- SPN 2200 Spanish III (3) AS WLE**
PR: SPN 1121 or equivalent. May NOT be taken concurrently with SPN 2201. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.
- SPN 2201 Spanish IV (3) AS WLE**
PR: SPN 2200 or equivalent. May NOT be taken concurrently with SPN 2200. Not open to native or near-native speakers of Spanish. Continued development of basic skills in listening and reading comprehension, speaking and writing of Spanish.
- SPN 2240 Conversation I (3) AS WLE**
PR: SPN 2201. Not open to native or near-native speakers of Spanish. For development of basic conversational skills.
- SPN 2241 Conversation II (3) AS WLE**
PR: SPN 2240 or equivalent. Not open to native or near-native speakers of Spanish. To improve fluency in spoken Spanish.
- SPN 2270 Overseas Study (1-6) AS WLE**
PR: SPN 1121. Prior departmental approval and early registration are required. An intensive study-travel program in a Spanish-speaking country.
- SPN 3300 Advanced Spanish Grammar and Composition (3) AS WLE**
PR: SPN 2201 or equivalent. Not open to native or near-native speakers of Spanish. A study of syntax, grammar and writing.
- SPN 3340 Advanced Spanish for Native Speakers I (3) AS WLE**
PR: Native and near-native oral/aural proficiency. May not count as Spanish major elective. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish speaking country, but without formal training in the language. Emphasis on cultural exploration and the grammatical problems of such speakers.
- SPN 3341 Advanced Spanish for Native Speakers II (3) AS WLE**
PR: SPN 3340. May not count as Spanish major elective. Continuation of SPN 3340. Course for native and near-native speakers of Spanish due to home environment and/or residence in a Spanish speaking country, but with limited or no training in the language. Emphasis on grammar problems affecting such speakers.
- SPN 3440 Spanish for Business and International Trade I (3) AS WLE**
PR: SPN 2201 or equivalent. A study of vocabulary and business practices of the Spanish speaking world. Overview of cultural differences within the Spanish speaking world, with emphasis on their impact on business and international trade.
- SPN 3441 Spanish for Business and International Trade II (3) AS WLE**
PR: SPN 3440 or equivalent. Open to Spanish and Business majors and minors. Continuation of SPN 3440. A study of vocabulary and business practices of the Spanish speaking world. Overview

378 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

of cultural differences within the Spanish speaking world, with emphasis on their impact on business and international trade.

SPN 3500 Spanish Civilization (3) AS WLE
PR: SPN 2201 or equivalent. The culture and civilization of Spain. For majors and non-majors.

SPN 3520 Spanish American Civilization (3) AS WLE
PR: SPN 2201 or equivalent. Readings and discussions on the culture and civilization of Spanish America. For majors and non-majors.

SPN 4301 Expository Writing (3) AS WLE
PR: SPN 3300 or SPN 3340. Practical training in contemporary Spanish structure, usage and stylistic devices.

SPN 4410 Advanced Conversation (3) AS WLE
PR: SPN 2241 or equivalent. Not open to native or near-native speakers of Spanish. Intensive practice in the formulation and expression of ideas in standard Spanish.

SPN 4470 Advanced Overseas Study (1-6) AS WLE
PR: SPN 2270. Departmental approval required. Intensive language study in Spain.

SPN 4700 Spanish Linguistics (3) AS WLE
PR: LIN 3010 or equivalent (may be taken concurrently with CI) and SPN 2201 or equivalent. An introduction to Hispanic linguistics: Phonology, morphology, syntax, and lexicography.

SPN 5525 Modern Spanish American Civilization (3) AS WLE
PR: SPN 3520 or equivalent or graduate standing. Advanced readings and discussions dealing with Spanish American civilization and culture, including a study of social, artistic and political trends. Text and discussion in Spanish.

SPN 5567 Modern Spanish Civilization (3) AS WLE
PR: SPN 3500 or equivalent or graduate standing. Advanced readings and discussions dealing with contemporary Spanish civilization and culture, including a study of recent social, artistic and political trends. Texts and discussions in Spanish.

SPW 3030 Introduction to Hispanic Literary Studies (3) AS WLE
PR: SPN 3300 or SPN 3340. Prose fiction, drama, poetry, and essay; techniques of literary analysis.

SPW 4100 Survey of Spanish Literature I (3) AS WLE
PR: SPW 3030 or equivalent. A study of Spanish literature from its origins through the 17th century.

SPW 4101 Survey of Spanish Literature II (3) AS WLE
PR: SPW 3030 or equivalent. A study of the later periods of Spanish literature.

SPW 4131 Survey of Spanish-American Literature II (3) AS WLE
PR: SPW 3030 or equivalent. An introduction to the study of Spanish-American literature from the Modernism period to the present. Emphasis on modern writers since Dario.

SPW 4900 Directed Study (1-3) AS WLE
Departmental approval required.

SPW 4930 Selected Topics (1-3) AS WLE
Study of an author, movement or theme.

SPW 5135 Colonial Spanish American Literature (3) AS WLE
PR: SPW 4131. Introduction to Colonial Spanish American Literature from the discovery through the Romantic Period.

SPW 5355 Spanish American Drama and Poetry (3) AS WLE
PR: SPW 4131. Major writers of all genres. Emphasis on modern writers.

SPW 5387 Spanish American Prose (3) AS WLE
PR: SPW 4131. Emphasis on the gaucho theme and contemporary prose fiction.

SPW 5388 Golden Age Poetry and Drama (3) AS WLE
PR: SPW 4100. Lope de Vega, Alarcon, Tirso, Calderon, and others.

SPW 5405 Medieval Literature (3) AS WLE
PR: SPW 4100 or equiv. Course gives an in-depth study of principal works and authors of the period such as El Poema de Mio Cid, Libro de Buen Amor, and La Celestina.

SPW 5465 19th Century Literature (3) AS WLE
PR: SPW 4101. An appreciation of the romantic and realist periods in Spanish literature.

SPW 5605 Cervantes (3) AS WLE
Cervantes' masterpiece Don Quijote de la Mancha.

SPW 5725 Generation of 1898 (3) AS WLE
PR: SPW 4101. The major figures of the period and their main followers.

SPW 5726 Vanguard Literature 1918 and 1936 (3) AS WLE
PR: SPW 4101. A study of Vanguard literature in Spain between 1918 and 1936.

SPW 5934 Selected Topics (3) AS WLE
PR: Upper-level or GS. Study of an author, movement, or theme.

SSE 4313 Teaching Elementary Grades Social Studies (3) ED EDE
PR: Admission to College of Education or CI. This course is

designed to study techniques and strategies employed by social studies teachers that are effective in motivating elementary school aged youth to acquire the information, skills, and modes of reasoning unique to the social sciences. Students are expected to plan and present instructional plan(s) demonstrating use of various methods, techniques, and materials that achieve concrete outcomes. Theoretical foundations of social studies are also examined.

SSE 4333 Teaching Middle Grades Social Science (3) ED EDW
This course is designed to study techniques and strategies employed by social sciences teachers that are effective in motivating teenage youth to acquire the information, skills, and modes of reasoning unique to the social sciences. Students are expected to plan and present instructional plan(s) demonstrating use of various methods, techniques, and material that achieve concrete outcomes. Theoretical foundations of social studies are also studied. Field work is required.

SSE 4334 Teaching Secondary Grades Social Science (3) ED EDW
PR: SSE 4333. This course is a continuation of SSE 4333 with further development of the instructional techniques and strategies and the information, skills, and modes of reasoning unique to the social sciences with an emphasis on the secondary school environment. The teaching profession, school settings, legal, and classroom management issues are also studied. Fieldwork in a high school is required.

SSE 4380 Global And Multicultural Perspectives in Education MW (3) ED EDW
PR: EDG 3604 and EDG 4620, or DPR. Examination of the major issues surrounding global and multicultural perspectives in education. Available to non-Education majors.

SSE 4600 Reading and Basic Skills in the Social Studies Class (3) ED EDW
Reading skills and other basic skills as applied to the social studies are examined. Students plan and present instruction appropriate to the social studies classroom. Fieldwork in middle or senior high schools is required. Restricted to majors.

SSE 4640 Communication Skills in the Social Sciences (2) ED EDW
PR: SSE 4333, SSE 4334 This course emphasizes preparation for instruction and demonstration of instructional techniques in social sciences covered in SSE 4333 and SSE 4334 with an emphasis on students developing their communication, presentation, and organizational skills.

SSE 4670 Economics USA: Principles of Economics for Teachers (3) ED EDW
S/U only. A television course focusing on content and teaching methodology related to micro/macro economic principles.

SSE 4936 Senior Seminar in Social Science Education (2) ED EDW
PR: Senior standing; CR: SSE 4940. Synthesis of teacher candidate's courses and preparation for the professional interview and application process.

SSE 4940 Internship: Social Science Education (1-12) ED EDW
CR: SSE 4936. S/U only. One full semester of internship in a public or private school. In special programs where the intern experience is distributed over two or more semesters, students will be registered for credit which accumulates from 9 to 12 Semester hours.

SSE 5331 Foundations, Curriculum & Instruction of Social Science Education (3) ED EDI
Social studies curriculum, methods of instruction and social, philosophical and psychological foundations are examined. Students are expected to plan and present instructional plan(s) appropriate to middle and secondary school levels demonstrating command of the course content.

SSE 5332 Methods & Strategies in Social Science Education (3) ED EDI
Social studies methods and strategies are examined with an emphasis on the secondary school environment. The teaching profession, school settings, and current issues are examined. Students are expected to plan and present instructional plan(s) appropriate to senior high school demonstrating command of the course content.

SSE 5336 Teaching Social Science Themes (3) ED EDI
PR: SSE 5331, 5332; SSE Majors only. The course is a laboratory-based, capstone course in which the knowledge, skills, and dispositions learned in SSE 5333 and SSE 5334 are brought together and demonstrated by students teaching social studies content using the thematic approaches adopted by the National and State accrediting bodies.

SSE 5641 Reading and Basic Skills in the Content Area (3) ED EDI

Reading skills and the other basic skills as applied to the social studies are examined. Students are expected to plan and present instructional plan(s) appropriate to the social studies classroom demonstrating command of the course content. Fieldwork in a middle school is required.

SSE 5644 Economic Decision-Making for Teachers (3) ED EDW
PR: Admission to College of Education or DPR. Provides teachers (K-12) with content related to the operation of businesses in a market economy. Teachers analyze economic/business concepts from the perspective of individuals currently operating businesses in the Tampa Bay area. Focus of the instruction is on the application of content to K-12 instructional programs.

STA 1023 Basic Statistics 6A QM (3) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. No credit for Mathematics majors. Basic philosophy of statistical thinking. Acquisition of data. Techniques for organizing and presenting statistical data. Sample mean, variance and standard deviation. Statistical decisions—estimation and hypothesis testing. Design of experiments, linear association and prediction. Statistical software: MINITAB.

STA 2023 Introductory Statistics I 6A QM (4) AS MTH
PR: C (2.0) or better in MAT 1033, or 440 or better SAT Math score, or 19 or better ACT Math Score, or 72 or better Elementary Algebra CPT score. No credit for Mathematics Majors. Descriptive statistics, basic probability principles, discrete and continuous probability distributions: binomial, Poisson, uniform, normal, t, chi-square and F; point estimation, confidence limits, hypothesis testing, correlation analysis and linear regression. Emphasis on applications to social sciences, life sciences, physical sciences, engineering and business.

STA 2122 Social Science Statistics 6A QM (3) AS ISS
Descriptive and inferential statistics - through ANOVA, correlation-regression, chi-square and now-parametrics. The course presents statistics with the view that numbers are a limited, but important aspect of understanding the world. Draws concepts and hypothesis from a wide range of disciplines.

STA 3024 Introductory Statistics II 6A (3) AS MTH
PR: STA 2023 or CC. Factorials, ANCOV; multiple curvilinear regression; response surfaces; Latin squares, Split Plots, incomplete designs; distribution free methods.

STA 4321 Introduction to Statistics 6A (3) AS MTH
PR: STA 4442. Basic statistical methods. Estimation, hypothesis testing, regression, ANOVA, and nonparametric methods.

STA 4442 Introduction to Probability 6A (3) AS MTH
PR: MAC 2313. Introduction to probability theory using calculus. Basic ideas of probability and random variables, discrete probability functions, continuous probability densities, joint distributions, transformations of random variables, moments and generating functions of random variables, limit theorems.

STA 5166 Computational Statistics I (3) AS MTH
PR: STA 4321 and CGS 3422, or CI. Statistical analysis of data by means of statistics package programs. Regression, ANOVA, discriminant analysis, and analysis of categorical data. Emphasis is on inter-relation between statistical theory, numerical methods, and analysis of real life data.

STA 5228 Sampling Techniques (3) AS MTH
PR: STA 4321 or CI. Sampling versus total enumeration. Planning of a survey. Statistical sampling methods and their analysis; simple, stratified, systematic cluster, and double and multistage sampling. Use of auxiliary information in sampling. Ratio and regression estimates. Case study.

STA 5326 Mathematical Statistics (3) AS MTH
PR: STA 5446. Sample distribution theory, point & interval estimation, optimality theory, statistical decision theory, and hypothesis testing.

STA 5446 Probability Theory I (3) AS MTH
PR: STA 4442 and MAA 4212 or CI. Axioms of probability, random variables in Euclidean spaces, moments and moment generating functions, modes of convergence, limit theory for sums of independent random variables.

STA 5526 Non-Parametric Statistics (3) AS MTH
PR: STA 5326 or CC. Theory and methods of non-parametric statistics, order statistics, tolerance regions, and their applications.

SUR 2101C Engineering Land Surveying (3) EN EGY
Principles of land surveying for engineering practice. Traverses, levels, boundary surveys, route surveys, coordinate geometry, and mapping.

SYA 3010 Classical Theory (3) AS SOC
PR: SYG 2000 or CI. The analysis of the philosophical foundations, central principles, and historical development of Sociological

theory. Required for Sociology majors and minors.

SYA 3015 Contemporary Theory (3) AS SOC
PR: SYA 3010 and SYG 2000 or CI. An examination of recent trends in sociological theory. Emphasis is on theories examining symbolic interactions, lived experience, popular culture, and social structures.

SYA 3202 Constructing Social Problems (3) AS SOC
Examination of how activists, media, politicians, and scientists construct public images of social problems; analysis of the process of forming social policy and how public images of social problems shape the characteristics of social service agencies.

SYA 3300 Research Methods (3) AS SOC
PR: STA 2122 or equivalent. Introduction to the scientific method and its application to social science research. Research design, sampling techniques, and critical evaluation of social research. Required for Sociology majors.

SYA 3310 Qualitative Inquiry 6A LW (4) AS SOC
PR: SYG 2000 or CI. DPR. Exploration of human relationships and behaviors, organizations, and the larger culture through research techniques such as interviews, participant observation, life histories, and narratives.

SYA 4910 Individual Research (1-3) AS SOC
PR: Four courses in sociology, including SYA 3300, upper level standing, at least 3.0 overall GPA, or CI. DPR. Content depends on the interest of the student. A contract between the student and the sponsoring faculty member must be signed before class registration.

SYA 4930 Topics in Sociology (3) AS SOC
Selected specialized topics in Sociology. Topics such as AIDS in society, drugs in society, problems in education, sociology of childhood, public life, socio-biology. Content will vary by semester and by section. See class schedule for specific contents each semester. This course, in different content areas, may be repeated for credit.

SYA 4935 Senior Seminar MW (3) AS SOC
PR: Senior standing, SYG 2000, SYA 3010, SYA 3300 plus 6 hours of Sociology electives. Majors only. DPR. The opportunity for senior Sociology majors to apply theory and methods to a selected topic of relevance in today's society. Topic changes by instructor.

SYA 4949 Sociological Internship (1-6) AS SOC
PR: Senior or graduate standing in Sociology plus CI. Supervised placement in community organization or agency for a minimum of 10 hours of volunteer work per week, and a weekly seminar on applying sociological skills and methods in the placement setting.

SYD 3441 Peasant Perspectives AF (3) AS SOC
PR: SYG 2000 or 6 hours of other Social Sciences Gen. Ed. coursework or CI. Examines the applicability of sociological concepts to peasant life around the world, and explores the roles played by "western" societies in creating and sustaining the conditions under which peasants live.

SYD 3700 Racial and Ethnic Relations SS HP (3) AS SOC
Comparative study of interracial relations, social tensions, attitudes, and modes of adjustment in various areas of the world.

SYD 4410 Urban Sociology (3) AS SOC
The social structure of the community in modern industrial societies. Analysis of community change.

SYD 4411 Urban Life (3) AS SOC
PR: SYG 2000 This course provides a number of insights into how living in cities has changed throughout history, how it varies culturally, and how it has been theorized in sociology.

SYD 4800 Gender and Society (3) AS SOC
Historical and current issues surrounding gender in America. Emphasis on exploring the causes, meaning, and consequences of gender differences, interpersonal relationships, and institutional participation.

SYG 2000 Introduction to Sociology SS (3) AS SOC
An introduction to sociological perspectives and methods and the basic areas of sociological interests such as socialization, gender, race and ethnic relations, deviance, social control, and social stratification. Required for Sociology majors and minor.

SYG 2010 Contemporary Social Problems SS (3) AS SOC
The analysis of social causes and dimensions of major public issues such as crime, the environment, inequality, gender, employment, and substance abuse.

SYG 2412 Marriage (3) AS SOC
Study of pre-marital relations. Social, cultural, and personal factors related to success and failure in mate selection and marriage. Does not count for sociology major credit.

SYG 3235 Latina Lives AF (3) AS SOC
An exploration of the experiences of Latinas in the United States.

Uncover and examine such sociological themes as oppression, migration, work, family, activism, spirituality, and sexuality through short stories, poetry, and scholarly research.

SYO 3120 Sociology of Families (3) AS SOC

With a goal to understand American families in the present, this course will examine variations in family types by social class, race, ethnicity, and historical era. Exploration of current controversies about how families should be organized and about what they should do for their members as well as social policies related to families.

SYO 3200 Sociology of Religion (3) AS SOC

PR: SYG 2000 or CI. An examination of the meanings of religion lived in experiences in the contemporary United States. Includes the construction and maintenance of religious meanings and communities, the impact of those meanings and communities on daily lives, use and impact of religious discourse in daily lives, social movements motivated by religious beliefs.

SYO 3500 Social Organization (3) AS SOC

PR: SYG 2000 or CI. Social organization in the broadest sense, including institutions and associations, as well as variations in role and status.

SYO 3530 Poverty, Inequality, and Stratification (3) AS SOC

Introduction to one of the most common features of modern society, social inequality. A survey of perspectives to explain the causes of inequality and reasons for its persistence.

SYO 4250 Sociology of Education (3) AS SOC

PR: SYG 2000 Application of sociological theory to the social institution of education. Primary attention directed toward the social organization of educational systems.

SYO 4300 Political Sociology (3) AS SOC

PR: SYG 2000 or CI. An examination of the social factors that affect government, politics, and political behavior.

SYO 4370 Occupations and Professions (3) AS SOC

PR: SYG 2000 or CI. A comparative analysis of professions, particularly medicine, law, teaching, allied health professions, engineering. Focus on the process of professionalizing service occupations like police work, business management, public administration and social work.

SYO 4400 Medical Sociology (3) AS SOC

PR: SYG 2000 or CI. The study of disease and the sick person including the analysis of health practices, beliefs, and practitioners, the hospital as an organization, the cost, financing, and politics of health care.

SYO 4430 Disability and Society MW (3) AS SOC

PR: SYG 2000 or CI. Examination of the applicability of sociological concepts to the experience of disability, and of disability as a means to a better understanding of the nature of social experience.

SYP 3000 Social Psychology SS (3) AS SOC

An exploration of the social forces that help shape individual perceptions, behaviors, and personality. The study of ways individuals develop identity and self-worth.

SYP 3060 Sociology of Sexualities (3) AS SOC

Explores the interactions, among and between people, and people and institutions that form the boundaries through which sexualities are understood in the United States. Addresses interactions with and within medical and religious institutions, racial/ethnic cultures, families and popular culture.

SYP 3562 Family Violence (3) AS SOC

An exploration of the complexity of the causes and consequences of physical and emotional violence among family members. Topics include the meanings and behaviors of violence, the process of help-seeking, and social interventions for offenders and victims. Open to nonmajors.

SYP 4420 Consumer Culture 6A MW LW (3) AS SOC

PR: SYG 2000 or CI. The exploration of how Americans' purchasing behavior connects to larger historical shifts in our economy, including disenchantment, alienation, inequality, and the rise of the credit card society.

SYP 4510 Sociological Aspects of Deviance (3) AS SOC

The examination of the social construction of deviance: how deviance is defined, implications of deviance designations. Applications of theories of deviance to questions such as motivations of deviants and implications of criminal justice processing of deviants.

SYP 4530 Sociology of Juvenile Delinquency (3) AS SOC

Sociological issues in defining delinquency; the nature of adolescence and delinquency; sociological theories of the causes of delinquency; types and consequences of social control applied to delinquents.

TAX 4001 Concepts of Federal Income Taxation (3) BA ACC

PR: ACG 2021. Major concepts used in taxation of income by federal government including enactment of tax laws, basic tax

research, preparation of basic tax returns and exploration of tax policy issues.

TAX 5015 Federal Taxation of Business Entities (3) BA ACC

PR: TAX 4001 with a grade of "C" or better (not C-). Tax issues encountered by small businesses. Includes tax planning, capital formation and preservation, tax compliance and tax alternatives.

THE 2020 Introduction to Theatre (3) VP TAR

An introduction to the art of theatre as part of the larger context of the nature of art itself. The approach will be both chronological and multi-cultural. Required of all theatre majors.

THE 2090 Languages of the Stage FA (3) VP TAR

Focuses on the variety of approaches to theatrical performance. The purpose of this course is to develop an awareness of the range of contemporary performance practices through a combination of lecture, discussion, theatre attendance, and experiential learning. Provides opportunities for critical thinking and reflection about theatre in contemporary society. Restricted to non-theatre majors.

THE 2305 Script Analysis (3) VP TAR

PR: Sophomore standing, THE 2020. This course teaches theatre students the techniques of close reading of dramatic texts.

THE 3110 Theatre History I MW (3) VP TAR

PR: Sophomore standing, THE 2020. The study of theatrical production in its cultural context, including theatre architecture, scenography, acting and directing. Normally fifteen plays will be read. Required of all theatre majors. Open to upper division non-majors.

THE 3111 Theatre History II MW (3) VP TAR

PR: Sophomore standing, THE 2020. A study of Theatre History in more detail as a companion to Theatre History I. This course and the companion Theatre History I will offer the opportunity for more careful study and emphasis on particular aspects of cross-cultural theatre in context.

THE 4174 New British Theatre and Drama 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111. A study of contemporary theatrical practice and key dramatic texts in the British Isles. Departmental permit required of majors and non-majors.

THE 4180 Theatre Origins 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111 and one of the following: THE 4320, THE 4330, THE 4360, THE 4401, THE 4434, THE 4435, THE 4442, THE 4480. Open to senior non-majors with CI. An analysis of the development of theatre out of myth, ritual, and liturgy. Emphasis placed on what attempts to understand the resulting phenomena (e.g. Aristotle's Poetics) can teach us about the nature of our art. Either THE 4180 or THE 4562 is required of all theatre majors.

THE 4264 History Of Costume (3) VP TAR

PR: Sophomore standing. Open to upper level non-majors with CI. A survey of clothing and dress from Ancient Egypt to the 20th Century with an emphasis on cultural and social influences. (A requirement in the design track/costume.)

THE 4266 Architecture And Decor (3) VP TAR

PR: Sophomore standing. Open to upper level non-majors with CI. A survey of architecture and furniture from ancient Egypt to the 20th Century. (A requirement in the design track/scenic.)

THE 4320 Theatre Of Myth And Ritual/Northern European (950-1600) & Oriental (400-1200) 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. An investigation into the interrelationship of myth, ritual, and theatre. Considers northern European liturgical and secular plays as compared with Hindu, Chinese, and Japanese drama.

THE 4330 Shakespeare For The Theatre 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A close study of selected plays with special emphasis on their performance values.

THE 4360 The 19th Century Theatre Revolution 6A LW (3) VP TAR

PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. Survey of the European art theatre revolution against the romantic realism of the commercial stage and its effect on subsequent theatre activity.

THE 4401 O'Neill And After 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A course in the function of the script for the theatre artist treating materials in the American Theatre from 1915 to 1964.

THE 4434 Caribbean Theatre 6A MW LW (3) VP TAR

PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. This course is a study of plays and popular theatrical forms of the Caribbean. The student will investigate the social and political forces that shape the culture of the Caribbean, the residual effects of the colonialism and the turbulence of independence as expressed in the dramatic art and theatre of the English-speaking West Indies.

- THE 4435 Theatre Of Pluralism 6A MW LW (3) VP TAR**
 PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. The practice of theatre as it reflects cultural heritage, gender, race and sexual orientation. Study of contemporary scripts, critical and artistic statements.
- THE 4442 Comedy Of The Classic And Neo-Classic Stage 6A LW(3) VP TAR**
 PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of comedic function in scripts from Greek and Roman, Restoration and French Neoclassic of the late 17th century and other plays from the late 18th and late 19th centuries which reflect similar characteristics.
- THE 4480 Drama-Special Topics (3) VP TAR**
 PR: THE 3110 or THE 3111. Open to upper level non-majors with CI. A study of a significant playwright or grouping of playwrights, e.g. Moliere, Brecht, recent American dramatists.
- THE 4562 Contemporary Performance Theory 6A MW LW (3) VP TAR**
 PR: THE 3110 or THE 3111 and one from the following: The 4320, THE 4330, THE 4360, THE 4401, THE 4434, THE 4435, THE 4442, THE 4480; or CI. A seminar for advanced students focusing on the theory and practice of performance.
- THE 4593 Honors Seminar (2) VP TAR**
 Enrollment limited to upper level majors who have been formally admitted to the department honors program. Not available S/U. Readings in the literature, history and theory of the stage in preparation for Theatre Honors Practicum. Past topics have included New German Theatre, Popular Theatre, New American Theatre, Jacobean Theatre.
- THE 4594 Honors Practicum (3) VP TAR**
 PR: THE 4593. Honors Practicum grows out of the Honors Seminar and engages students in workshops or production with guest artists. Past artists have included the Free Theatre of Munich, the San Francisco Mime Troupe, playwrights Eric Overmeyer, Jeff Jones and Gary Hill.
- THE 4595 Honors Thesis (1-3) VP TAR**
 PR: THE 4594. A practical or written thesis related to the seminar and practicum and approved by the departmental honors committee.
- THE 4761 Methods of Teaching Theatre for Adolescents (3) VP EDD**
 Methods of effective drama and theatre instruction in middle school, junior and high schools, recreation centers, community, and professional theatres.
- THE 4905 Directed Studies (1-4) VP TAR**
 Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.
- THE 4930 Selected Topics in Theatre (1-8) VP TAR**
 PR: CI. The content of the course will be governed by student demand and instructor interest. May be lecture or class discussion or studio format.
- THE 5909 Directed Studies (1-6) VP TAR**
 PR: CI and CC. Independent studies in the various areas of Theatre. Course of study and credits must be assigned prior to registration.
- THE 5931 Selected Topics In Theatre (1-8) VP TAR**
 PR: CI. The content of the course will be governed by the student demand and instructor interest. May be lecture or class discussion or studio format.
- TPA 2200 Introduction to Technical Theatre I (3) VP TAR**
 CR: TPA 2290L or CI. An introductory course in technical production including coursework in the areas of scenic construction, theatre production/organization, and sound. Required for Theatre majors. Requires sequential semester enrollment with TPA 2211 and TPA 2291L. Open to non-majors.
- TPA 2211 Introduction to Technical Theatre II (3) VP TAR**
 CR: TPA 2291L or CI. An introductory course in technical production including stage lighting, costume construction, and sound. Required for Theatre majors. Requires sequential semester enrollment with TPA 2200 and TPA 2290L. Open to non-majors.
- TPA 2248 Workshop In Stage Makeup (1) VP TAR**
 Beginning theory and practice in make-up for the stage. Open to non-majors. Theatre majors given preference. A studio course.
- TPA 2290L Technical Theatre Lab I (1) VP TAR**
 CR: TPA 2200 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.
- TPA 2291L Technical Theatre Lab II (1) VP TAR**
 CR: TPA 2211 or CI. A practical laboratory involving the pre-performance preparation of all technical aspects of a major production such as: painting, sewing, lighting, and sound. Students are assigned two areas of study per semester. Required of all Theatre majors. Open to non-majors.
- TPA 2292 Production Involvement I (1) VP TAR**
 PR: TPA 2200, TPA 2290L, TPA 2211, TPA 2291L or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the students completion of a PI request form, available in the Theatre Office, and enrollment in this course.
- TPA 3007 Introduction to Design I (3) VP TAR**
 PR: TPA 2200, TPA 2211, TPA 2290L, and TPA 2291L. Open to non-majors. This course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization.
- TPA 3008 Introduction to Design II (3) VP TAR**
 PR: TPA 3007. This course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an introduction to the various aspects of design including: two and three dimensional design, basic presentation and visual communication skills, research, and project analysis/organization. Open to non-majors.
- TPA 3208 Drafting and CAD I (3) VP TAR**
 PR: TPA 2200, TPA 2211, TPA 2290L and TPA 2291L. The course will include lectures, demonstrations, individual student presentations, and studio activities. The course work will provide an opportunity to develop skills and techniques in the visual presentation of various design and technical draftings. Required of all Design Track Theatre majors. Open to non-majors.
- TPA 3221 Lighting: Theory And Practice (3) VP TAR**
 PR: TPA 3208 or CI. Intermediate lighting design course concerned with graphic presentations, color theory, design concepts, and practical experience with computer lighting systems. A requirement in the design track/lighting.
- TPA 3231 Costume Construction (3) VP TAR**
 PR: TPA 3208 or CI. A practical course in the drafting of patterns for costuming the actor. Materials, skills, and techniques for construction of costumes and costume accessories will be treated. Included topics are millinery, footwear, jewelry, masks, armor, courtesy; both period and modern.
- TPA 3251 Drafting and CAD II (3) VP TAR**
 PR: TPA 3208. Continuation of TPA 3208. The course will include lectures, demonstrations, field trip(s), individual student presentations, and studio activities. The course work will provide an opportunity to develop your skills and techniques in the visual presentation of various design and technical draftings. Open to non-majors.
- TPA 3265 Sound For The Stage (3) VP TAR**
 PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. Basic study of audio components, fundamental properties of sound, multiple channel recording, editing, reproduction and reinforcement. Methods and techniques used in theatre to create sound effects.
- TPA 3296 Design Practicum (2) VP TAR**
 PR: TPA 3008. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide realized production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill areas. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.
- TPA 3601 Stage Management (2) VP TAR**
 PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. A practical course in the working organizational function of the stage manager in theatre, dance, opera, and other live performance situations.
- TPA 3840 Puppetry Performance And Production (4) VP TAR**
 PR: TPA 2200, TPA 2290L, TPA 2211, and TPA 2291L. Open to non-majors with CI. The creation, building, rehearsal, and performance of plays for puppet theatre.
- TPA 4011 Design Studio I (3) VP TAR**
 PR: TPA 3008 and TPA 3208 plus two of TPA 3231, TPA 3221, or TPA 3251. TPA 4011 will include studio design project activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design.
- TPA 4012 Design Studio II (3) VP TAR**
 PR: TPA 4011. This course will include studio design project

- activities in the areas of costume, lighting, and scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design. Evaluation of the project will emphasize the process followed in the development of the design including thumbnail/idea sketching, research, and production concept. The course will include seminar (production) discussions, lectures, demonstrations, individual and group work, and individual student presentations.
- TPA 4013 Design Studio III (3) VP TAR**
PR: TPA 4012. This course will include studio design project activities in an individual's selected primary and secondary areas of costume, lighting, and/or scenic design. The course work will stress the nature of collaborative work and the various stages and processes involved with the development of a design from the first meeting to the final paper/model design.
- TPA 4077 Scene Painting (2) VP TAR**
PR: TPA 3007. Open to upper level non-majors with CI. A practical course in the painting of stage scenery: media and application.
- TPA 4273 Stage Properties: Techniques And Materials Studio (2) VP TAR**
PR: TPA 3007. Open to upper level non-majors with CI. Demonstration of and experience with materials used in construction of stage properties. Modeling of prototypes and basic casting techniques. Organization of shop.
- TPA 4293 Production Involvement II (1) VP TAR**
PR: TPA 2292 or CI. The rehearsal, construction, and performance of major theatrical works. Assignments are made by a faculty committee following the student's completion of a PI request form, available in the Theatre Office, and enrollment in this course.
- TPA 4298 Advanced Design Practicum (3) VP TAR**
PR: TPA 4011. This is a studio/laboratory course in the practical aspects of production. The course is intended to provide realized production experience to the advanced theatre design student in such areas as costume, lighting, and scenic design; stage properties design; technical direction; and theatrical production craft/skill areas. The student will be individually mentored by a faculty member through the process of developing and realizing a production design/craft/skill.
- TPP 2110 Voice-Body-Improvisation (3) VP TAR**
Exploring the elements basic to acting skills, a participation course. Required of all theatre majors. Open to non-majors.
- TPP 2190 Studio Theatre Performance I (1) VP TAR**
PR: TPP 2110, THE 2020. A practical laboratory involving the rehearsal and performance of a major production. Activities may include acting, directing, stage management, and the activities of the performance production crews. Placement by audition. If cast in production student must accept role. Required of all Theatre majors. May be repeated. Open to non-majors with CI.
- TPP 2500 Body Disciplines (2) VP TAR**
PR: TPP 2110. A laboratory course in various disciplines or systems and understanding the body's motive powers, with focus on their use for the stage performer.
- TPP 3121 Improvisation I (3) VP TAR**
PR: TPP 2110. An intensive study in improvisation as an enhancement of the actor's skill. Exercises and theatre games as flexible forms which accommodate improvisation and physical invention are examined and used to develop group creativity.
- TPP 3155 Scene Study I (3) VP TAR**
PR: Audition and all core 2000 level courses. Identify and investigate the fundamental elements of acting as applied to scene exploration, rehearsal, and presentation.
- TPP 3230 Laboratory Workshop In Performance (3) VP TAR**
PR: Audition and TPP 2110. May be repeated twice for a total of 9 hours credit. Open to upper level non-majors by audition only. The content of the course will be governed by student demand and instructor interest.
- TPP 3580 Special Skills In Movement (2) VP TAR**
PR: TPP 2110 or CI. May be repeated for credit. Open to upper level non-majors with CI. Stage combat, circus and acrobatic techniques, and other special techniques of movement.
- TPP 3790 Voice Preparation For The Actor (3) VP TAR**
PR: TPP 2110. A concentrated laboratory on freeing the breathing function, developing body and oral resonance, and strengthening muscles used on the formation of speech sounds.
- TPP 3920 Acting Studio I (8) VP TAR**
PR: Audition, all lower level core theatre courses and junior standing. An intensive and comprehensive ensemble workshop that explores the basic principles of acting and the skills necessary for play, scene and character analysis. An emphasis is placed on the integration of body, voice, mind and emotions. This course will be team taught by the Performance faculty.
- TPP 3921 Acting Studio II (8) VP TAR**
PR: TPP 3920. A continuation of Acting Studio I with greater emphasis on addressing individual needs in order to explore emotionally complex characters and scenes in an intensive and systematic way. This course will be team taught by the Performance faculty.
- TPP 4140 Styles Of Acting (3) VP TAR**
PR: TPP 3155 plus audition or TPP 3921. Examination of the actor's craft and skills needed to fulfill the demands of classical theatre forms.
- TPP 4180 Advanced Scene Study (3) VP TAR**
PR: Audition and TPP 3155 or TPP 3921. An acting workshop focusing on application of character development and rehearsal techniques over a sustained period leading toward a project showing at semester's end.
- TPP 4193 Studio Theatre Performance II (1) VP TAR**
PR: TPP 2190. A practical laboratory involving the rehearsal and performance of a major production. Activities may include acting, directing, stage management, and the activities of the performance production crews. Placement by audition. If cast in production student must accept role. Required of all Theatre majors. May be repeated. Open to non-majors with CI.
- TPP 4220 Audition Workshop For Actors (2) VP TAR**
PR: TPP 3155 or TPP 3921. Preparation for professional audition; discussion of professional objectives.
- TPP 4310 Directing I (3) VP TAR**
PR: TPP 3155 or TPP 3230. An elective sequence in directing. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.
- TPP 4311 Directing II (3) VP TAR**
PR: TPP 4310 and CI. An elective sequence in directing. A workshop course in which the student first encounters the basic tasks of the director by preparing and directing one or two scenes and then progresses to more complex scene work in a variety of styles and finally proceeds to the short play or theatre pieces.
- TPP 4600 Writing For The Theatre (3) VP TAR**
PR: TPP 3110 or THE 3111. An elective sequence in writing, in which the student first encounters the problems unique to dramatic language and situation, then progresses to complexities of character, plot, and stage dynamics. Normally the aim would be to complete several performance-worthy self-contained scenes.
- TPP 4920 Senior Workshop For Actors (3) VP TAR**
PR: TPP 2500, TPP 3790, TPP 3155, or TPP 3921. A workshop in advanced vocal and movement techniques.
- TPP 4923 Music Theatre Workshop (3) VP TAR**
PR: TPP 2110 and audition. Open to non-majors by audition only. Exploration of Musical Theatre materials and performance techniques for the performer. Individual and ensemble work.
- TSL 4374 Methodology of Teaching English Overseas (3) AS WLE**
PR: Upper-level standing. Designed to introduce and prepare the enrollee in the various facets of teaching English as a foreign language in the overseas setting. It will include aspects of teaching verbal skills and comprehension as well as writing. It involves a practicum at the English Language Institute on campus.
- TSL 5321 ESOL Strategies for Content Area Teachers (3) AS WLE**
Course designed for public school teachers working with limited English Proficient (foreign) students in the classroom. The new ESOL requirements specify that this course be offered to content area teachers and to ESOL teachers.
- TSL 5371 Methods of Teaching English As A Second Language (3) AS WLE**
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.
- TSL 5372 ESOL Curriculum and Instruction (3) AS WLE**
Analysis of the methods of teaching English pronunciation and structure to speakers of other languages.
- TSL 5471 Language Testing (3) AS WLE**
PR: TSL 5371. Lecture course on testing English as a second/foreign language.
- TSL 5525 Cross-Cultural Issues in ESL (3) AS WLE**
PR: LIN 5700. Lecture course on cultural issues in Teaching English as a Second/Foreign language.
- TTE 4004 Transportation Engineering I (3) EN EGX**
PR: EGN 3321. Principles of surface transportation system development, design, and operations; administration, modal characteristics, capacities, and functional classifications; vehicle kinematics, human factors and minimum design standards; traffic flow theory and queuing, capacity and signalization; transportation planning and economics.
- TTE 4005 Transportation Engineering II (3) EN EGX**

- PR: TTE 4004. Techniques for the geometric route design of surface transportation systems; horizontal and vertical alignments. Spiral curves, superelevations and earthwork analysis; drainage, soils, and a rigid and flexible pavement design; right-of-way acquisition and Environmental Impacts; site layout & design, and operation of alternate models including bus, air, rail, water, and pipeline facilities and terminals.
- TTE 5205 Traffic Systems Engineering (3) EN EGX**
PR: TTE 4004 or equivalent. Traffics models, intersection analysis, capacity analysis, data methods collection, parking studies, volume and speed studies, freeway management, and advanced technologies.
- TTE 5501 Transportation Planning and Economics (3) EN EGX**
PR: College Algebra & Cl. Fundamentals of urban transportation planning: trip generation, trip distribution, modal split, traffic assignment. Introduction to environmental impact analysis, evaluation an choice of transportation alternatives.
- URP 4050 City Planning and Community Development (3) AS POL**
An introduction to the development, role, and components of city planning, and the political and actual policies of government in attempting to regulate or control urbanization.
- URP 4052 Urban and Regional Planning (4) AS GPY**
PR: GEO 3402, GEO 3602. The geographic foundations of the modern city, metropolitan development, and the trend toward megalopolis. Examined are the political problems of conflicting jurisdictions at the local, county, state, national, and international levels.
- URS 3002 Introduction to Urban Studies (3) AS ISS**
An interdisciplinary introduction to the process of urbanization in the United States and the diverse communities it has created. Study of the Tampa Bay region is emphasized.
- VIC 3001 Introduction to Visual Communications (3) AS COM**
PR: MMC 2100 and MMC 3602. Survey of visual communication theory, techniques and contemporary application in the visual media. Critical examination of visual communication in newspapers, magazines, television, motion pictures and new media.
- VIC 3943 Visual Communication Practicum (1) AS COM**
PR: Senior standing and Cl. For visual communications sequence majors. S/U only. Practical experience outside the classroom where the student works for academic credit under the supervision of a professional practitioner. Periodic written and oral reports to the faculty member coordinating the study.
- WST 2250 Female Experience in America HP (3) AS WST**
The female experience in America, in historical context, with an emphasis on women in families of various classes, races, and ethnic groups from colonial times to 1870.
- WST 2600 Human Sexual Behavior SS (3) AS WST**
The dynamics of human sexuality: biological, constitutional, cultural, and psychological aspects. The range of sexual behavior across groups. Sources of beliefs and attitudes about sex, including sex roles and especially human sexuality.
- WST 3015 Introduction to Women's Studies SS AF (3) AS WST**
Survey of major issues relevant to the female experience. the women's movement: historical, psychological, sociological, anthropological perspectives.
- WST 3210 European Feminist History: Pre-18th Century 6A HP (3) AS WST**
Survey of European feminist history prior to the 18th century (focusing primarily on Western Europe). Examines women's lives, roles, ideas, as well as origins of Western attitudes toward relation of power to gender, race and class. No prerequisites.
- WST 3220 European Feminist History: Enlightenment to the Present HP (3) AS WST**
A survey of European feminist history from the 18th century through the 20th century (focusing primarily on Western Europe). Examining women's lives, roles and ideas, as well as the dominant attitudes toward women over this time period.
- WST 3225 Women, Environment and Gender MW (3) AS WST**
Course designed to: provide students with a basic understanding of relationships between women's physical, health and occupational environments; consider the position of women regarding environmental issues; examine role that women can and do play in effecting environmental change; and analyze concepts related to ecofeminism.
- WST 3311 Issues in Feminism SS (3) AS WST**
Survey of major issues relevant to the female experience: marriage and the family, sexuality, work, creativity.
- WST 3440 Women and Social Action SS (3) AS WST**
Course focuses on ordinary women working collectively in diverse social settings to empower themselves and others to challenge gender stereotypes; to reduce harassment, poverty, violence and homelessness; to enhance health-care and family life and to confront barriers in education, the media and the criminal justice system.
- WST 4262 Literature by Women of Color in the Diaspora 6A LW (3) AS WST**
Will not be counted toward the English major. An introduction to contemporary women writers of color in the U.S.: Native Americans, African Americans, Asian Americans, and Chicanas/U.S. Latinas. Readings will include literature and contextual articles on historical and cultural issues.
- WST 4310 History of Feminism in the U.S. 6A MW (3) AS WST**
A study of feminist critiques of American women's experiences and status, and their implications for women's lives, by 19th- and 20th-century theorists, and how adequately these various critiques address the intersections of gender, class, ethnicity, and race.
- WST 4320 The Politics of Women's Health (3) AS WST**
Explores current issues and concerns in the conceptualization and delivery of health information and health care for women from a feminist perspective, with a special emphasis on ways in which we can inform and help ourselves.
- WST 4335 Women and Film (4) AS WST**
A study of representation of women in Hollywood films and the responses of feminist film theorists and filmmakers working in documentary, experimental and narrative modes.
- WST 4350 Women and Science MW (3) AS WST**
An examination of selected issues related to women and the natural and physical sciences including: historical participation of women in science, current status of women in science, and feminist critiques of science as a discipline.
- WST 4410 Third World Women Writers 6A LW (3) AS WST**
Will not be counted toward the English major. Introduces the literature of women from various anglophone countries in Africa, the Caribbean, and South Asia; some U.S. writers will be included to represent a third world diasporic consciousness.
- WST 4522 Classics in Feminist Theory MW (3) AS WST**
A study of classic contributions to the elaboration of feminist thought from the 18th century to the present in an attempt to discover the roots of the contemporary feminist movement. (May also be taken for credit in Philosophy.)
- WST 4561 Contemporary Feminist Theory (3) AS WST**
PR: Completion of one upper division Women's Studies course. An exposure to and an exploitation of a wide range of current feminist theories and debates, as well as an examination of the possible political and practical implications for various theoretical positions.
- WST 4900 Directed Readings (1-3) AS WST**
PR: Registration requires instructor's written consent and signed contracts from instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest.
- WST 4910 Directed Research (1-3) AS WST**
PR: Registration requires written contract signed by student and instructor of choice. To provide advanced students with interdisciplinary research experience in areas of specific interest.
- WST 4930 Selected Topics (1-4) AS WST**
Study in special areas such as Women and Work, Reproductive Law, Women and Health.
- WST 4935 Seminar in Women's Studies (3) AS WST**
PR: Women's Studies Major and 24 credit hours in Women's Studies. Recognizing the interplay between personal connections and intellectual experience, this capstone course is designed to focus on topical areas related to women's studies and facilitate linking student learning experience to future plans.
- WST 5308 Feminist Spirituality (3) AS WST**
Open to non-majors. Focuses on the many voices of contemporary feminist spirituality, emerging from women's experiences in diverse religious, ethnic and cultural traditions, and representing a range of theoretical perspectives from biblical feminism to goddess worship and wicca.
- WST 5825 Internship in Women's Studies (3) AS WST**
PR: Must have completed Comprehensive Exam. Majors Only. All required courses in MA program, CC. Student placement in approved intern setting for a minimum of 150 hours of supervised experience. S/U. Department Approval Required.
- WST 5934 Selected Topics (1-4) AS WST**
PR: DPR. Study of current research methods and scholarship on women from a multidisciplinary perspective.
- WST 5940 Internship in Women's Studies (3) AS WST**
Student placement in an approved intern setting for a minimum of 150 hours of supervised experience. S/U only. PR: Majors only. All required courses in MA program, CC. Permit.
- YOR 1120 Yoruba I (4) AS WLE**
This course is designed to familiarize students with modern orthography and to develop skills in reading, writing, speaking, and

384 USF Course Descriptions

UNIVERSITY OF SOUTH FLORIDA - 2004/2005 UNDERGRADUATE CATALOG

understanding spoken Yoruba. Pronunciation in Yoruba and achieving basic communicative competence in the language are among the skills to be attained in the course.

ZOO 2303 Vertebrate Zoology (3) AS BIO

PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. The origin, diversity, and adaptations of the vertebrates. Phylogenetic systematics (cladistics) will be used as the basis for determining evolutionary relationships of organisms. Monophyletic groupings provide a framework for examining behavior, physiology, and ecology in an explicit evolutionary context. Vertebrates common to Florida and the southeastern United States will be emphasized.

ZOO 3205C Advanced Invertebrate Zoology (4) AS BIO

PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. An introduction to the major invertebrate groups, with emphasis on local forms. Field work will be required. Lec.

ZOO 3323C Anatomy of Chordates (4) AS BIO

PR: BSC 2010, BSC 2010L, BSC 2011, BSC 2011L. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lec.-lab.

ZOO 3713C Comparative Vertebrate Anatomy (4) AS BIO

PR: BSC 2010, BSC 2011. Anatomy of selected vertebrate types emphasizing evolutionary trends. Lec.-Lab.

ZOO 4512 Sociobiology MW (3) AS BIO

This course is restricted to seniors. Not for major's credit. An analysis of Animal and human behavior such as sex, territoriality, and aggression in the context of evolution.

ZOO 4513C Animal Behavior (3) AS BIO

PR: PCB 3043 or PCB 3063. An introduction to comparative animal behavior (Ethology), with emphasis on communication, social use of space, and behavioral evolution.

ZOO 4603 Animal Embryology (4) AS BIO

PR: PCB 3023. Structural and functional events involved in differentiation and morphogenesis. Lec.-lab.

ZOO 4753C Histology (4) AS BIO

PR: PCB 3023 and PCB 3063. Comparative approach to the study of tissues and the relation of their structure and function. Lec.-lab.

ZOO 5235 Parasitology (3) AS BIO

PR: MCB 3020C, PCB 3023, PCB 3043, PCB 3063, ZOO 3205C, ZOO 4753C, CI. Fundamentals of animal parasitology and parasitism, the biology of selected animal parasites, including those of major importance to man.

ZOO 5456 Ichthyology (3) AS BIO

PR: Senior or GS in Biology; ZOO 3323C, CI. PCB 4674 is suggested. Evolution, systematics, structure, behavior, physiology, and ecology of fishes.

ZOO 5456L Ichthyology Lab (1) AS BIO

CR/PR: ZOO 5456 Laboratory portion of Ichthyology relating to evolution, systematics, structure, behavior, physiology and ecology of fishes.

ZOO 5463C Herpetology (4) AS BIO

PR: CI. Major aspects of amphibian and reptilian biology emphasizing fossil history, evolutionary morphology, sensory physiology, life history and reproductive behavior. Lec.-lab. Field trip.

ZOO 5555C Marine Animal Ecology (4) AS BIO

PR: PCB 3043, senior standing, CI. Investigation of energy flow, biogeochemical cycles, and community structure in marine environments. Lec.-lab.