FALL 2013 NEW COURSES & DESCRIPTIONS

AR-316 INTRODUCTION TO ARABIC TEXTS

A course designed to build on the reading skills acquired in intermediate Arabic by presenting texts drawn from many fields of interest: politics, business, pre-Islamic and modern literature, history. Taught in Arabic. Emphasis will be placed on reading, writing, and multi-genre analysis. ***Pre-requisite: AR- 202.***

CH-482 COMPUTATIONAL CHEMISTRY (5 WEEK COURSE MEETS: 9/30 – 10/30)

This short course is an introduction to the methods of computational chemistry used to predict molecular structure and properties. With the advance of computing power we can now answer questions that were impossible to solve analytically 40 or 50 years ago. The course will introduce the cadet to the types of calculations that can be performed, their strengths and weaknesses, and what information can be obtained. Homework and projects will make up the bulk of the graded assignments and these will make extensive use of free online molecular modeling software and there is no required text book. Some knowledge of organic compounds and structures is necessary. ***Pre-requisite: CH-224.***

CH-484 STATISTICAL THERMODYNAMICS (5 WEEK COURSE MEETS: 8/28 – 9/27)

Statistical thermodynamics describes the macroscopic properties of matter by applying the laws of probability to the behavior of the large numbers of component molecules. Thermodynamic functions such as energy, free energy, and entropy will be developed from the statistical treatment of molecules. Such concepts will be applied to ideal gases in which, for example, PV=RT will be shown to be not only an experimental law but also a statistical law. Other applications will range from a tangible description of the heat capacities of solids to a more abstract treatment of systems having negative absolute temperatures, as well as implications to a philosophical understanding of chemistry. ***Pre-requisites: CH-137 & CH-138 or CH-131 & CH-132.***

CH-489 TOXIC ELEMENTS (5 WEEK COURSE MEETS: 11/1 – 12/2)

Mercury, lead and arsenic are three elements that have a long history of uses and abuses in chemistry from earliest times. This course will take an overview of their analytical chemistry, including forensics and famous murders, their medicinal and industrial uses and environmental problems and the toxicity of these three infamous elements. ***Pre-requisites: CH-246 and CH-335.***

CIS- 101 INTRODUCTION TO COMPUTER AND INFORMATION SCIENCES

This course is an introductory survey of the scope of computer and information sciences. This course provides an exposure and a foundation from which cadets can appreciate the relevance and interrelationships of future courses. This course and the text follow a bottom-up arrangement of subjects from the concrete to the abstract. The course begins a discussion of techniques to analyze information needs. Next, we study basics of information encoding and computer architecture, and move on to the study of operating systems and computer networks. After that, we investigate the topics of algorithms, databases, programming, data structures, software development, human computer interaction, and computer graphics. We conclude with a brief overview of the history of information technology. Includes unit on ethics and professionalism in computer science.

CIS- 111 PROGRAMMING I

An introduction to fundamental data types and programming concepts using a modern algorithmic language. Emphasis is on programming style, documentation, and implementation of standard elementary algorithms and data structures. ***Co-requisite: CIS-101.***

CIS-311 WEB APPLICATION DEVELOPMENT

A survey of contemporary software tools, languages and techniques for Web application development. Software design, interface design, and use of current technologies in developing client-side and server-side web applications. Technologies include HTML and XHTML, CSS, *Development using widely-used scripting languages such as JavaScript and Perl, and XML / XSL.* ***Pre-requisite: CIS-112 minimum grade C.***

CIS-341 DATABASE MANAGEMENT SYSTEMS AND INFORMATION RETRIEVAL

Introduces database management systems with emphasis on the relational model. Database system architecture, storage structures, access methods, relational model theory, security and integrity, locking, query optimization, and database and retrieval systems design and includes team project experience with a SQL-type relational system. Pre-Requisite: CIS-112 minimum grade C.

ERH-101 WRITING & RHETORIC I

This course introduces the essential principles of rhetoric, develops cadets' ability to analyze complex texts rhetorically, and refines their writing strategies, paying special attention to their critical reflection on their writing processes. Such essential practices as invention, arrangement, and revision will be emphasized in their writing of expository essays. Minimum grade of C required. ***Cadets cannot take this course if they have already taken WR-101.***

ERH-102 WRITING & RHETORIC II

This course engages cadets in reading, thinking, and writing about contemporary civic issues from a rhetorical perspective. Cadets learn to write persuasive essays for public audiences in which they ethically incorporate research from appropriate secondary sources, as well as to critically reflect on their writing processes. Minimum grade of C required. ***Pre-requisite: ERH-101 minimum grade of C. Cadets cannot take this course if they have already taken WR-102.***

ERH-103 FUNDAMENTALS OF PUBLIC SPEAKING

Emphasizing organization and delivery, this course introduces basic rhetorical theory and teaches cadets to consider audience, purpose, context, and occasion as both speakers and listeners. While there are no prerequisites, cadets are encouraged to complete ERH-102 with a minimum grade of C prior to taking ERH-103. ***Cadets cannot take this course if they have already taken SE-300.***

ERH-201WX RHETORICAL TRADITIONS

An introduction to navigating, analyzing, and participating in networked writing spaces, as well as developing projects using images, audio, video, and words. Attention will be given to defining digital literacy-its language, modes of thought, and methods of communicating complex meaning-within the historical framework of rhetorical traditions. Projects with practical application for external audiences will be emphasized. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive / Civ. & Cultures Course.***

ERH-204 THE LANGUAGE OF ART

An introduction to the visual arts both in theory and in practice. Cadets will learn about formal elements, context, content, and interpretation of art as well as experiment with various media in the studio. They will develop visual perception-that is, the ability to "read" aesthetic and intuitive aspects of art and architecture, or the overall language of art. ***Pre-requisite: ERH-102 minimum grade of C. Cadets cannot take this course if they have already taken FA-207***.

ERH-205WX BRITISH LITERARY TRADITIONS

An introduction to British literary movements focusing on major texts that illustrate how writers have shaped and been shaped by traditions and cultures. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive / Civ. & Cultures Course. Cadets cannot take this course if they have already taken EN-201, EN-201W, EN-202, or EN-202W.***

ERH-206WX AMERICAN LITERARY TRADITIONS

An introduction to American literary movements by focusing on major texts that illustrate how writers have shaped and been shaped by traditions and cultures. ***Pre-Requisite: ERH-102 minimum grade of C. Writing Intensive / Civ. & Cultures Course. Cadets cannot take this course if they have already taken EN-209.***

ERH-207W ETHICS

An introduction to critical thinking about moral concepts and issues, including why one should be moral, major theories of what is right and wrong, and controversial social problems concerning questions of justice, life, and death. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Cadets cannot take this course if they have already taken PH-204 or PH-304.***

ERH-212 ANCIENT GREEK & MEDIEVAL PHILOSOPHY

An introduction to some of the main concepts and arguments developed by philosophers from before the birth of Socrates to the end of the Middle Ages. Questions to be explored might include: What is the fundamental nature of reality? What is the nature of human beings? What and how can we know about such things? ***Pre-requisite: ERH-102 minimum grade of C. Cadets cannot take this course if they have already taken PH-201.***

ERH-215 HISTORY OF WORLD ART

A foundational study of the arts of sculpture, architecture, painting, drawing, and craft traditions from the Prehistoric period through the Medieval era and from many cultures throughout the world. The course develops awareness of the importance of the arts as an expression of human endeavor and the intimate connection between art and various social, political, philosophical, and religious movements. ***Pre-requisite: ERH-102 minimum grade of C. Cadets cannot take this course if they have already taken FA-251.***

ERH-221W DIGITAL RHETORICS

An introduction to navigating, analyzing, and participating in networked writing spaces, as well as developing projects using images, audio, video, and words. Attention will be given to defining digital literacy-its language, modes of thought, and methods of communicating complex meaning-within the historical framework of rhetorical traditions. Projects with practical application for external audiences will be emphasized. **Pre-requisite: ERH-102 minimum grade of C. Writing Intensive.**

ERH-222W GENRE STUDIES: POETRY

A study of the conventions of poetry with opportunities to practice writing in the genre. The course emphasizes the process and techniques of original composition and includes opportunities to share work beyond the classroom. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Cadets cannot take this course if they have already taken WR-332 or WR-332W.***

ERH-223W GENRE STUDIES: FICTION

A study of the conventions of fiction with opportunities to practice writing in the genre. The course emphasizes the process and techniques of original composition and includes opportunities to share work beyond the classroom. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Cadets cannot take this course if they have already taken WR-330 or WR-330W****.*

ERH-225W VISUAL ARTS STUDIO

A study of the conventions of one or more of the visual arts-e.g., painting, drawing, photography, film, and computer media-with opportunities to practice in the medium. The course emphasizes original creative expression and includes opportunities to share work beyond the classroom. **Pre-requisite: ERH-102 minimum grade of C. Writing Intensive.**

ERH-240W POVERTY & HUMAN CAPABILITY

An exploration of the causes of, and possible solutions to, the problem of poverty, especially within the United States. Cadets will study various ways of understanding and defining poverty, as well as the question of whose moral responsibility it is to do something to alleviate poverty. The goal is not only to develop a greater understanding of poverty and the poor, but also to identify solutions that are both practical and ethical. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Cadets cannot take this course if they have already taken PH-303.***

ERH-301 RHETORIC & PUBLIC ADDRESS

A study of the principles and techniques of effective public speaking and listening practices through examination of a variety of historical and contemporary examples. The course offers advanced practice in persuasive, public address with extensive instructor and peer feedback. ***Pre-requisite: ERH-102 minimum grade of C and ERH-103.***

ERH-303WX CULTURAL RHETORICS

A close examination of a significant event, social movement, or major figure particular to a distinct local or global culture. Through the analysis of oral, written, and visual texts, cadets will study and draw conclusions about the rhetorical strategies that drive cultural movements. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive / Civilizations & Cultures Course.***

ERH-304W LANGUAGE & STYLE

An intermediate writing course that focuses on the study of style, one of the five canons of rhetoric. Cadets will develop their abilities to read, draft, and revise complex texts, paying special attention to the relationship between style and meaning. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive.***

ERH-311W PROFESSIONAL WRITING

An examination of contemporary issues through the written discourse of professional communities. These seminars will treat select professions-law, the government, the military, the arts, among others. Cadets will study the profession's rhetorical traditions, read and analyze significant texts from a rhetorical perspective, and develop writing projects that evolve from relevant reading, research, and experiences with professionals in the field. Projects with practical application for external audiences will be emphasized. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive.***

ERH-314W TECHNICAL COMMUNICATION

An introduction to the conventions of writing in engineering and the sciences from a rhetorical perspective. Cadets will learn to translate a variety of technical documents for select audiences, purposes, and occasions. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Cadets cannot take this course if they have already taken WR-342W.***

ERH-321WX BRITISH LITERATURE CULTURAL CONTEXT

A study of particular works, authors, or movements focusing on the ways in which cultural and historical context have influenced the composition of and response to literature in Great Britain. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive / Civ. & Cultures Course.***

ERH-332 LOGIC & CRITICAL THINKING

A study of logic designed to improve cadets' ability to identify, analyze, and evaluate arguments, understood not as forms of verbal combat but as cases of reasoning from premises to a conclusion. The course aims to improve critical thinking skills and the ability to defend one's own beliefs rationally. ***Pre-requisite: ERH-102 minimum grade of C. Cadets cannot take this course if they have already taken PH-301.***

ERH-370W STUDIES IN ART & CULTURE

An examination of selected media in light of a particular culture's history and ideals, beginning with such foundational questions as: What defines a culture? What is the relationship between artistic expression and cultural concerns and values? In what ways is art political*?* ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive.***

ERH-371WX STUDIES IN ART & CULTURE

An examination of selected media in light of a particular culture's history and ideals, beginning with such foundational questions as: What defines a culture? What is the relationship between artistic expression and cultural concerns and values? In what ways is art political? ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive / Civ. & Cultures Course.***

ERH-470W SEMINAR IN RHETORIC & WRITING

Focused study of a specific topic in rhetoric and writing, including (but not limited to) historical and theoretical studies, linguistics, creative writing, or writing for a profession such as journalism. ***Pre-requisite: ERH-102 minimum grade of C. Writing Intensive. Or appropriate rhetoric or writing course or permission of the department head (as specified in registration materials).***

ERH-481WX SENIOR CAPSTONE

A seminar in which cadets will demonstrate their comprehensive achievement of the learning outcomes in the major by creating a capstone e-portfolio and making an oral presentation to the department faculty. Cadets cannot take this course if they have already taken EN-480W. ***Pre-requisite: ERH-102 minimum grade of C. First Class standing; completion of all Major Core Requirements and at least three required electives. Writing Intensive & Civ. & Cultures Course.***

GR-316 INTRODUCTION TO GERMAN TEXTS

Designed to build on post-intermediate reading skills. German language texts include politics, business, literature, history. Class discussion and writing in German. ***Pre-requisite: GR-202.***

GR-331X THE RESISTANCE IN NAZI GERMANY: THE BEST AND BRIGHTEST AND THE "OATH-BREAKERS"

Designed to examine the opposition to Hitler and the affirmation of the rule of law, which became a firm basis for the modern German military (*Bundeswehr*). Literary, historical, and biographical readings and films relate to the Resistance in Nazi Germany and depict life during the dictatorship and the vision – and fate – of those who opposed it. This course does not include a foreign language component and cannot be used toward a language requirement. ***Civilizations & Cultures Course.***

IS-370 POLITICS & THE MEDIA

An examination of theories of communication, of the relationship between various types of media and the political world, of the impact of media on political decision-making, and of political themes found in film, television, literature and other media forms. Specific topics include the nature and impact of television journalism, the context and political theme so of selected films and the political roles performed by electronic and other forms of media.

IS-371 NARCOTERRORISM

This course will concentrate on narcotic trafficking syndicates and criminal gangs operating in Mexico and other locations worldwide and how the illegal narcotics trade impacts U.S. foreign policy. We will make use of a wide variety of source materials and examine how U.S. national level intelligence agency analysis of narcotics trafficking has performed. The class will shed light on a major foreign policy dilemma facing the United States: Will current U.S. counternarcotics strategies in Mexico work?

IS-471 THEORIES OF WAR & PEACE

This course explores the causes of war and peace between and within states in international relations. Topics to be discussed include, but are not limited to, system structure, deterrence, major power wars, civil war onset and diffusion, economic integration, and alliance behaviors. Cadets will engage the abstract theories of international relations through close analysis of the major works in the field and will gain an improved understanding of rigorous, quantitative approaches. It is expected cadets will apply these theoretical approaches to ongoing events in international politics, acquiring an improved understanding of international relations theory through debate, a course-long simulation, and written assignments. Finally, cadets will develop through the course of the semester a testable research design that provides a blueprint toward answering an international relations puzzle of their choosing.

ME-370X HISTORY OF TECHNOLOGY

In this course, students will examine, from both an historical and current perspective, technologies that have had a major role in influencing both the development of distinctive cultural practices and the spread and globalization of specific cultures (western, eastern, and the Americas) in order to gain a better understanding of the cultural catalyst that technology has played in the past and may play in the future. ***Civ. & Cultures Course.***

ME-490 BIOMECHANICS

Biomechanics is the application of the principles of solid mechanics and dynamics to the systems of the human body. Specific topics include musculoskeletal anatomy, and analysis of forces in biological structures under static and/or dynamic loading. ***Pre-requisite: ME 201 and ME 302.***