

BI 213H Principles of Biology

CRN: 53825 Section 001 LEC MWF 1300 - 1350 & GRP Midterm 4 UHC Credits

SIGN UP FOR ONE OF THE LAB/401H PAIRS BELOW

CRN: 53826 Section 010 LAB M 1400 - 1650 Indira Rajagopal
AND

CRN: 52649 **BI 401H** – Sec. 001 RES M 1400 - 1650 1 UHC Credit
(optional – see description)

OR

CRN: 54114 Section 020 LAB R 0800 - 1050 Nathan Kirk
AND

CRN: 54115 **BI 401H** – Sec. 002 RES R 0800 - 1050 1 UHC Credit
(optional – see description)

Instructor(s): Nathan Kirk & Indira Rajagopal

Genetics, evolution, natural selection, and ecology. The optional BI 401H credit provides an additional credit for research done during the lab section. Coursework for students enrolled and not enrolled in BI 401H will be identical. Lecture, Lab, and additional research credit total 5 UHC credits. For life science majors and pre-professional students. Prereqs: (CH121 or CH201 or CH221 or CH 224H) OR (CH231/231H and (CH261/261H OR CH271)). **Course Fee \$30.00**
Satisfies: **Bacc Core - Biological Sciences**

BI 435H Genes and Chemicals in Agriculture: Value and Risk

CRN: 54305 Section 001 LEC T 0900 - 0950 & 1600 - 1650 3 UHC Credits
R 0900 - 0950

Instructor(s): Steven Strauss & Dave Stone

This class will examine the use of genetic engineering, pesticides, and other environmental technologies with respect to their benefits and damages to societies and the environment. The class features lectures by experts in a number of fields that range from organic agriculture to animal cloning. The class will address biological and social aspects of biotechnologies, including scientific methods, safety analysis, government regulation, corporate interests, information reliability, and ethical considerations for decision-making. Each lecture is followed by small group discussions and interviews with the speaker to help critique the information presented, and answer questions of interest to students. Prereqs: Students should have junior or senior standing, and at least two quarters of introductory biology. Cross-listed with FES 435H & TOX 435H. Satisfies: **Bacc Core - Science, Technology and Society**.

CH 233H Honors General Chemistry

CRN: 57128 Section 001 LEC MWF 1200 - 1250 5 UHC Credits

CHOOSE ONE OF THE RECITATION SECTIONS

CRN: 57129 Section 010 REC T 1100 - 1150 Kevin Gable

OR

CRN: 57250 Section 011 REC R 1400 - 1450 Kevin Gable

AND CHOOSE ONE OF THE LABORATORY SECTIONS**CH 263H Laboratory for Chemistry 233H**

CRN: 58295 Section 011 LAB R 1500 - 1750 Michael Burand

OR

CRN: 57127 Section 010 LAB T 1200 - 1450 Michael Burand

Instructor(s): Kevin Gable & Micheal Burand

Third course in General Chemistry sequence for Honors College students with one-year high school chemistry. This sequence examines the characteristics of molecular and atomic behavior and the way in which these influence chemical properties and reactions. Prereqs: (CH232/232H or CH 222 or CH 225/225H) and (CH 262/262H or CH272 or CH 222 or CH 225H). CH 263H or CH 273 must be taken concurrently. **Course Fee \$30.00** Satisfies: **Bacc Core - Physical Sciences**

CH 463H Experimental Chemistry II

CRN: 52650 Section 001 LEC W 1300 - 1350 3 UHC Credits

AND

CRN: 52651 Section 010 LAB W 1400 - 1650 & F 1300 - 1650

Instructor(s): Christine Pastorek and Emile Firpo

Second-level integrated laboratory course for majors in chemistry and related disciplines, covering experimental techniques of analytical, inorganic, organic and physical chemistry. Prereqs: CH 362/362H and (CH324 or CH461/461H) and CH442. CH442 can be taken concurrently. **Additional no-show drop fee. Course Fee \$44.00. Fee is non-refundable.** Satisfies: **UHC Elective**

CHE 333H Transport Phenomena III

CRN: 60317 Section 001 LEC MW 1300 - 1350

AND

CRN: 60318 Section 010 STUDIO TR 1400 - 1450 1 UHC Credits

Instructor(s): Liney Arnadottir

A unified treatment using control volume and differential analysis of binary mass transfer, prediction of mass transport properties, and introduction to mass transfer operations. Studio section honors; lecture common with non-honors sections. 3 total OSU credits. Prereqs: CHE 331/331H or CHE 332/332H. Satisfies: **UHC Elective**

ENG 374H Modern Short Story

CRN: 60320 Section 001 LEC TR 1400 - 1520 4 UHC Credits

Instructor(s): Majorie Sandor

In this course we will study several masterful short stories from the early 19th century to the present, using Freud's notion of "the uncanny" as a starting point from which to explore the complexities of the modern experience from the psychological to the social and spiritual. We will focus on the way the elements of a literary writer's craft--such as imagery and setting, point of view, character, tone, and dramatic structure--contribute to the reader's experience and interpretation of meaning in a literary work. Written work required: two 1 page (single-spaced) take-home analyses, unannounced quizzes and in-class writing, midterm exam, final exam, and a research presentation.

Satisfies: **Bacc Core - Literature and the Arts****ENGR 212H Dynamics**

CRN: 57133 Section 001 LEC MWF 0900 - 0950 3 UHC Credits

Instructor(s): Ravi Balasubramanian

Kinematics, Newton's laws of motion, and work-energy and impulse-momentum relationships applied to engineering systems. Prereqs: ENGR211/211H and PH211/211H. Satisfies: **UHC Elective**

ENGR 391H Engineering Economics and Project Management

CRN: 57148 Section 001 LEC TR 0830 - 0950 3 UHC Credits

Instructor(s): Ean Ng

The traditional roles of engineers and scientists are changing rapidly to roles that require solid management and technical skills. This course explores the transition from engineer and/or scientist to manager, through two fundamental engineering and technology management skills: project management and engineering economic analysis. The combination of project management and engineering economic analysis will provide students a glimpse into the life cycle of engineering/technology projects and the management/decision making behind such projects. Satisfies: **UHC Elective**

FES 435H Genes and Chemicals in Agriculture: Value and Risk

CRN: 60032 Section 001 LEC T 0900 - 0950 & 1600 - 1650 R 0900 - 0950 3 UHC Credits

Instructor(s): Steven Strauss & Dave Stone

See BI 435H for course description. Crosslisted with BI 435H and TOX 435H. Satisfies: **Bacc Core - Science, Technology and Society**

FR 429H French Society Through Its Cinema

CRN: 60335 Section 001 LEC T 1600 - 1850 3 UHC Credits

Instructor(s): Nabil Boudraa

An examination of French society through its own cinema. Via the screening and study of films from the various periods of French history, students will delve into the heart of French society and will discover the socio-historical, political, economic and cultural context. Knowledge of French is not required. Satisfies: **Bacc Core – Western Culture**

GEO 335H Introduction to Water Science and Policy

CRN: 56018 Section 001 LEC TR 1500 - 1620 3 UHC Credits

Instructor(s): Aaron Wolf & Michael Campana

This course provides students with an introduction to hydrology—the science dealing with Earth’s freshwaters—and the policies that affect use, distribution, quality, and management of those waters. About one third of the course is devoted to science, one third to policy, and one third to student presentations. Satisfies: **Bacc Core - Science, Technology and Society**

GER 231H German Dictatorships: Nazis and Communists

CRN: 61107 Section 002 LEC MW 1000 - 1120 3 UHC Credits

Instructor(s): Sebastian Heiduschke

Introduction to the two best-known dictatorships in German society, National Socialism of the Third Reich from 1933-1945 and Socialism in the German Democratic Republic from 1949-1989 via the study of visual media (feature films, documentaries, newsreels, etc.) and other primary and secondary sources. Prereqs: Sophomore standing. Satisfies: **Bacc Core - Western Culture**

HC 199 Honors Writing

CRN: 51722 Section 001 LEC MW 0800 - 0920 3 UHC Credits

OR

CRN: 52735 Section 002 LEC TR 0800 - 0920

OR

CRN: 56015 Section 003 LEC TR 1000 - 1120

Instructor(s): Eric Hill

Becoming a critical reader and thinker promotes clear writing and verbal communication. You will hone your skills in a discussion/debate format, along with frequent in-class writing assignments and presentations. You will also further develop your abilities to be a critical reader. We will be examining texts from many disciplines and on a variety of topics; you will also bring in examples for discussion. The research paper, which includes both formal documents and informal writing, will focus on an ethical/controversial issue or current research within your discipline; this will include field and library research. Prereqs: WR 121. Satisfies: **Bacc Core - Writing II**

HC 299 Farside Entomology

CRN: 54620 Section 001 SEM W 1800 - 1950 2 UHC Credits

Instructor(s): Michael Burgett

Farside Entomology is designed to introduce you to the humanistic side of entomology by utilizing the entomological humor of Gary Larson, et alia as paradigms of human-insect interactions. Interactions between humans and insects are numerous, of variable time scales and of varying implications (for both the human and the insect), ranging from the mildly humorous to the deadly serious. The "cartoon" format normally provides an anthropomorphic view of insects. This can be an incredibly rich venue as an introduction to the more serious aspects of insects and their relevance to human activities. Satisfies: **UHC Colloquia**

HC 299 The Art of Healing - Medical Ethics Through the Movies

2 UHC Credits

CRN: 57134 Section 002 SEM TR 1300 - 1350 &
T 1800-1950
(Weeks 1-5 Only)

OR

CRN: 58303 Section 003 SEM TR 1300 - 1350 &
T 1800-1950
(Weeks 6-10 Only)

Instructor(s): Courtney Campbell

This is a special colloquium on the art of healing in medicine open to interested honors, medical humanities, and pre-medical students. The focus of the colloquium this term is medical ethics, which will be explored through readings and illustrative films. The topics in medical ethics for class discussion include physician-patient relationships, reproductive technologies, medical research, genetic engineering, and end-of life issues. These issues will be discussed in class and illustrated through (required) attendance at screenings of the following films: The Cider House Rules, The Doctor, Gattaca, Million Dollar Baby, and the documentary, How to Die in Oregon. Meets weeks 1-5 only OR weeks 6-10 only. Satisfies: **UHC Colloquia and Medical Humanities Colloquia**

HC 299 Building Homes and Hope: International Service Learning

CRN: 58304 Section 004 SEM W 1500 - 1550 1 UHC Credit

Instructor(s): David Kovac

This course is part of a series of 3 colloquia exploring issues and practices of international service-learning. Each course in the series stands independently and may be taken as a prerequisite for participation in the UHC Summer Service Experience — in Ethiopia in 2015 — but the courses are in no way limited to only those participating in the trip. Extending our exploration of the notion of culture that began in the fall, the winter course focused on local and regional impacts of international service and relief work; and the spring course revolves around group development and international trip logistics. Satisfies: **UHC Colloquia**

HC 299 History of Rock & Roll EMP Trip

CRN: 60321 Section 005 SEM T 1800 - 1850 1 UHC Credit
Meets Weeks 8-10 Only / Trip May 29-31, 2015

Instructor(s): Ryan Biesack

This unique colloquium combines some preparatory reading and listening and discussion, and culminates in a trip to the Experience Music Project Museum in Seattle. Here we will explore collections and installations of some of the most important artists, bands, sounds, fashion, media, instruments and technology that have helped define popular music throughout history, shaping and reflecting our society in the process. The course requires attendance at an organizational meeting (5/19), a three day field trip (5/29/15-5/31/15), and one discussion meeting (6/2). The course has a \$161 course fee which covers lodging, two breakfasts, transportation, and entrance into the EMP museum. Bring money for snacks and meals, besides breakfast (which will be provided). Since all arrangements have been prepaid the **course fee is non-refundable if the course is not dropped prior to the 1st day of the term.** Graded: **P/N.** **Course Fee: \$161.00** Satisfies: **UHC Colloquia**

HC 299 Topics in Medicine – Pulling Back the Curtain

CRN: 60698 Section 006 SEM M 1800- 1950 2 UHC Credits

Instructor(s): Gabriel Ledger

For students interested in the US medical system and real-world applications of healthcare delivery. This course presents detailed discussions of topics such as evidence-based medicine, standards of care, medical innovation & technology, screening & preventive health, healthcare economics, consumer-driven healthcare, disparities in healthcare and outcomes, communication in medicine, medical error, cultural sensitivity, and others. Topics will be illustrated with specific examples from the day-to-day practice of clinical medicine, presented by an emergency room physician. Previously ran as PHL 399H. Satisfies: **UHC Colloquia**

HC 399 Introduction to Rocket Science

CRN: 60322 Section 001 SEM TR 0800 - 0920 3 UHC Credits

Instructor(s): Jack Higginbotham

The course is an introduction to the history, societal impact and basics of rocket theory, design, testing and applications. Topics include: trajectories, orbits, thrust, engine design, rocket components, testing, stability, control and complexities of rocket flight. A model rocket will be constructed, a microprocessor controlled sensor payload will be flown and the class will visit the rocket artifacts displayed at the Evergreen Aviation and Space Museum
Prereqs: Recommended class standing of sophomore or above. Satisfies: **UHC Elective**

HC 407 Shakespeare via Ashland

CRN: 51723 Section 001 SEM T 1800 - 1850 1 UHC Credit
Trip April 17-19, 2015

Instructor(s): Eric Hill

The course requires attendance at an organizational meeting (4/14), a three day field trip (4/17/15-4/19/15), and one discussion meeting (4/21). At this meeting you will turn in and discuss your written assignment.

Write either of two options:

1. a short (no longer than five minute) scene based on one of the plays or
2. an analysis based on at least one character from the play.

Travel Details: **Leave Friday, April 17th, at 12:30pm**; arrive in Ashland to check into the Best Western Windsor Inn and leave to see *Fingersmith*. Saturday will consist of two shows: *Pericles* and *Long Days Journey Into Night*. Sunday April 19th (following breakfast) we will depart Ashland at 10:00am.

Course Fee of \$240.00 includes tickets for three plays, coach travel, and two nights stay with continental breakfast at the Windsor Inn. Bring money for snacks and meals, besides breakfast (which will be provided). Since all arrangements have been prepaid the **course fee is non-refundable if the course is not dropped prior to the 1st day of the term**. All students are required to travel and stay as a group. Pick up class syllabus in the UHC office during week 10 of Winter Term. Please note that this class can only be taken twice for credit. Graded: **P/N. \$240 Non-Refundable course fee.** Satisfies: **UHC Colloquia**

HC 407 STEM Outreach as Service Learning - Community Outreach

CRN: 57164 Section 005 SEM R 1800 - 1950 2 UHC Credits

Instructor(s): Skip Rochefort & Margie Haak

The colloquium will focus on doing. Students will learn about the delivery of STEM (Science, Technology, Engineering, and Math) content in typical outreach environments. And they will learn by doing, as they will be required to participate in five K-12 Outreach events. The 10 hrs of outreach participation approximately every other week, will be part of the course time requirements. Service Learning Opportunities – Discovery Days, Earth Day, Family Science and Engineering Nights, and school campus visits.

Graded: **P/N** Satisfies: **UHC Colloquia**

HC 407 Adapting to Global Interdependence

CRN: 57260 Section 008 SEM R 1000 - 1150 2 UHC Credits

Instructor(s): Richard Clinton

Global interdependence has come about gradually but inexorably as 1) the human population has burgeoned, 2) new technologies have multiplied human interactions and impacts, 3) globalization of trade has intermeshed geographically separated economies, 4) weapon systems have acquired unprecedented reach and destructiveness, and 5) modern communications have revealed every part of the world to every other part. Climate change, which results from the cumulative effects of these processes on the global eco-system, is, perhaps, the most dramatic symbol of Global Interdependence. While these various trends have not gone unreported, the profundity of the change that Global Interdependence represents in the conditions of life on Earth has largely escaped notice. In light of these new conditions, accepted assumptions must be rethought, honored values realigned, accustomed ways of doing things modified or abandoned. The purpose of this colloquium is to clarify our understanding of Global Interdependence and its implications and to explore a number of measures that hold promise for meeting the challenges it poses. Junior standing or above recommended. Graded: **P/N** Satisfies: **UHC Colloquia**

HC 407 Principles of Comparative Planetology

CRN: 57137 Section 018 SEM TR 1000 - 1050 2 UHC Credits

Instructor(s): Randall Milstein

This colloquium may appeal to honors students considering space sciences as a field of study. Planetology - often referred to as planetary science - is an interdisciplinary field combining planetary astronomy with geology, geophysics, geochemistry, geomorphology, atmospheric sciences, oceanography, hydrology, glaciology, and astrobiology with intent to describe and suggest physical conditions and processes on other celestial bodies including planets, dwarf planets, moons, and asteroids. This course provides students with an introduction to the fundamental scientific principles of comparative planetology with particular attention to how we know what we know about other celestial bodies and the state of current technologies used to gather Solar System data. Graded: **P/N** Satisfies: **UHC Colloquia**

HC 407 The Invention of Altered States

CRN: 57140 Section 020 SEM T 1200 - 1350 2 UHC Credits

Instructor(s): Robin Pappas

The nineteenth through early twentieth centuries saw a transformation in how Western cultures understand human consciousness. This shift was informed in part by "science," technologies and methods for describing and explaining behavior and experience that were becoming disciplines: neurology, physiology, pharmacy, psychology, and psychiatry; and by aesthetics, the artistic, literary, and philosophical texts and perspectives (themselves using technologies and methods) emphasizing the subjective and social relevance of experience. In the interest of documenting "the whole man," these discourses explored experiences reflecting the typically intractable aspects of human consciousness, what Aldous Huxley (author of *Brave New World* and *The Doors of Perception*) termed "the mind's antipodes." In short, they investigated altered states of consciousness, particularly those induced by substances. The prominent genre for articulating this transformation was the drug confession. Though first adopted by aesthetic authors, the confession model provided a rhetorical architecture for scientific writers, as well. By looking at how authors describe the phenomena they experience as a result of using substances, we will find new ways to ask questions about topics as diverse as poetic expression, medical ethics, human consciousness, and legal history. Most important to our investigation will be the challenge of understanding the ways in which substance use within specific socio-historical moments transforms behavior and self-image. Satisfies: **UHC Colloquia**

HC 407 Historical Fictions & Fictional Histories

CRN: 58305 Section 022 SEM R 1600 - 1750 2 UHC Credits

Instructor(s): Thomas Bahde

Cultural critic and theorist Hayden White wrote: "If there is an element of the historical in all poetry, there is an element of poetry in every historical account of the world." Historian Simon Schama says similarly: "the asking of questions and the relating of narratives need not...be mutually exclusive forms of historical representation." This course explores the ways in which both historians and novelists construct historical stories, and examines the premise that there is more than one way to tell a true story. We will inquire how creative imagination helps us comprehend historical experience, and we will seek an understanding of historical truth that embraces both the authority of history and the empathy of literature. We will read literary classics, recent literature, and non-traditional histories that complicate our understanding of truth, fiction, and history. Graded: **P/N** Satisfies: **UHC Colloquia**

HC 409 PRAC/CONVERSANTS

CRN: 51701 Section 007 PRAC TBD 1 UHC Credit

Instructor(s): Leanna Dillon

The INTO OSU Cultural Ambassador Conversant Program provides an opportunity for honors students to earn credit while participating in a mutual cultural exchange. Participating honors students commit to meeting on average one hour per week with their international partner, keep a log of the times and places they met and the topics discussed, and complete a 2 page reflections paper due at the end of the term. Program information including the application process, is available at <http://oregonstate.edu/international/cultural-ambassador>. Students must meet with a UHC advisor to complete a Learning Agreement. Applications must be submitted online no later than the end of week 1. Graded: **P/N** Satisfies: **UHC Elective**

HC 409 PRAC/CIVIC ENGAGEMENT

CRN: 58819 Section 008 PRAC TBD 1 UHC Credit

Instructor(s): Leanna Dillon

The Center for Civic Engagement provides an opportunity for honors students to earn credit while participating in an ongoing community engagement project within the local community. Participating honors students commit to serving on average 2-3 hours per week within their project site, keeping track of their service hours, and completing a 2 page reflection paper due at the end of the term. Additional information, including placement opportunities, is available at: <http://oregonstate.edu/cce/ongoing>. Students must meet with a UHC advisor to complete a Learning Agreement and a CCE staff member to discuss placement opportunities. Placement must take place no later than the end of Week 1. Graded: **P/N** Satisfies: **UHC Elective**

HST 106H World History III: The Modern and Contemporary World

CRN: 60587 Section 001 LEC MWF 1300 - 1350 3 UHC Credits

Instructor(s): Katherine Hubler

A survey of the historical development of several world civilizations from the 18th century to the contemporary period. Exploration of religious, cultural, social, political, and economic institutions of various societies. Cultural diversity analysis of both ancient Western and non-Western civilizations. Satisfies: **Bacc Core - Cultural Diversity or Western Culture**

HST 425H Holocaust in its History

CRN: 60326 Section 001 LEC TR 1400 - 1550 4 UHC Credits

Instructor(s): Paul Kopperman

An inquiry into the causes, course, and impact of the Holocaust. The general theme of anti-Semitism in European history is explored for background. Topics discussed for comparative purposes include anti-Semitism in American history; other episodes of mass murder in the 20th century. Satisfies: **Bacc Core - Contemporary Global Issues**

HSTS 415H Theory of Evolution and Foundation of Modern Biology

CRN: 60327 Section 001 LEC MW 1000 - 1150 4 UHC Credits

Instructor(s): Michael Osborne

Origin and development of Darwin's theory of evolution. Reception of theory and history of evolution to the present. Satisfies: **Bacc Core - Science, Technology and Society or WIC**

MTH 254H Vector Calculus I

CRN: 52899 Section 001 LEC MWF 1600 - 1720 4 UHC Credits

Instructor(s): Tevian Dray

Vectors and geometry: coordinate systems, scalar product. Real-Valued Functions of Several Variables: partial and directional derivatives, gradient, extreme values. Multiple Integrals: change of coordinates, applications. Vector valued-functions: arc length and curvature of space curves, normal and tangential components of acceleration. Prereqs: MTH 252/252H. Satisfies: **UHC Elective**

MTH 256H Applied Differential Equations

4 UHC Credits

CRN: 54370 Section 001 LEC MWF 1300 - 1350

AND

CRN: 60328 Section 010 REC W 1200 - 1250

Instructor(s): Stephen Scarborough

First order linear and nonlinear equations, and second order and higher order linear equations, Laplace transform, and applications appropriate for science and engineering. Prereqs: MTH 254/254H. Satisfies: **UHC Elective**

MTH 306H Matrix and Power Series Methods

CRN: 58299 Section 001 LEC MWF 1400 - 1450 4 UHC Credits

AND

CRN: 60329 Section 010 REC W 1500 - 1550

Instructor(s): Adel Faridani

MTH 306H will move at a fast pace from day one. We plan to cover most of the textbook. Topics will include introduction to matrix algebra, determinants, systematic solution to linear systems, and eigenvalue problems. Convergence and divergence of series with emphasis on power series, Taylor series expansions, convergence tests for power series, and error estimates for truncated series used in practical approximations. Prereqs: MTH 252/252H; MTH 254/254H recommended. Satisfies: **UHC Elective**

MUS 102H Music Appreciation II: A History of Rock and Roll

CRN: 56180 Section 001 LEC TR 1000 - 1120 3 UHC Credits

Instructor(s): Ryan Biesack

This survey is a selected examination and study of musical and social events that have occurred in popular culture over a period of roughly the past 50 years, and what has come to be known generally as “Rock” music. The survey will begin its journey looking at the 1950’s and the beginnings of Rock music and conclude with the Rock culture of today. The term “Rock” music will be used as an umbrella or generic term to cover the many variations of popular music that fall under its reach: Motown, Soul, R &B, Disco, Acid Rock, Death Metal, Thrash Metal, Punk Rock, Indy Rock, Grunge, etcetera, etcetera. As there are numerous artists and performers who have contributed to Rock music, this survey will focus on a selected group who have significantly changed, or illustrate the change in Rock music. This course will examine some of the pinnacle recordings, repertoire, artists, concerts, performances, and events to provide insight and meaning as to “how” and “what” this music was changing within pop culture in a historical and social context. By examining different works of Rock music, we can hope to extrapolate broader meaning and understanding of these events in an overarching sense relative to recent history. This course will also examine how Rock music has functioned as a vehicle for commentary on everything from sex to religion to politics and how this music continues to be a relevant and ever changing vehicle in the present day. Satisfies: **Bacc Core - Literature and the Arts**

PH 221H Recitation for Physics 211

CRN: 52652 Section 001 REC R 1100 - 1150 1 UHC Credit

Instructor(s): David McIntyre

Honors recitation reserved for UHC students enrolled in lecture/lab sections of PH 211. One-hour weekly session for the development of problem-solving skills in calculus-based general physics. Lecture, Lab, and Recitation combined, total 5 OSU credits. COREQ: PH 211. Satisfies: **Bacc Core - Physical Sciences**

PH 223H Recitation for Physics 213

CRN: 53829 Section 001 REC T 1100 - 1150 1 UHC Credit

Instructor(s): Tom Giebultowicz

Honors recitation reserved for UHC students enrolled in lecture/lab sections of PH 213. One-hour weekly session for the development of problem-solving skills in calculus-based general physics. Lecture, Lab, and Recitation combined, total 5 OSU credits. COREQ: PH 213. Satisfies: **Bacc Core - Physical Sciences**

PH 407H The Physics and Philosophy of Time

CRN: 60330 Section 001 SEM F 1400 - 1450 1 UHC Credit

Instructor(s): Albert W. Stetz

Time is of fundamental importance in physics and it also rules our lives, but it's difficult to put one's finger on exactly what time is. Nevertheless, physics has some interesting things to say. For example, according to thermodynamics, everything should run down and fall apart, but the universe has evolved from a state of perfect simplicity to the staggeringly complex structures that are ourselves. The fundamental laws of physics work just as well with time running backwards or forwards, but there is an infinitesimal violation of this rule without which no matter could exist. And finally, in some regions of the universe, time and space are so inextricably intertwined that what we call space and what we call time is arbitrary. These issues and others will be explored in a general, i.e. non-mathematical way by reading a selection of books and articles about time written for a general audience. Students will be asked to prepare brief written reports on their reading and suggest questions for classroom discussion. Satisfies: **UHC Colloquia**

