Winter 2023 Course Descriptions

Please review the course descriptions below. You should select your top five classes. The course selection survey will open Tuesday, October 18 at 11:50 AM and closes Monday, October 24 at 8:00 AM. Course assignments will be sent via UC Davis email on Wednesday, October 26.

- These courses are restricted to honors students and can only be accessed using a Course Registration Number (CRN) distributed by UHP. You cannot search for them in Schedule Builder.
- Each honors student must complete three UHP courses during the 2022-2023 academic year (one per quarter). Taking a second course during Winter 2023 does not waive another quarter’s UHP course requirement unless approved by UHP.
- All of the Honors courses are capped at 25 students each, except for DES 128A, ECH 1, MAT 17B, and MAT 21C, which are capped at 13, 24, 30, and 30 respectively.
- ECH 1 is part of a large general-population lecture; however, the lab section is taught by Professors Kuhl and Ristenpart instead of a TA and includes only UHP students.
- MUS 107A is part of a large general-population lecture; however, the lab section is taught by Professor Nichols instead of a TA and includes only UHP students. There are two lab sections—all UHP students will attend the same large lecture and select a lab section capped at 13 students each.
- Honors courses must be taken for a letter grade and earn a minimum grade of C-; courses changed to P/NP grading will not count toward UHP requirements.
- All prerequisites listed in red text will not be waived for honors students. All courses with WE General Education credits require satisfaction of ELWR.

**Note:** Department course offering details—classrooms, days, and times—are subject to change. Schedule Builder provides the most accurate information to date.

### COURSE OFFERINGS

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<td>Art, Architecture, and Human Rights</td>
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<td>AHI</td>
<td>120A</td>
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**INSTRUCTOR(S)**  
Watenpaugh, Heghnar  
**TYPE**  
Lecture  
**DAYS**  
MW  
**TIME**  
9:00 AM – 10:50 AM  
**BUILD**  
SHREM  
**ROOM**  
1001

**Description:**  
Lecture/Discussion – 4 hour(s). Prerequisite(s): Completion of Entry Level Writing Requirement (ELWR). Study of human rights as they relate to art, architecture, and cultural heritage. Examines museums, art collections, and cultural-heritage management, their relation to the cultural prerogatives of communities and indigenous groups, and protection of cultural heritage during war and conflict. (Same course as HMR 120A). GE credit: AH, DD, SS, VL, WC, WE.
Introduction to American Studies

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). **Prerequisite(s): Completion of Entry Level Writing Requirement (ELWR).** Ideals, conflicts, and realities defining American Cultures through study of popular music, advertising, and other media. Themes include Imagining America, Citizenship and Belonging, and Cultural/Spatial Practices. GE credit: ACGH, AH, DD, SS, WE.

This course examines the intersecting ideals, conflicts, and material realities that have defined American culture. Together, we explore whether there is or has ever been a representative “American” or American narrative. We examine cultural representations of American identity and interrogate what is at stake in those claims. And we focus on particular moments where the intersection between culture, politics, and power has been especially instructive or poignant.

As an American Studies course, the material is interdisciplinary, meaning that we will examine texts and sources from a range of different fields, such as literature, history, music, ethnic studies, and visual culture. The course will also focus on making connections between culture, politics, history, and our everyday lives.

Human Evolutionary Biology

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). **Prerequisite(s): Completion of Entry Level Writing Requirement (ELWR).** Processes and course of human evolution; primatology; biological and social diversity within Homo sapiens; human paleontology. GE credit: SE, SL, WE.

This course explores how we became human. It delves into the latest findings from primatology, human paleontology, genetics, archaeology, and modern social and biological diversity. To understand how we are similar to our nearest relatives and what makes humans unique, the course examines the processes and course of human evolution.

The honors version of the course will spend relatively less time on reviewing concepts from high school biology. This will free up time for 1) hands-on experience with computational models of evolution and 2) discussions about how the course concepts are relevant to understanding contemporary issues including human health, diversity, conservation, and cooperation. The readings will also be supplemented with primary research and lay media articles to foster discussions of the accuracy and consequences of such reporting.
The historical avant-gardes used art to transform not only individual experience but also culture, society, and political life. In this course, we will examine key texts from multiple European and global avant-garde movements, focusing on the explosive moment of the early twentieth-century. Figures working alone and in groups across media and countries created shocking new forms of expression to reflect and respond to the conditions of the modern world. We will examine how they went about this, why, and with what consequences. We will also consider how the historical avant-gardes have continued to shape and reshape our contemporary literary-artistic practices as well as our modern social imagination. From immersion in mystical imagination to channeling bellicose violence, from radically reshaping the limits of representation to performing radical socio-political critique, the avant-gardes demand that we consider them as a powerful intervention into the modern world. Are they right?

Primary texts will include manifestoes, poetry, novels, films, and other artistic production from: Italian Futurism (FT Marinetti, Bruno Corra, and others); Dada (Tristan Tzara, Hannah Höch, Max Ernst, and others); Surrealism (André Breton, Salvador Dalí, Luis Buñuel, and others); Vorticism (Wyndham Lewis, Ezra Pound); Estridentismo (Manuel Maples Arce, List Arzubide, and others)... and more!

In this unique pair of courses over two quarters – Winter and DES 128B in Spring 2023 – students will work closely with Design and faculty from other colleges in a hands-on, cross-disciplinary course to produce and showcase innovative new products that are functional, elegant, and sustainable. This is a two-quarter commitment, and students are required to enroll in both W23 DES 128A and SP23 DES 128B.

The BioDesign curriculum is based off the BioDesign Challenge competition rules. In the first quarter, interdisciplinary teams of undergraduates learn basic principles of BioDesign and develop their project ideas for a proposal, including an introduction to the lab work they’ll need to get going in the next
quarter. Then students put their approved plans in motion in the second quarter to create the novel designs coupled with promotional materials such as videos, websites, and product pitches. The series culminates in a local competition judged by UC Davis and visiting faculty as well community experts such as designers and entrepreneurs. Four years ago, UC Davis BioDesign students produced completely innovative biodegradable zero-waste bandages and a variety of other designs merging art and science. The UCD teams were specifically challenged to use agricultural waste products, even tricking Kombucha SCOBY to produce new biodegradable polymers that can be incorporated into a whole host of applications.

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**INSTRUCTOR(S)**
Bogad, Lawrence

**TYPE**
Lecture

**DAYS**
TR

**TIME**
12:10 PM – 2:00 PM

**BUILD**
WRIGHT

**ROOM**
101

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). Prerequisite(s): Completion of Entry Level Writing Requirement (ELWR). Not open to students who have completed DRA 001S. Introductory investigation of the nature of performance, moving from performance theory to consideration of various manifestations of performance including theatre, film and media, performance art, dance, sports, rituals, political and religious events, and other “occasions.” GE credit: AH, DD, VL, WE.

In this course we will be exploring the multi-faceted concept of performance in order to begin seeing the ways that performance exists not only in the predictable and varied spaces we call the stage, but also how it emerges in everyday life, in religious ritual, in public spaces, in your own sense of identity (gender, race, ethnicity, sexuality), and, of course, in athletic events. We will use insights from performance art, anthropology, sociology, and linguistics as well as theater, dance, and other art forms. We will consider questions such as: What does it mean to perform? Am I performing? If so, how? How can we talk about and analyze performance? What is the difference between ritual and performance? What are the limits of performance?

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<td>ECH</td>
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**INSTRUCTOR(S)**
Kuhl, Tonya

**TYPE**
Lecture

**DAYS**
M

**TIME**
3:10 PM – 4:00 PM

**BUILD**
MDSC C

**ROOM**
180

Ristenpart, William

**TYPE**
Lab/Dis

**DAYS**
T

**TIME**
10:00 AM – 11:50 AM

**BUILD**
EVERSN

**ROOM**
126

**Description:**
Lectures – 1 hour(s); Laboratory – 2 hour(s); Project (Term Project) – 1 hour(s). Non-mathematical introduction to how chemical engineers think, illustrated by elucidation of the process of roasting and brewing coffee. Qualitative overview of the basic principles of engineering analysis and design. Corresponding experiments testing design choices on the sensory qualities of coffee. Not open for credit to students who have completed ECH 001Y, ECM 001, ECM 005, or ECH 005. GE credit: SE, SL, VL.

**Note:** This course is a large 1-hour general population lecture, but Professors Tonya Kuhl and William Ristenpart will be teaching the small 24-person 2-hour lab.
Intermediate Macro Theory

INSTRUCTOR(S)
Geromichalos, Athanasios

Description:
Lecture – 3 hour(s); Discussion – 1 hour(s). Prerequisite(s): (ECN 001A C- or better or ECN 001AV C- or better); ECN 001B C- or better; ((MAT 016A C- or better, MAT 016B C- or better) or (MAT 021A C- or better, MAT 021B C- or better) or (MAT 017A C- or better, MAT 017B C- or better)). Theory of income, employment, and prices under static and dynamic conditions, and long-term growth. GE credit: None.

Global Economic History

INSTRUCTOR(S)
Meissner, Christopher

Description:
Lecture – 3 hour(s); Discussion – 1 hour(s). Development and application of analytical models to explain the nature and functioning of economies since the Industrial Revolution. Examples will be drawn from a variety of societies, including England, China, Germany, and India. GE credit: SS.

Macroeconomics is the study of aggregate economic variables, the economy as a whole. This is in contrast to microeconomics, the study of the economic behavior of individual consumers, firms, and industries. These two branches, however, are much closer than their standard separation into different courses would lead you to believe. Macroeconomists look at the individual behavior- the so-called “micro-foundations”- in creating their theories of aggregate economic activity. In this course, we will study how economists model the relationships between aggregate economic variables and examine how various fiscal and monetary policies can affect the results. The main goal of this class will be to improve your ability to apply economic models to analyze and understand real-world events.

This course introduces students to the evolution of the global economy since the early 19th century. Getting familiar with the economic history of the global economy will make you more comfortable in understanding current events such as the global economic crisis, the impact of international trade, the role of international capital flows, and the movement of workers across borders. We will focus heavily on the following concepts/fields from economics:

- International Trade
- International Finance (exchange rates, capital flows, financial crises)
- Immigration
Description:
Lecture – 3 hour(s); Term Paper. Prerequisite(s): Completion of Entry Level Writing Requirement (ELWR). European thought in the early industrial era. Shifting cultural frameworks, from romanticism to scientism; liberal and socialist reactions to social change. Focus on the work of Goethe, Hegel, J.S. Mill, Marx, Darwin, and Flaubert. GE credit: AH, SS, WC, WE.

This course is an historical survey of the origin and development of “science fiction,” both as a genre and a set of myths for a modern age conflicted about its immersion in science, technology, reason, and secularism. We will discuss the genre in terms of its historical contexts, major authors, seminal publications, key themes, and diverse styles, and analyze how it has developed during the course of the past century.

Among the issues we will address are: Can we find a common way to define such a protean body of works and themes, which include escapist “planetary romance”; “hard SF” (emphasizing the natural sciences); “soft SF” (emphasizing the social sciences); “New Wave SF” (employing modernist literary techniques and concerns), Utopian and Dystopian SF? Is there such a thing as “science fiction”? Why has science fiction been deemed “escapist” on the one hand, and politically engaged on the other? Might it have a particular social function, in contrast to other genres (e.g., westerns, romances, mysteries)?

Science fiction has often been opposed to literary realism, defined instead as a subset of fantasy. But might we consider contemporary science fiction as a form of realism, given the enormous pace of scientific and technological change and its effects on our daily lives, as well as the pervasive nature of science fiction ideas and imagery in modern culture? Could we call our everyday perceptions of the world a form of “science-fictionality”? (Might the current vogue for fantasy in the media reflect a reaction against science fiction, which has become so omnipresent in our daily lives that it no longer elicits the “sense of wonder” that characterized it in the first half of the twentieth century?) Finally, we will trace how the genre began in the 1920s and 1930s as a relatively homogeneous form, created largely (but not exclusively) in the West by white men (many of them teenage fans), and has since become a truly diverse and global phenomenon. We will also follow how it went from being condemned by critics as juvenile and unsophisticated to being acclaimed as literature, produced by Nobel prize winners and fan fiction writers alike.
Description:
Lecture – 3 hour(s); Discussion – 1 hour(s). Group study of a special topic in natural sciences and mathematics. Varies with topic offered. May be repeated for credit. GE credit: SE, SL.

Cancer is a genetic disease caused by changes to genes that lead to uncontrolled cell growth and spread of cells to other parts of body. Some of these genetic and epigenetic changes occur naturally when DNA is replicated during the process of cell division. But others are the result of environmental exposures that damage DNA or alter the gene expression pattern, such as tobacco smoke. This “Environment and Cancer” course is designed to provide an overview about the link between environment and cancer and to discuss new frontiers of cancer research and biomedical sciences. Topics will include an introduction of cancer, man-made and natural carcinogens, and the underlying mechanisms of cancer development. Through class lectures and discussions, student will develop a critical skill in reading, comprehension and communication. Students will also be able to develop a skill to discuss and/or explain the implication of scientific discoveries to lay audiences. At the end of the course, students will offer an opportunity to shadow a graduate student mentor as they work in the laboratory and then carry out cutting-edge cancer research for a student who plans to pursue a career in medicine, veterinary medicine, and/or biomedical research.

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INSTRUCTOR(S)    TYPE    DAYS    TIME           BUILD   ROOM
Hahn, Tom        Lecture  T       2:10 PM – 5:00 PM  OLSON  261

Description:
Lecture – 3 hour(s); Discussion – 1 hour(s). Group study of a special topic in natural sciences and mathematics. Varies with topic offered. May be repeated for credit. GE credit: SE, SL.

Many major discoveries in the fields of animal behavior, behavioral ecology, evolution, and neuroscience have been based on studies of bird vocalizations. With the recent advent of publicly available repositories of high-quality audio recordings of wild bird vocalizations, it is now possible to evaluate some long-standing assumptions and test hypotheses about bird vocal behavior using existing samples. Key questions in this research area concern the mechanisms of vocal development (whether vocalizations are learned or innate), the evolution of developmental mechanisms (when the ability to modify vocal behavior through learning first appeared, and how many times it has evolved), and whether there are widespread “limits to vocal performance” that constrain vocalizations to be honest indicators of individual quality. In this course we will evaluate these and other questions using publicly-available audio recordings from Xeno-Canto and free Raven sound analysis software.

The course will begin with a few lectures introducing the broad array of biological questions that have been (or could yet be) examined in the context of bird vocalizations. The purpose of this will be to give students ideas for problems they can explore further; students will not be handed pre-packaged projects and study plans. The next part of the course will involve forming teams of 2-4 students who share interests in particular topics. Those teams will then each identify a primary research question and a set of alternative hypotheses that they plan to investigate using audio recordings. They will then outline sets of testable predictions to evaluate their hypotheses. Finally, the students will formulate and carry out a plan to test their predictions by collecting and analyzing data from recordings they download from Xeno-Canto. All of this can easily be done in the remote learning environment. A fundamental goal of
the course will be to give students the opportunity to explore, and participate deeply in, the process of formulating scientific questions, hypotheses, and predictions, and with collecting and analyzing acoustic data. In addition to receiving feedback from their peers and instructor, each team will be assigned a primary graduate student mentor to guide them in developing their questions and research projects.

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). Prerequisite(s): MAT 016A C- or better or MAT 17A C- or better or MAT 021A C- or better or MAT 21AH C- or better. Introduction to integral calculus and elementary differential equations via applications to biology and medicine. Fundamental theorem of calculus, techniques of integration including integral tables and numerical methods, improper integrals, elementary first order differential equations, applications in biology and medicine. Not open for credit to students who have completed MAT 016C, MAT 021B, or MAT 021C; only 2 units of credit for students who have completed MAT 016B. GE credit: QL, SE, SL.

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). Prerequisite(s): MAT 016C C- or better or MAT 017C C- or better or MAT 021B C- or better or MAT 021BH C- or better or MAT 017B B or better. Continuation of MAT 021B. Sequences, series, tests for convergence, Taylor expansions. Vector algebra, vector calculus, scalar and vector fields. Partial derivatives, total differentials. Applications to maximum and minimum problems in two or more variables. Applications to physical systems. GE credit: QL, SE.
**Description:**
Lecture – 3 hour(s); Discussion/Laboratory – 1 hour(s). Basics of electronic music history, techniques, and composition. Fixed media creation using field recordings. Focus on history, theory and techniques of musique concrète, elektronische musik, and related repertoire. GE credit: AH.

Music 107A will challenge you to develop as a composer/sonic artist. We'll study a broad array of different kinds of electronic music. As this repertoire comes into focus, you’ll explore new ideas and techniques through listening, reading, discussions, and by making projects of your own. You’ll learn new music, new concepts, new skills, and new ways of making electronic music. Three compositional projects will allow you to think about what you’ve learned and ask you to incorporate this knowledge creatively.

This is a music composition class, taught as part of the Music Department curriculum. MUS 107A is part of a comprehensive undergraduate electronic sound program, which includes introductory, intermediate, advanced, and special topics classes. This particular class covers a range of topics, including the history and repertoire of electronic music, basic technical skills, and aesthetics. Our main focus, however, is on listening and composition. No previous musical training is necessary.

*This course is a large 1-hour general population lecture, but Professor Nichols will be teaching each small 13-person lab.

**There are two sections of UHP MUS 107A – all students will attend the same AU0 lecture and choose a lab section, either AU1 or AU2. Each lab section will contain only UHP students.

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**INSTRUCTOR(S):**
Caporale, Natalia

**TYPE:** Lecture
**DAYS:** TR
**TIME:** 1:10 PM – 2:30 PM
**BUILD:** BAINER
**ROOM:** 1060

**Description:**
Lecture – 3 hour(s); Discussion – 1 hour(s). Broad examination of age-associated changes in body functions. Includes basic cell physiology, a survey of major organ systems, and the age-induced alterations in system function. Some age-associated diseases will be examined. Intended for non-science majors. Not open for credit to students who have completed NPB 015V. GE credit: SE.

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**INSTRUCTOR(S):**
Dorsey, Jonathan

**TYPE:** Lecture
**DAYS:** MWF
**TIME:** 12:10 PM – 1:00 PM
**BUILD:** WICKSN
**ROOM:** 1020

**Description:**
Lecture/Discussion – 4 hour(s). Introduction to the interdisciplinary cognitive scientific approach to the study of mind, drawing concepts and methods from psychology, philosophy, linguistics, artificial intelligence, and other disciplines. Same course as CGS 001. GE credit: SE, SL.
This course introduces the interdisciplinary pursuit of cognitive science. See how philosophers, neuroscientists, computer scientists, linguists, and others come together in the common goal of developing a science of cognition.

**Research Methods in Psychology**

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**INSTRUCTOR(S)**

Geng, Joy

**TYPE**

Lecture

**DAYS**

TR

**TIME**

3:10 PM – 4:30 PM

**BUILD**

WELLMN

**ROOM**

203

**Description:**

Lecture – 3 hour(s); Extensive Writing. Introduction to experimental design, interviews, questionnaires, field and observational methods, reliability, and statistical inference. GE credit: QL.

This course is an overview of the fundamentals of research methods behind the broad field of psychological science. Emphasis on how research in psychology is planned, carried out, interpreted, and critiqued. Topics include use of human participants in research, reliability and validity, and observational and experimental methods. Examples drawn from various specialty areas in psychology.

**Health, Cultures, and Inequalities**

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**INSTRUCTOR(S)**

Lo, Ming-Cheng

**TYPE**

Lecture

**DAYS**

TR

**TIME**

1:40 PM – 3:00 PM

**BUILD**

OLSON

**ROOM**

105

**Description:**

Lecture – 3 hour(s); Term Paper/Discussion – 1 hour(s). Analysis of how sociocultural factors shape illness experience. Evaluation of how certain conditions come to be understood as health conditions; illness identities and biographies; doctor-patient interactions; biomedical cultures; how race, ethnicity, and gender shape health practices. GE credit: DD, SS.

This course equips students with sociological concepts in order to advance their understandings of the social and humanistic aspects of medicine. We will focus on how cultural and societal factors shape health, healthcare options and encounters, as well as the ways in which we make sense of illness experiences and develop patient identities. Key topics that will be explored include: the social construction of medicine; doctor-patient interactions; doctors’ professionalization; medicalization of social and behavioral problems; race and class disparities in health; healthcare policies; illness experiences and identities; the medicalization of deaths and its limitations.