



SPRING 2018

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**Freshman and Sophomore Seminars
University of California, Berkeley
231 Evans Hall
Berkeley, CA 94720-2922**

Freshman & Sophomore Seminars at Berkeley

UC Berkeley's Freshman and Sophomore Seminars provide an unparalleled opportunity for faculty members and small groups of lower-division students to explore a scholarly topic of mutual interest together, in the spirit of learning for its own sake. By taking a seminar a student becomes an active member of Berkeley's intellectual community. The seminars depend on the regular presence and active participation of every student. Sharing ideas in class is an important academic skill that can be acquired only through practice. The vigorous discussions that characterize the most successful seminars depend on the commitment of each and every member of the class. Students are encouraged to choose their seminars based on the pull of intellectual curiosity, a desire to explore enticing and even unfamiliar realms.

Please visit the Freshman & Sophomore Seminar website at <http://fss.berkeley.edu/> for the following:

- Updates to the seminar lists included in this document on easy-to-follow web pages
- Revisions to this document
- Pop-up menus to help students find seminars of interest based on seminar topics
- Information regarding the Food for Thought Seminar series, a wonderful way for faculty and students to get better acquainted in an informal setting before or after class

L&S Discovery Courses

The seven-course breadth requirement can be an unparalleled opportunity to explore fascinating worlds of knowledge. The Letters & Science Discovery Courses take the guesswork out of satisfying the breadth requirement. Taught by some of the most distinguished faculty on campus and deliberately designed to engage and ignite the minds of non-experts, these courses are unforgettable. For details on the Discovery Courses, see <http://lsdiscovery.berkeley.edu>.

This document was last updated on October 4, 2017.

FRESHMAN SEMINARS

The following courses, most of which are numbered 24, are limited to 15-18 students. Each is offered for one unit of credit. First-year students will be given priority for enrollment. Courses designated P/NP may be taken pass/no pass only; courses designated LG may be taken for a letter grade or on a pass/no pass basis. If a course is designated as requiring the consent of the instructor to enroll, or if you would like additional course information, contact the undergraduate assistant in the department offering the seminar.

African American Studies 24, Section 2
Sport, Celebrity, and Controversy in American Culture (1 unit, P/NP)
Professor Bil Banks
Tuesday 2:00-3:00, 104 Dwinelle Hall, Class number: 21923

The goal of the class is to encourage critical thinking about the interplay between sport, society and celebrity in 20th- and 21st-century American culture. We hope to occasionally reference developments (like soccer) in other countries, but the focus will be on the United States.

Ideas about race, class, gender and popular media treatments have consistently shaped how various sports and sports figures have fared in the broader culture. The recent cultural/political controversy about Colin Kaepernick has stirred the pot; however, the issues have histories. Billie Jean King, Muhammad Ali, Jack Dempsey, Jackie Robinson, boxing, performance-enhancing drugs and, more recently, U.S. football and health have generated fierce debates in the culture. The growth of media forces like ESPN and social networks have enlightened or demeaned the discussions, depending on your point of view. **I cannot overemphasize how much a successful seminar is contingent on vigorous student involvement in the class sessions. This being Berkeley, I assume a degree of intellectual and cultural diversity in the class, and I encourage students to bring their individual perspectives into the discussions. I believe all students can have something to say. In the vernacular of competitive sportspeople, "bring it!" Your active participation will be a factor in my evaluations.**

The class is limited to 15 students.

Bil Banks is a Professor of African American Studies and author of *Black Intellectuals: Race and Responsibility in American Life*, winner of the 1997 American Book Award. Professor Banks has offered many Freshman and Sophomore Seminars.

Anthropology 24, Section 1
Chocolate: History, Culture, and Science (1 unit, LG)
Professor Rosemary Joyce
Wednesday 12:00-1:00, 221 Kroeber Hall, Class number: 41122

Chocolate is an everyday part of life in the US today. Displays of chocolates next to cash registers give a sense of its global scope, with varieties boasting of coming from Belize, Venezuela, Indonesia, and Ghana. Meanwhile, fine chocolates are associated with Belgium, France, and San Francisco. What is less obvious to the chocolate consumer is the world of chocolate research that ranges from studies of DNA and medical potential to identifications of the oldest traces of the parent plant, cacao, and its use for a wide range of foods, drinks, and medicinal preparations. In this seminar, we will delve into the world of chocolate research, finding out what commonly held ideas are being debunked, and asking questions as yet unanswered about the culture, history, and science of chocolate. **This course would be ideal for any student interested in historical approaches to understanding everyday life, but especially those who want to learn how researchers working in multiple disciplines can build up understanding of the distant past.**

I am an anthropologist who conducts research in archives, museums, and through field archaeology in Honduras, on sites ranging in age from the earliest known villages (occupied by 1600 BC) to colonial forts and towns from the eighteenth and nineteenth centuries. My publications deal with people's identities as men and women, and as members of different racialized groups, and how those identities influence their power and status. I am a specialist in ancient pottery, which has led me to research on foodways, including the detection of traces of chocolate in pots dating before 1100 BC. This is an aspect of my interest in everyday lives and their complexity, including feasting, ceremonies around birth and death, and artistic craft production.

Faculty web site: <http://anthropology.berkeley.edu/people/rosemary-joyce>

Anthropology 24, Section 2
Archaeology and Anthropology of the Environment (1 unit, P/NP)
Professor Junko Habu
Monday 10:00-11:00, 180 Barrows Hall, Class number: 41123

This course provides an overview of recent discussions on long-term sustainability of human-environmental interaction in the fields of archaeology, ecological anthropology and related disciplines. The theoretical foundation of this course is that of historical ecology, which conducts comprehensive research into long-term and short-term cultural change while emphasizing the impact of human actions on the environment. Key aspects of human cultures and societies that will be discussed in this course include 1) food and subsistence diversity, 2) networks (including the mobility of people, goods and information), 3) local autonomy and sovereignty, 4) rituals, traditional ecological knowledge and indigenous rights, and 5) implications of technological developments. The importance of the initiatives of local stakeholders will also be emphasized. **Students who are interested in human-environmental interactions in both the past and present, those who are interested in local and global environmental issues, are particularly encouraged to take this course. For more information about my current research, please see my website: <https://junkohabu.com/>.**

Please also see the website of my recent project in Kyoto:
<http://www.chikyu.ac.jp/fooddiversity/en/index.html>

2010-present Professor, Dept. of Anthropology, UC Berkeley.

2002-2010 Associate Professor, Dept. of Anthropology, UC Berkeley.

1996-2002 Assistant Professor, Dept. of Anthropology, UC Berkeley.

1996 Ph.D. (Anthropology), McGill University

1994-1995 Faculty Lecturer, Dept. of Anthropology, McGill University.

1984-1988 Full-time Research Associate, Faculty of Science, Univ. of Tokyo.

1984 MA (Archaeology), Keio University, Tokyo.

1982 BA (Archaeology), Keio University, Tokyo

Faculty web site: <https://junkohabu.com/>

Architecture 24, Section I
Design Thinking, Creativity, Innovation, and Future Career Paths (1 unit, P/NP)
Professor W. Mike Martin
Tuesday 1:00-3:00, , Class number: 21445

This seminar will meet five weeks, two hours per week.

Creativity and innovation are the key drivers of success for many of today's leading industries and organizations. At the center of these activities is how design thinking supports innovation. Most of our future, both today and in the years to come, will be due to a culture of creative innovation. An important element of a creative culture is the use of design thinking as a means to unlock and define the challenges of the day and provide a framework for our actions in producing resolutions. **This course provides opportunities for students from all disciplines to explore the principles and concepts that underpin design thinking, creativity, and innovations, and how these powerful ways of thinking and acting are manifested in potential career paths.**

Professor W. Mike Martin has been at UCB for the past 25 years in the Architecture Department of the College of Environmental Design. He served as the Undergraduate Dean of CED for eleven years and completed a three-year term as Chair of the Architecture Department. Just before retiring, he served as the University of California Systems Education Abroad Director for Scandinavia from 2006-2008 in Copenhagen, Denmark. His teaching and research have focused on the study of the practice of design thinking, collaborative design, work-studies of practice, and storytelling/narrative as a means of knowledge transfer in practice and the academic community.

Faculty web site: <http://ced.berkeley.edu/ced/faculty-staff/mike-martin>

Bioengineering 24, Section I
History of Biology in Science Fiction (1 unit, P/NP)
Lecturer Terry Johnson
Tuesday 3:00-4:00, 247 Dwinelle Hall, Class number: 41066

The science fiction of a particular period often reflects the cultural struggles and anxieties of that time, while drawing inspiration from contemporary scientific discovery. In this course, we will examine fiction (primarily English-language short stories, novels, radio plays, television, and film). We'll consider the actual biological science behind them (as it was understood at the time that the text was written), the ways in which authors apply and extrapolate science in their narratives, and to what ends. We'll also discuss a few trends in science fiction, and how these trends have changed over time, and explore why. **This seminar is part of the Food for Thought Seminar Series.**

Terry D. Johnson has a master's degree in chemical engineering from MIT and is currently an Associate Teaching Professor of bioengineering at UC Berkeley. He hopes that by teaching in this field, he will be giving students the tools that they will need to repair him as he gets older.

He teaches courses in a wide range of subjects, displaying a versatility that has prevented him from achieving any actual expertise. In 2010 he received the Golden Apple Award for Outstanding Teaching, and was one of the recipients of Berkeley's 2013 Distinguished Teaching Awards. He is also co-author of the popular science book *How to Defeat Your Own Clone* (and other tips for surviving the biotech revolution).

Civil and Environmental Engineering 24, Section I
Providing Clean, Safe Water for Developing Countries (1 unit, P/NP)
Professor John Dracup
See days and times below. , 212 O'Brien Hall (first meeting), Class number: 35248

The class will meet four times: Wednesday, January 17, 2018, 6:00-8:00 pm in 212 O'Brien Hall; Saturday, January 27, 2018, 9:00 am - 3:00 pm in 212 and 125 O'Brien Hall; Saturday, February 3, 2018, 9:00 am - 3:00 pm in 212 and 125 O'Brien Hall; and Wednesday, February 7, 2018, 6:00-8:00 pm in 212 O'Brien Hall.

UNESCO and WHO report that approximately 800 children under the age of five die each day in the developing world from the lack of clean water and sanitation. This is equivalent to two Boeing 747 jet passenger planes crashing each day of the year. However, biosand, membrane and ceramic water filters are simple and cheap technologies available to mitigate this problem.

These water filters have recently become widely used in the developing world as a means of purifying drinking water for individual household use. They provide an inexpensive and effective system of removing turbidity and pathogens (i.e. viruses, bacteria and worms) from polluted water.

Biosand filters can be readily made from local sources of sand and gravel. The bio layer is located at the top of the sand column and takes up to a few weeks to grow, feeding off the influent initially poured through the sand and gravel column. The outer container can be made from plastic or concrete, materials that are commonly available in the developing world. The pipes and connections are usually made of 1-inch PVC pipes.

Membrane water filtration is a method to remove viruses, bacteria and other contaminants from water by passing raw water through a microporous membrane. Most membrane filters for drinking water start with thin semi-permeable materials made from a synthetic polymer—manufactured as flat sheet stock or as hollow fibers. Many small, individual membranes are then bundled and formed into one of hundreds of different types of membrane modules.

Ceramic filters remove viruses, bacteria and other contaminants by passing the raw water through a wall of ceramic material.

The purpose of this class will be to construct and test three different biosand filter containers, three different membrane filters and three different ceramic filters. The class of 18 freshman students will be divided into three teams, with six students per each type of filter category. Each team will test, assess and report on its own unique filters.

To obtain a passing grade, attendance at all of the four class meetings is mandatory. There will be no exceptions. Please check your schedule carefully before registering for this class.

Dr. John Dracup is an Emeritus Professor in the Department of Civil & Environmental Engineering. His expertise is in water resource engineering and hydrology. He holds degrees from the University of Washington, Seattle; the Massachusetts Institute of Technology, Cambridge; and from the University of California, Berkeley. His awards include being inaugurated into the "Order of the Black Blouse" by the Water Rights Court of Valencia, Spain; the designation of a Diplomat of the American Academy of Water Resource Engineering of the American Society of Civil Engineers; a Honorary Professorship at the Universidad Catolica St. Antonio of Murcia, Spain; and the "Agua para Todos" award from the Region of Murcia, Spain; he was a Senior Fulbright Scholar to Australia and he is a Fellow of the AGU, ASCE, AAAS and the AWRA. He is active in providing clean water to developing countries as a volunteer for Rotary International and NGOs.

Faculty web site: <http://www.ce.berkeley.edu/faculty/faculty.php?id=205>

**Civil and Environmental Engineering 24, Section 2
Ethical Problems in Design and Construction of the New Bay Bridge (1 unit, P/NP)
Professor Abolhassan Astaneh**

Tuesday 4:00-5:00, 544 Davis Hall, Class number: 35249

The Seminar focuses on the new spans of the San Francisco-Oakland Bay Bridge opened to traffic in 2013. The existing Bay Bridge was built during 1930's and still is considered one of the marvels of bridge engineering of all times. During the 1989 Loma Prieta earthquake, a small portion of the roadway above a pier collapsed, while the rest of the bridge withstood the M7.1 earthquake with minor damage. Initially, the plan was to retrofit both East Bay and West Bay spans seismically. However, in 1996 through a series of activities marred by conflict of interests and ethically questionable decisions by engineers and transportation officials in charge, it was decided to replace the Eastern spans. Since then, and after more than 16 years from the time that a decision was made to build a new replacement for the Eastern Spans, the project has been plagued with serious design and construction problems, resulting in the seismic safety of the new bridge questioned by many experts. The root of almost all problems of the new Bay Bridge can be traced back to the well-documented lack of engineering ethics in design and construction of the new bridge on the part of engineers and transportation officials involved. Professor Astaneh became a "Minner Fellow on Engineering Ethics and Professional/Social Responsibility" in 2013 and had studied many aspects of the new Bay Bridge, including ethical aspects, for more than fifteen years. In this seminar, he will focus on ethical aspects of design and construction of the new Bay Bridge. **There is no textbook required for this course. Reading material will be assigned during the semester.**

Professor Astaneh is a member of the faculty in the Department of Civil and Environmental Engineering. His area of specialty is behavior and design of structures to withstand gravity, seismic and blast loads. He has conducted several major research and design projects on long span bridges and tall buildings. He teaches graduate and undergraduate courses in structural engineering. He has studied extensively the existing as well as the new Bay Bridge for more than twenty-four years including the ethical aspects of its design and construction.

Faculty web site:

<http://www.ce.berkeley.edu/people/faculty/astaneh?destination=people%2Ffaculty%2Fastaneh>

**Civil and Environmental Engineering 24, Section 3
Waves - Ideal, Real, and In-Between (1 unit, P/NP)
Professor Evan Variano**

Thursday 4:00-5:00, 544 Davis Hall, Class number: 37078

Predicting sinusoidal wave motion has been one of the great successes of calculus and is a centerpiece of basic physics. However, many of the wave types observed in nature do not fit into this rather narrow mathematical description. This course will take a broad view of waves, exploring a wide variety of different wave types. Examples will be drawn from fields including biology, ecology, and physics, with a particular emphasis on the water waves encountered in environmental engineering. For each wave type we explore, we will consider the simplified mathematical models that try to capture the essence of the wave. We will explore the limits of these models and discuss the practical implications of making engineering decisions based on idealized models. The class will follow Gavin Pretor-Pinney's armchair science book, "The Wave Watcher's Companion," with supplementary material presented in class to motivate and support group discussions. **This seminar is part of the Food for Thought Seminar Series.**

Dr. Variano studies fluid motion in the environment, with a special focus on the air-water interface. As an innovator of laboratory techniques, he has found ways to directly observe fluid behavior in new and revealing ways. He uses his measurements to describe the underlying physical processes that control the motion of pollutants, nutrients, and plankton in the world's oceans. The constant tension between observing the world in all its complexity and simplifying it for engineering purposes is what drives his research program; this tension is a central theme that we discuss in the seminar. Undergraduates contribute in significant ways to his research efforts, with several students joining the lab each year. He has also published a paper on best practices for integrating research experiences and classroom learning.

Classics 24, Section I

Turning Physics into Poetry: Lucretius' On the Nature of the Universe (1 unit, P/NP)

Professor Anthony Long

Tuesday 1:00-2:00, 122 Wheeler Hall, Class number: 40964

In this class we will read and discuss the epic poem of the Roman poet and Epicurean philosopher Lucretius. In the words of its English translator, "this book is intended to change your life." Lucretius tells a dramatic story of how the universe is constituted by the interplay of atoms moving in space. They dance, do battle, build infinite worlds, and create the conditions for a tranquil life. Lucretius's goal is to use the resources of poetry (visual imagery, sound effects, personification, metaphor) so as to conquer superstition with science. **The following textbook is required: Penguin Classics: Lucretius On the Nature of the Universe, translated by R.E. Latham.**

Anthony Long has been teaching classics at Berkeley for several decades. His main area of interest is Greek and Roman philosophy. He has written many books that include treatments of Epicureanism and Lucretius including Hellenistic Philosophy and From Epicurus to Epictetus.

Earth and Planetary Science 24, Section I

"An Ocean of Air": Exploring how we know what we know about the atmosphere (1 unit, P/NP)

Professor Kristie Boering

Thursday 11:00-12:00, 401 McCone Hall, Class number: 23976

In this seminar course, we will use the beautifully written and well-researched book by Gabrielle Walker titled "An Ocean of Air" as a vehicle for discussing how we have come to know what we know about the atmosphere. With lively and informative chapters—from how early scientists solved the mystery of what air is made of to how more recent scientific detective work solved the mystery of what causes the Antarctic Ozone Hole—this book is an interesting and lively launch point for further discussions on how human activities affect the atmosphere, from smog to climate change, and, from a scientist's perspective, what we have done and can do in the future to lessen these impacts.

Attendance is required.

This seminar is part of the Food for Thought Seminar Series.

Professor Boering studies atmospheric chemistry and climate through measurements on high altitude aircraft and scientific balloons, complemented by laboratory experiments and computer modeling, and was excited to learn as an undergraduate at UC San Diego that interesting chemistry problems can be studied outside, free of white lab coats and fluorescent lighting. After graduating from UCSD in 1985 with a BA in Chemistry with a Specialization in Earth Science, she received her PhD in physical chemistry from Stanford (1992) and did research at Harvard before joining the UC Berkeley faculty in 1998.

Faculty web site: <http://eps.berkeley.edu/people/kristie-boering>

Earth and Planetary Science 24, Section 2

Oceans in the Media (1 unit, P/NP)

Professor Jim Bishop

Thursday 2:00-3:30, 401 McCone Hall, Class number: 41221

Not one week goes by without major articles about oceans in print/online media such as The San Francisco Chronicle, New York Times, and LA Times. Oceans are a frequent topic of documentary videos. Coverage spans the gamut from the March 2011 earthquake near Japan, resulting in tsunami

damage to a nuclear reactor, and subsequent radionuclide releases to the ocean which are still being tracked years later... to James Cameron diving to the deepest Ocean Trench in a novel submarine ... to the latest news on changing climate and Arctic sea ice melting / Antarctic ice shelf breakup... and the 2017 alphabet of hurricanes of destruction. Seminar participants will choose topic areas to be covered, find their own articles, and lead discussion. The aim is to identify and drill down to the sources of the material--in other words, to learn about effective communication and the validation of communication. Students will be graded on active participation and presentations. **The seminar is aimed at freshmen. We need the 1.5 block to enable short field trips - documentary videos.**

Students will not be able to add this course after the first two weeks of the semester.

Jim Bishop is a Professor of marine biogeochemistry in the Department of Earth and Planetary Science. His research focus is on understanding the role of ocean biology in the control of atmospheric carbon dioxide. He loves going to sea and has logged almost two years at sea during 46 oceanographic expeditions. He and his group design, build, and deploy autonomous ocean profiling robots which have already racked up eight years of continuous observations. For more information regarding Professor Bishop, visit his faculty web page. His August 2016 ocean expedition is covered at <http://oceanbots.lbl.gov>.

Faculty web site: <http://eps.berkeley.edu/people/jim-bishop>

**Environmental Science, Policy, and Management 24, Section I
Issues in Natural Resource Conservation (1 unit, P/NP)
Professor David Wood
Friday 10:00-11:00, 332 Giannini Hall, Class number: 33595**

There is one optional field trip to Muir Woods on a Saturday or Sunday from 8:00 am to 3:00 p.m. to be arranged.

Some of the issues to be dealt with include management and preservation of timberlands; reducing fire risk through logging; management in wilderness areas; endangered species; importation and exportation of logs; the lives of John Muir and Gifford Pinchot; trees and religion; can rain forests be saved?; killer bees; coral reefs—human threat; jobs versus spotted owls; vegetarianism; Muir Woods, past and present; garbage in the United States; biofuels; solar power; airport expansion in the San Francisco Bay Area; the competition for water; fracking; global warming and geoengineering; and many more topics to be selected by the students.

Professor Wood's research interests include host-selection behavior of forest insects, chemical ecology, the biology and ecology of bark beetles, forest pest management, the biodeterioration of wood by insects, and insect/pathogen/tree interactions. In 1995 he was awarded the Berkeley Citation for distinguished service to the University.

Among his numerous publications, he recently co-authored three research papers, one that is published in *Forest Ecology and Management*, one in *Forest Science* and one in *Environmental Entomology*.

Faculty web site: http://ourenvironment.berkeley.edu/people_profiles/david-wood/

**Ethnic Studies 24, Section I
Queer Latinx Studies: Theory in the Flesh (1 unit, P/NP)
Professor Raul Coronado
Tuesday 11:00-12:00, 211 Dwinelle Hall, Class number: 24145**

In the 1980s and as a result of their involvement in the various social movements of the 1970s, Latinas and other women of color began to publish what are now canonical texts in women of color feminism, books

such as *This Bridge Called My Back: Writings by Radical Women of Color* (1983) and *Loving in the War Years* (1983). Yet queer Latino men remained relatively silent. Why was this the case? What were the conditions of possibility that allowed Latinas to consciously and politically engage in the public sphere by publishing their work? We will begin with these questions as we focus our attention on these early writings by queer Latinas. We will then trace the emergence of queer Latinas/os in the public sphere. That is, we will study literature, art, and film that represented queer Latinas/os. **This course is designed for students interested in reading and studying literature and culture by and about queer Latinas/os. All readings and discussions will be in English; no Spanish proficiency required. This seminar is part of the Food for Thought Seminar Series.**

My teaching and research interests are in Latina/o literary and intellectual history, from the colonial period to the 1940s. In a sense, this field and period allow—indeed force—us to rethink the literature of the Americas in a transnational, hemispheric framework. That is, Latina/o literature has usually been described as a twentieth-century phenomenon, emerging for the most part during the Civil Rights movements of the 1960s and 70s. Yet a return to the literary-historical archive reveals a quite different genealogy. Beginning in the late eighteenth century, Spanish Americans—including Mexicans, Cubans, Puerto Ricans, Venezuelans, and Colombians—sought refuge in the U.S. and used the printing press, especially in Philadelphia, Charlottesville, and New Orleans, to foment support for the independence of their Spanish American countries. Likewise, during the first half of the nineteenth century, the printing press arrived across what is today the U.S. Southwest and gave birth to a vibrant and often belligerent print culture. It was through these published texts that ideas associated with modernity were, for the first time, debated and developed in print among Latinas/os, ideas such as representative government, the rights of citizen-subjects, and the power of the press to reconfigure society. By returning to the archive, rethinking the category of literature, genres, and disciplines, and engaging with the theoretical-historical problematic of modernity and colonialism in the Americas, we can begin to imagine alternative historical geographies for a literature of the Americas, one where the seemingly impermeable barrier between U.S. and Latin American literary and intellectual history begins to disintegrate in U.S. Latina/o studies.

But all these interests developed out of my initial and continuing interest in the history of Latina/o sexuality. Along with my research/teaching interests above, I also have longstanding interests in queer and feminist theory, with a particular focus on how women of color have theorized the queer subject and the emergence of queer Latina/o print culture and publics.

Faculty web site: <http://ethnicstudies.berkeley.edu/faculty/profile.php?person=123>

Ethnic Studies 24, Section 2

Reading Du Bois's *Souls of Black Folk* Today (1 unit, P/NP)

Professor Keith Feldman

Wednesday 11:00-12:00, 204 Dwinelle Hall, Class number: 24146

“The problem of the twentieth century is the problem of the color line.” W. E. B. Du Bois is inarguably one of the most renowned American scholars of race, and this sentence, repeated three times in *Souls of Black Folk* (published in 1903), is one of his most famous. *Souls* illuminates African American lifeworlds through a veritable mixtape of genres, disciplines, and topics. Allegory, sociology, history, musicology, and philosophy vibrate across the text. Since its publication over a hundred years ago, it has profoundly influenced how scholars, artists, and activists regard slavery and its aftermath, the role of education in social transformation, the centrality of African American culture, the persistence of white supremacy, and perhaps most profoundly (to use our contemporary idiom), the mattering of Black lives. In this freshman seminar we will read *Souls* closely, carefully, and critically, focusing our attention on one chapter per week. Questions we will consider include these: How does *Souls of Black Folk* help us understand racial division as an ongoing problematic in American life? How does *Souls* invite us to hear, sense, and feel the past in the present? What can we draw from our shared patient engagement with this single text?

Keith P. Feldman is an Associate Professor in the Department of Ethnic Studies at UC Berkeley. Born and raised in Maryland, Feldman moved to the west coast for graduate school at the University of

Washington, and has taught at UC Berkeley since 2009. Feldman's research and teaching draw from U.S. cultural studies frameworks to explore the interface between race, knowledge, and state power. He routinely writes about, teaches, and draws inspiration from W. E. B. Du Bois's work, and has published on Du Bois in a wide array of academic settings. Feldman's first book, *A Shadow over Palestine: The Imperial Life of Race in America* (Minnesota 2015), was named Best Book in Humanities and Cultural Studies by the Association for Asian American Studies, and was a Finalist for the Romero Best First Book Prize in American Studies.

Faculty web site: <http://ethnicstudies.berkeley.edu/people/faculty-profile/keith-feldman-1>

Gender and Women's Studies 24, Section I
Feminism, Coloniality and Decoloniality (1 unit, P/NP)
Professor Minoo Moallem
Thursday 12:00-1:00, 50 Barrows Hall, Class number: 39433

This seminar focuses on questions of feminism, coloniality and decolonial epistemologies. Students are asked to participate in a series of lectures and discussions by feminist scholars from various disciplinary and interdisciplinary backgrounds who use postcolonial and decolonial epistemologies to study women, gender, race, and nation.

The seminar draws upon three interconnected themes: first, it engages with questions of how knowledge is produced, circulated and institutionalized and how it relates to various communities of culture and history. Secondly, it revisits feminist epistemology and its relationship with the politics of knowledge production including how knowledge and power intersect with each other when we study questions of women, gender, race, and nation. Thirdly, it explores how decolonial and postcolonial epistemologies challenge relations of power and knowledge and the legacy of coloniality.

Minoo Moallem received her MA and BA from the University of Tehran and her PhD from Université de Montréal. She has also done postdoctoral studies at the University of California at Berkeley. She was the Chair of Gender and Women's Studies Department at Berkeley from 2008-2010 and the Chair of Women's Studies Department at San Francisco State University from 2001-2006.

Professor Moallem's research areas are postcolonial and transnational feminist theories; immigration and diaspora studies; feminist cultural studies; Middle Eastern studies; and Iranian cultural politics and diasporas.

Global Studies 24, Section I
Diversity, Identity, and Social Justice: America in Global Perspective (1 unit, P/NP)
Lecturer Darren Zook
Tuesday 2:00-3:00, 204 Dwinelle Hall, Class number: 32695

Diversity is perhaps the most important social issue in America. As a concept, diversity includes and relates to a number of other issues, such as racism, discrimination, social justice, immigration, marginality, integration, and so forth. Many a program has been put in place to address and resolve these issues, in the hope that over time America would come together and make all of its differences work collectively as one harmonious and integrated society. For some people, this is already happening. For others, America seems more divided now than ever, and diversity has failed to deliver on its promise.

This seminar will delve into the complexities of this thing we call diversity, to explore the rhetoric and the reality of diversity as it currently exists in America. We will do this by reading accounts of diversity as it happens—not just in the news but also in a variety of different media—and then learning how to discuss critically the central issues of diversity. The goal is not just to talk about diversity, but also to learn how to talk about diversity in ways that are both critical and constructive. Diversity is an extraordinarily sensitive issue, and too many people simply avoid the conversation to avoid the discomfort that might ensue.

Darren Zook has been a member of the faculty at the University of California, Berkeley, since 2000. He teaches in International and Area Studies and in Political Science. He has taught previously at the University of California, Davis, and at the Claremont Colleges in southern California. In 2012, he was a Fulbright Research Scholar in Singapore working on a project that focused on cybersecurity in the Asia-Pacific region.

During his time at the University of California, Berkeley, Darren Zook has taught and published on a wide variety of topics, including the politics of Asia-Pacific region, human rights and international law, terrorism and security studies, multiculturalism and diversity, and economic policy with a focus on anti-corruption programs. His research interests have continuously grown into an unusually broad portfolio of international and comparative projects, and his work has taken him to various parts of Asia, the Pacific Islands, and northern Europe.

Zook has recently published a four-book series, entitled *Ourselves Among Others: The Extravagant Failure of Diversity in America* and *An Epic Plan to Make It Work*, which is an engaged critique of current diversity policy and practice in the United States and elsewhere in the world.

Global Studies 24, Section 2

Reading the Word and the World: An introduction to global studies through the New York Times magazine (I unit, P/NP)

Professor Erin Murphy-Graham

Tuesday 12:00-1:00, 122 Wheeler Hall, Class number: 41426

Paulo Freire, a Brazilian theorist famous for his work in the field of education, believed that students needed to know how to “read the word” before they could “read the world.” In this weekly seminar, open only to freshman, we will “read the word and the world” through the lens of the New York Times Magazine. The seminar is intended to make students feel at home in the UC Berkeley community. It hopes to help students participate actively in the intellectual life of campus and to positively influence their trajectory as scholars.

In this seminar we will begin by reading a few key texts, including an interview with Freire where he discusses, among other ideas, the notion of “reading the word and the world.” We will then look at a short introductory text on Globalization. Each week we read the New York Times Magazine (cover to cover!). We will establish a discussion protocol to scaffold what will be many engaging conversations.

This seminar is part of the Food for Thought Seminar Series.

Erin Murphy-Graham is broadly interested in the role education plays in fostering or inhibiting social change. Her research areas focus on how education can promote gender equity and women's empowerment, the expansion and reform of secondary education in Latin America, and the connection between research and policy. With funding from the William and Flora Hewlett Foundation, she is currently engaged in a longitudinal mixed-methods study investigating the impact of secondary school in the lives of adolescents in 110 rural Honduran communities. She is the author of *Opening Minds, Improving Lives: Education and Women's Empowerment in Honduras* (Vanderbilt University Press, Spring 2012) and her articles have appeared in journals including *International Journal of Educational Development*, *International Review of Education*, *Gender and Education*, and the *American Journal of Evaluation*.

History 24, Section I

Making U.S. Foreign Policy (I unit, P/NP)

Professor Daniel Sargent

Monday 2:00-3:00, 180 Barrows Hall, Class number: 40188

What is foreign policy, who makes it, and to what avail? This freshman seminar, "Making U.S. Foreign Policy," will introduce students to the study of U.S. foreign policy. The course will assess the institutional and bureaucratic dimensions of foreign policy, beginning with the Constitution and the organization of the American government for the conduct and implementation of foreign policy. Readings will consider the evolving international context for foreign policy, the utility of strategy, and the particular challenges the United States faces as the world's dominant superpower. The course will offer an introduction to academic disciplines and methods for studying foreign policy and international relations more broadly. Students will also explore and engage campus resources, including visiting speakers from the professional foreign policy community. **The seminar is intended to help freshman who are interested in US foreign policy and international relations to figure out how to develop, cultivate, and refine their interests over their undergraduate careers. Accordingly, I am most interested in students who plan to major in the social sciences and would prefer that preference be given to these students over students who plan to major elsewhere and are interested in the course for reasons of intellectual breadth and/or diversity.**

Daniel J. Sargent is associate professor in the Department of History. He is the author of *A Superpower Transformed: The Remaking of American Foreign Relations in the 1970s* and a range of articles and essays on US foreign policy and international relations. He is now writing a history of the American world order. A PhD graduate of Harvard University, Sargent has held fellowships at the Olin Institute for Strategic Studies and at International Security Studies at Yale University. At Berkeley, he teaches courses on US foreign relations, the Cold War, human rights, and global history. He has in the past taught freshman seminars on US foreign policy in the 1970s and on the history of human rights.

Faculty web site: <http://history.berkeley.edu/people/daniel-sargent>

History 24, Section 3

Endangered Children and Youth in Africa: Documentaries (1 unit, P/NP)

Professor Tabitha Kanogo

Tuesday 10:00-12:00, 3205 Dwinelle Hall, Class number: 41216

Seminar will meet two hours per week for the first half of the semester (ending March 6, 2018).

Scheduled to meet for the first half of the semester only, this once-a-week two-hour seminar will analyze documentaries that explore and expose the endangerment of children and youth in Africa. Documentaries on child trafficking and enslavement, child brides, child laborers, street children and youth, victims of FGM, child soldiers, HIV/AIDS orphans and urban youth gangs will be viewed in class. The goal of the seminar is to examine the complex local, regional, and at times global factors behind the extensive abuse and endangerment of children and youth in Africa. In order to historicize and contextualize the study, we shall, in addition to the documentaries, refer to a limited number of published articles. **This course is open to all freshman students regardless of their intended major.**

I am a professor of African History at the Department of History. I am a social historian whose research interests include gender, women, missions, labor and social movements, children and youth, and biographies.

Faculty web site: <http://history.berkeley.edu/people/tabitha-kanogo>

Integrative Biology 24, Section 1

Ethnobiology, Nutrition, and Global Food Systems (1 unit, P/NP)

Professor Thomas Carlson

Wednesday 10:00-11:00, 4110 Valley Life Sciences Building, Class number: 25106

We will explore the ethnobiological systems around the world that generate thousands of different species of plants and animals eaten by humans. We will examine the historical, cultural, commercial, and biological factors that have resulted in the worldwide consumption of certain plant and animal species. We will also compare the nutritional qualities, health effects, and carbon footprint of conventional industrial food, organic food, locally grown food, and food that is hunted or gathered. In this seminar we will read Michael Pollan's *Omnivore's Dilemma* and view the documentary film *Food Inc.* **Any interested Freshmen are welcome.**

Thomas Carlson is a physician and ethnobotanist who is on the faculty of the Department of Integrative Biology and is Curator of Ethnobotany in the University and Jepson Herbarium at the University of California, Berkeley. He has conducted food plant and medicinal plant research with, and provided medical care for, over forty different ethno-linguistic groups in fifteen different countries in South America, Central America, North America, Africa, Asia, and Pacific Islands. Tom's multidisciplinary work with diverse institutions, biocultural environments, and communities has helped illuminate how local indigenous ethnobotanical systems contribute to human health and ecosystem health.

Faculty web site: <http://ib.berkeley.edu/people/faculty/carlsont>

Integrative Biology 24, Section 2

How and Why Do Birds Sing (1 unit, P/NP)

Professor George Bentley

Wednesday 2:00-3:00, 4110 Valley Life Sciences Building, Class number: 25107

Do you ever wonder why some birds sing and others just call? Would you like to know how songbirds produce such melodious tunes? What about the dawn chorus? Sexual attraction? Aggression? It's just the day-to-day life of songbirds. Come and learn about the anatomy and physiology of birdsong, from the specialized organs to highly evolved brains. Find out how bird song can cause hormones to surge. This seminar will cover the hows and whys of vocal communication in birds with an emphasis on what classic and cutting-edge research has taught us.

George Bentley received his B.Sc. in biology (1993), and his Ph.D. in zoology (1996) at the University of Bristol in the United Kingdom. Following receipt of his doctorate, Dr. Bentley joined the Behavioral Neuroendocrinology Group at Johns Hopkins University, initially as a postdoctoral fellow and later as an associate research scientist. In January 2000, Dr. Bentley moved to Professor John Wingfield's laboratory at the University of Washington as a research associate in the Departments of Psychology and Biology. Dr. Bentley moved to Berkeley in June of 2005, where he is an Associate Professor in the Department of Integrative Biology and his lab focuses on how the brain detects environmental cues and turns them into hormonal signals. These signals in turn affect the behavior and physiology of the organism itself, or organisms to which the behavior is directed. For example, a male bird's song can cause a female to solicit copulation and change her hormonal status. Exactly how the brain performs this feat is largely unknown, but birds are an excellent model for this type of research as they have extravagant auditory and visual displays. The research in Dr. Bentley's lab is mostly performed on birds, but is not limited to this vertebrate class. Current projects in the lab involve sheep, horses, rats, mice, hamsters and humans; many of these projects are in collaboration with other labs around the world (Japan, New Zealand, Germany, United Kingdom). Undergraduates are especially encouraged to get involved in active research projects. Currently, there are nine undergraduates working in the Bentley lab on neuroendocrine mechanisms of regulation of reproduction and on the neural basis of song behavior.

Faculty web site: <http://ib.berkeley.edu/people/faculty/bentleyg>

Integrative Biology 24, Section 3

Biological Impacts of Climate Change (1 unit, LG)

Professor Caroline Williams

Wednesday 2:00-3:00, 5053 VLSB, Class number: 25108

The pace of current climate change is orders of magnitude faster than any changes experienced in the Earth's past. This is reconfiguring biological diversity in ways that we are only beginning to recognize. Organisms are shifting their distributions in time and space, and experiencing population fluctuations and extinctions. In this seminar we will explore the biological impacts of climate change on plants, animals (including humans), communities, and ecosystems. **This seminar is for anyone who cares about the planet, wants to understand climate change research, and become a more effective advocate for understanding climate change. You must be prepared to fully engage with the course, contribute actively to discussions, and do all the readings.**

Caroline Williams is an Assistant Professor in Integrative Biology. She is an evolutionary physiologist who studies the evolution of metabolism in response to environment perturbations. One of her research foci is the responses of insects to winter climate change.

Faculty web site: <http://cmwilliamslab.com>

Integrative Biology 24, Section 4

Animal Navigation: Which Way is Home? (1 unit, LG)

Professor Roy Caldwell

Monday 2:00-3:00, 5192 VLSB, Class number: 25109

A homing pigeon can return to its loft after being shipped one thousand km to a place it has never been. A whale spends its summers in the Bering Sea and its winters near Maui. A female sea turtle returns for the first time to a beach where she hatched thirty years earlier to lay her own eggs. A Monarch butterfly flies south two thousand km to spend the winter in a secluded grove in central Mexico. A limpet returns forty cm to a favorite depression in a rock. The abilities of animals to navigate have intrigued biologists for decades. We will read a series of papers describing how animals navigate and how they use such methods as landmarks, celestial cues, and geomagnetic fields to determine where to go and what route to follow. We will also attempt to replicate experiments that suggest that humans are able to navigate using geomagnetic fields. This seminar is as much about the process of science as it is about animal navigation. We will first explore examples of animal navigation and how the underlying mechanisms are being researched. We will then examine experiments that suggest a human navigation ability based on geomagnetic input, and finally we will design an experiment to test if humans have the ability to detect and/or use a geomagnetic sense as do many other animals. At the end of the semester each student will write a short scientific paper presenting the results of the class experiment. The seminar is designed for students interested in biological research. Registration for this seminar is limited to 15 students.

The seminar is designed for students interested in biological research.

My research interests lie in invertebrate behavior and ecology with much of my work centering on the behavioral ecology of stomatopod crustaceans, a group of tropical marine predators. The initial focus of this research was on how the evolution of potentially lethal weapons influenced stomatopod biology. These studies dealt mainly with communication and the function of aggression. More recent research has expanded to include the evolution of mating systems, interspecific communication, sensory ecology, prey selection, and the biomechanics of the strike and larval biology. We are currently initiating studies on the genetic structure of stomatopod populations attempting to deduce the timing and pathways of dispersal. We have also used stomatopod populations as bio-indicators to assess the health of tropical coastal habitats. I have also become interested in the behavior of blue-ringed and other pygmy octopuses. We are currently studying the reproductive and aggressive behavior of several Indo-Pacific species. Much of my research is centered in the tropical Indo-Pacific including programs at Lizard Island, Moorea, and Indonesia.

Faculty web site: <http://ib.berkeley.edu/people/faculty/caldwellr>

Integrative Biology 24, Section 5
Global Change and Emerging infectious Diseases (1 unit, P/NP)
Professor Wayne Sousa
Friday 3:00-4:00, 5053 VLSB, Class number: 25110

With accelerating changes to the Earth's landscapes and its climate, we are witnessing the rapid emergence of infectious diseases that are having dramatic effects on plant and animal populations, including humans. Some of these diseases are novel, while others have been present in low prevalence, but are suddenly erupting. We will discuss examples of this phenomenon and explore its causes and impacts on natural populations and communities. **The seminar should be of particular interest to students wanting to learn more about community ecology, the impacts of global change, or the dynamics of parasite populations and the diseases they cause.**

I have been a faculty member at Berkeley since 1977, first as a member of the Zoology Department, and now Integrative Biology. My early research was on the response of seashore communities to natural disturbances. I then studied salt marsh host-parasite interactions, focusing on the host snail, *Cerithidea californica* and its larval trematode parasites. I am now investigating the biological and physical factors that structure tropical mangrove forests on the Caribbean coast of Panama.

Faculty web site: <https://sousalab.squarespace.com/>

Integrative Biology 24, Section 6
The Darwinian Revolution (1 unit, LG)
Professor Brent Mishler
Thursday 10:00-11:00, 4110 Valley Life Sciences Building, Class number: 25111

The Darwinian Revolution was one of the greatest upheavals in human thought, involving the very basis of our self-awareness: Where did we come from? What is or should be the basis for our ethics and social behavior? Where are we going? Topics to be considered include the historical antecedents of Darwin's theories; the scientific evidence for evolution and natural selection; the impact of Darwinism on religion, social theory, and ethics; later scientific developments and recent challenges by latter-day creationists. The goal is to use these interdisciplinary topics as an exemplar of scientific methods and change, and of the unsteady relationship between science and the public. In addition to attending and participating in each week's lecture/discussion, each student will be required to write a short paper (five pages maximum) due at the end of the semester.

Brent Mishler is Director of the University and Jepson Herbaria at the University of California, Berkeley, as well as a professor in the Department of Integrative Biology, where he teaches phylogenetic systematics and plant diversity. He received his Ph.D. from Harvard University in 1984, and was on the faculty at Duke University in Durham, NC for nine years before moving to UC Berkeley in 1993.

Faculty web site: <http://ucjeps.berkeley.edu/people/mishler.html>

Italian Studies 24, Section 1
Voyages to Italy: Reframing the Bel Paese in the Postwar Era (1 unit, P/NP)
Professor Mia Fuller
Wednesday 10:00-11:00, 6331 Dwinelle Hall, Class number: 41056

Italy is known for its many contributions to cinema, perhaps especially for neorealism in the immediate aftermath of World War II. Not only was neorealism stylistically innovative—shunning studio artifice by using natural lighting and non-professional actors—but it also helped to forge a new image of Italy in the mid-1940s. Instead of the threatening Nazi ally it had been, Italy was now seen as a nation recovering

from war amid cities in ruins, and lacking the most basic resources. But then, within a very short time films focused on marginalized or rural Italians and their struggles gave way to stunning comedies and thrilling dramas, celebrating or satirizing the 'economic miracle' of the 1950s and highlighting the culture shock many Italians experienced in their quickly changing society. In this seminar we will watch and discuss the films that shaped the world's most lasting impressions of Italy and its citizens, sampling some of the great works by Visconti, de Sica, Fellini, and Rossellini, among others.

Mia Fuller, Ph.D. Berkeley, is Associate Professor of Italian Studies. She is a cultural anthropologist who has combined fieldwork and archival research in her studies of architecture and city planning in the Italian colonies between 1869 and 1943. Her book on the subject, *Moderns Abroad: Architecture, Cities, and Italian Imperialism*, was published by Routledge in 2007. She is also the co-editor (with Ruth Ben-Ghiat) of *Italian Colonialism: A Reader* (Palgrave, 2005). Currently, she is preparing an ethnographic, architectural, and oral-historical study of the Fascist-era 'New Towns' built in 1930s Italy.

Faculty web site: <http://italian.berkeley.edu/people/profile.php?id=19>

Letters and Science 24, Section I
The Past, Present and Future of the University of California (I unit, P/NP)
Professor Bob Jacobsen
Monday and Wednesday 4:00-5:00, 262 Evans Hall, Class number: 41199

Class will meet on Mondays and Wednesdays for the first seven weeks of the spring 2018 semester.

We're going to figure out how UC got to where we are, and then look at where to go next.

Bob Jacobsen is an experimental physicist, which means he spends a lot of time trying things that are not certain to work. His current experiment is a search for Dark Matter that's located almost a mile underground in an old gold mine outside Deadwood, South Dakota. The New York Times article on it was headlined "Dark Matter Experiment Has Detected Nothing, Researchers Say Proudly." Previously, Bob worked in several other fields. He's encountered many kinds of mistakes, in science and outside it, and thinks that they're fascinating.

Faculty web site:

http://physics.berkeley.edu/index.php?option=com_dept_management&act=people&Itemid=299&task=view&id=363

Linguistics 24, Section I
Language Myths (I unit, P/NP)
Professor Larry Hyman
Wednesday 10:00-11:00, 263 Dwinelle Hall, Class number: 26263

Everyone has preconceptions about language in general and languages in particular. But are these accurate? In this course we will discuss and evaluate a number of common language myths such as these: Are all languages equally complex? Are some more logical? More beautiful? Is there such a thing as a primitive language? Do some people speak more grammatically than others? Is the English language undergoing a process of decay? We will draw on facts from English, other languages that may be familiar to participants, and lesser known languages that bear on the above and other questions. **No linguistic or other prerequisites are required. All interested students are welcome, especially students who have a fascination with language and/or languages.**

Larry M. Hyman is a Professor of Linguistics at Berkeley where he chaired the Department of Linguistics from 1991 to 2002. He obtained his Ph.D. at UCLA in 1972 and subsequently taught at USC until coming to Berkeley in 1988. His research centers around the study of sound systems (phonology) and grammar,

particularly within Bantu and other Niger-Congo languages in Africa. His publications include several books and numerous articles in the major journals in general and African linguistics. One of his long-standing interests is the study of tone languages, as found in Africa, Asia, Meso-America and elsewhere.

Faculty web site: http://linguistics.berkeley.edu/people/person_detail.php?person=19

Materials Science and Engineering 24, Section I
Materials and Weapons of War through History (I unit, P/NP)
Professor J. W. Morris Jr.
Friday 10:00-11:00, 348 Hearst Mining Building, Class number: 36385

For most of known history, advances in materials technology have appeared primarily in two areas: objects of art and weapons of war. The former build civilization. The latter have often set its course, as critical military engagements from Kadesh to Kosovo have most often been dominated by the forces with the superior technology. In this seminar, we shall use the development of weapons through history as a vehicle to understand the important properties of different types and classes of materials, and trace their technological development and technical significance across the millennia.

Professor Morris has been a member of the Berkeley faculty since 1971 and was Program Leader for the Advanced Metals Program at the Lawrence Berkeley Laboratory for almost twenty years. He has taught the introductory course Material Science and Engineering 45 for most of that period, and is a recipient of the University's Distinguished Teaching Award.

Faculty web site: <http://www2.mse.berkeley.edu/ourfaculty/morrisj>

Materials Science and Engineering 24, Section 2
Physics and Materials Science of Skateboarding (I unit, P/NP)
Professor Daryl Chrzan
Thursday 10:00-11:00, 3119 Etcheverry Hall, Class number: 36386

The popularity of skateboarding and other extreme sports is increasing at a rapid pace. The sports are termed extreme in part because they place the participants and their equipment under extreme conditions. This seminar will explore the extreme conditions associated with skateboarding, and how materials science has been used to evolve the original sidewalk surfers into the modern-day skateboard. Topics to be discussed include the physics of skateboarding (including an analysis of the inevitable slam) and the implications of this physics for the design of wheels, boards, bearings, trucks and safety equipment. The course includes experiments to measure rolling friction and the breaking strength of skateboards. **There are no special prerequisite constraints—just an interest in skateboarding, physics and materials science.**

Professor Daryl C. Chrzan received his Ph. D. in Physics, specializing in condensed matter theory, from UC Berkeley in 1989. From 1990 to 1995, he was a Senior Member of the Technical Staff at Sandia National Laboratories, Livermore. In 1995, Professor Chrzan joined the (now) Department of Materials Science and Engineering at UC Berkeley. His research emphasizes the prediction of the physical properties of metals and semiconductors based on knowledge of the atoms composing the materials. He has published over 70 papers, and presented over 40 invited talks at universities, laboratories, and international meetings Professor Chrzan spent much of his youth on a skateboard, and can often be found carving the bowls at nearby skateparks.

Faculty web site: <http://www2.mse.berkeley.edu/ourfaculty/chrzand>

Mathematics 24, Section I
Using Random Walks in the Physical and Social Sciences (I unit, P/NP)

Professor F. Alberto Grunbaum
Thursday 10:00-12:00, 939 Evans Hall, Class number: 26498

Class will meet for 2 hours on Thursdays for the first seven weeks of the semester

Random walks (whatever they are) have been used as models to understand all sorts of phenomena. More recently this has been enriched with the introduction of so-called "quantum walks." I will explain what this is all about and illustrate some of the surprising results one can explain with these tools by looking at the so called Parrondo's paradox (you may want to Google this one).

Alberto Grunbaum is a Professor in the Mathematics Department at UC Berkeley. His fields of expertise include analysis, probability, integrable systems and medical imaging.

Faculty web site: <http://math.berkeley.edu/people/faculty/f-alberto-gruenbaum>

Molecular and Cell Biology 90E, Section I
Matter, Mind, Consciousness (1 unit, P/NP)
Professor David E. Presti
Thursday 2:00-3:00, 134 Dwinelle Hall, Class number: 26967

All we know comes to us via our mental experience: our thoughts, feelings, perceptions, and conscious awareness. However, it is a deep mystery as to how the physical processes of our brain and are related to the subjective experience of consciousness. Some argue that the investigation of this mind-body connection is the most profound question in all of science, impacting everything about who we believe we are and how we relate to the rest of what we call reality. We will address this question from the perspectives of psychology, biology, physics, and philosophy -- cognitive science, broadly defined.

Students interested in all areas of the arts, humanities, and sciences are encouraged to enroll.

David Presti has taught neuroscience at UC Berkeley for twenty-seven years. For the past fifteen years, he has also been teaching neuroscience to Tibetan monastics in India and Bhutan.

Faculty web site: <http://mcb.berkeley.edu/labs2/presti/>

Molecular and Cell Biology 90E, Section 2
Vision and Art (1 unit, P/NP)
Professor Tamira Elul
Friday 11:00-12:00, 104 Dwinelle Hall, Class number: 26968

How do artists achieve specific and unique visual effects in their paintings? For example, why do Monet's poppies seem to blow in the wind, why is the Mona Lisa's smile so enigmatic? In this seminar, students will learn about the biology of vision through art. The course will follow Margaret Livingstone's book "Vision and Art: The Biology of Seeing." Specific subjects taught include color, luminance, perspective, and contrast enhancement. Students will present readings and lead discussions, as well as bring in paintings they would like to discuss. To complement our study of vision through art, we will create our own art based on what we learn about visual perception. **Budding scientists and artists are invited, and anyone interested in Vision and Art.**

Visiting Associate Professor Tamira Elul received her B.A. and Ph.D in Biophysics from the University of California, Berkeley. She is an Associate Professor at Touro University California and a Visiting Associate Professor in the Department of Molecular and Cellular Biology at UC Berkeley. She teaches Cell Biology, Histology, and Biophysical Neurobiology. Her research focuses on molecular and cellular mechanisms underlying the development of the nervous system. In recent years, she has also pursued interdisciplinary art-science projects inspired by her research on the developing nervous system.

Near Eastern Studies 24, Section 1
Animals in Ancient Egypt (1 unit, LG)
Professor Carol Redmount
Wednesday 2:00-3:00, 252 Barrows Hall, Class number: 28039

The ancient Egyptians had a rich and multifaceted relationship with the natural world around them, especially with animals. Animals, domestic and wild, played symbolic roles in the Egyptian universe as representatives and manifestations of various deities, and practical roles in the lives of ancient Egyptians where they functioned as pets, food, and offerings to the gods. In this one-hour seminar we will look at some of the many different ways the ancient Egyptians related to the animals populating their universe. **Seminar open to freshman students. No background in field required.**

Carol Redmount is an archaeologist who has been excavating in the Middle East, and especially Egypt, for over thirty years. Her fieldwork research has taken place in Egypt, Jordan, Israel, Cyprus, Tunisia and the United States. Over the years she has adopted cats from Israel and Jordan and sponsored a dog and a cat from Egypt for adoption. She has always been fascinated by the ancient Egyptians' complex relationships with the many animals in their world and looks forward to exploring these further in this seminar. She lives in Berkeley with four rescue animals—one small dog and three cats—as well as two parrots.

Faculty web site: http://nes.berkeley.edu/Web_Redmount/Redmount.html

Nuclear Engineering 24, Section 2
How It's Made (1 unit, P/NP)
Professor Peter Hosemann
Friday 10:00-11:00, 35 Evans Hall, Class number: 36783

This class is an introduction to the conventional manufacturing techniques of components used in nuclear and other engineering applications. An introduction to metal fabrication will be given, including, but not limited to, a brief introduction to refining, casting, forming, machining and joining. After an overview of the techniques available to engineers, the students will be expected to perform a literature review and discuss how specifically chosen components can be manufactured. In addition, the students will be encouraged to participate in the campus-offered machine-shop training where basic skills in machining are taught after a short introduction by the professor to the shop tools.

Originally from Vienna Austria, Peter Hosemann earned his MS in 2005 and his PhD in 2008 at the Montanuniversitaet Leoben in Austria in Materials Science. Professor Hosemann is interested in experimental materials science for nuclear applications. His main focus is on structural materials used for nuclear components (fission, fusion, spallation, etc.). His research focuses on developing a basic understanding of the materials' degradation processes in a nuclear environment and resulting consequences to engineering application.

Physics 24, Section 1
Magnets: Science, Technology, and "Magic Tricks" (1 unit, P/NP)
Professor Frances Hellman
Friday 11:00-12:00, 397 Le Conte Hall, Class number: 28810

Magnets and magnetic fields are essential to almost every aspect of our lives, from the most fundamental science experiments, to medical applications like the MRI, to computers and cars and navigation, to beautiful effects like the aurora borealis. The earth's magnetic field has made navigation possible for thousands of years, and keeps life on our planet safe from energetic particles coming from the sun and beyond. Magnetism has been known to exist for thousands of years, and yet requires twentieth-century physics (quantum mechanics) to understand the basic principles, such as what makes iron magnetic. Many

Nobel Prizes have been given for discoveries related to magnetism, and magnets also make some of the best and most fun "magic tricks" or demonstrations. Magnetism is found on the tiniest scale (electrons) and the largest (galaxies). We will learn what makes iron magnetic, and copper not magnetic. I will show why a magnet pushes away a superconductor, which makes levitated trains possible, but how the strongest magnetic fields are produced by superconducting magnets. We will discuss why there are magnets in a car's starter motor, and in computer hard drives, and where current research efforts are. We will also talk about some of the most exciting topics in modern magnetism, such as what happens when you try to make magnets really small (a field known as "nanomagnetism") or when you try to blend together magnets and semiconductors ("spin electronics"). **This seminar is intended for anyone with an interest in understanding some science that is all around us. This seminar is part of the Food for Thought Seminar Series.**

Frances Hellman is Professor of Physics and of Materials Science and Engineering, a Senior Scientist at Lawrence Berkeley National Laboratory, and Dean of Mathematical and Physical Sciences at UC Berkeley, where she oversees the departments of Astronomy, Earth and Planetary Science, Mathematics, Physics, and Statistics. She is an expert in novel magnetic, semiconducting, and superconducting materials, especially in thin-film form. She is also a visiting scientist at the San Francisco Exploratorium, where she goes whenever possible to work with them on exhibits, some of them involving magnets. She received her BA in Physics from Dartmouth College and her PhD in Applied Physics from Stanford University. Before joining the Berkeley faculty in 2005, she held positions at AT&T Bell Labs and UC San Diego. Her faculty office is filled with magnets, and her laboratory is her workshop, where she delights in devising experiments on magnetic materials composed of rare and exotic ingredients.

Political Economy 24, Section I
Political Economy in Contemporary Perspective (I unit, P/NP)
Senior Lecturer Alan Karras
Tuesday 4:00-5:00, 180 Barrows Hall, Class number: 29443

This seminar will require students to engage with current events, international and domestic, through the lens of political economy. Those who are enrolled will be required to read The New York Times and/or The Economist each week, identify issues of political economy that are being discussed, and present them to their peers for discussion. Differing perspectives on the news, as well as the different ways in which political economy theorists would interact with the events, will be discussed. Students should expect vigorous engagement and critical thinking.

Alan Karras is Associate Director of and Senior Lecturer in the International and Area Studies Academic Program. He is the author of *Smuggling: Contraband and Corruption in World History*, as well as several other books and articles on similar subjects. He is currently the Lead Media Author for the concise edition of a World History textbook, an author of the AP edition of the same book, and is also engaged in researching corruption in the British East India Company. He previously served as the Chair of the AP World History Development Committee for the College Board (as well as several other committees). He is also a member of the Boards of Editors for Cambridge University Press's forthcoming Dictionary of World History and the nine-volume Cambridge World History. In addition to smuggling and corruption, his research interests are in eighteenth-century Caribbean history, especially as it relates to more recent global issues in political economy.

Faculty web site: <http://iastp.berkeley.edu/People-Detail/Alan%20Karras>

Portuguese 24, Section I
Hello Hello Brazil: An Introduction to Brazil and its History, Literature and Culture
(I unit, P/NP)
Professor Candace Slater

Tuesday 11:00-12:00, 180 Barrows Hall, Class number: 41131

This seminar offers a description of Brazil—a vast and varied country—through some of its major literary and artistic expressions. It provides a sense of roots for some of the challenges that Brazil is currently facing as well as a notion of its shifting identities. The title "Hello Brazil" comes from a celebrated film about cultural and economic change. **Students do not need to have any sort of prior background. Some familiarity with Latin America is welcome but by no means required. All readings and discussions will be in English.**

Candace Slater teaches Brazilian literature and culture, as well as courses on the Amazon, in the Department of Spanish and Portuguese. She has a secondary affiliation with the Energy and Resources Group. She is the author of seven books and many articles and has traveled widely throughout Latin America and the Iberian Peninsula.

Faculty web site: <http://spanish-portuguese.berkeley.edu/our-faculty/>

**Slavic Languages and Literatures 24, Section I
The Mystery and Fascination of the Balkans (1 unit, P/NP)
Professor Ronelle Alexander
Wednesday 11:00-12:00, 6307 Dwinelle Hall, Class number: 39156**

The Balkans as a region have always fascinated Westerners, ranging from intrepid eighteenth- and nineteenth-century travelers seeking the exotica of "Turkey in Europe" to their modern cohorts who become enamored of Balkan culture, and especially its music—a fascination so great that a group of middle-aged and elderly Bulgarian women who were known at home as The Bulgarian State Television Female Vocal Choir could be marketed in the West as "Le mystère des voix bulgares" (The Mystery of Bulgarian Voices), win a Grammy, and have their songs used on the soundtrack of *Xena: Warrior Princess*. But the Balkan region is fascinating in a negative sense as well, that sense which has given our language the verb "to balkanize", defined by Merriam-Webster as "to break up (as a region or group) into smaller and often hostile units." In this class we will explore two basic questions about the Balkans: What is it that makes the region such a land of contradictions and fascination? And why—especially after the intense media attention to the violent breakup of Yugoslavia—does it remain so little understood? **All readings and discussions will be in English.**

Ronelle Alexander, Professor of Slavic Languages and Literatures (Ph.D., Harvard University), has been involved with the Balkans since she was an undergraduate. She has visited all regions of Bulgaria and former Yugoslavia, and has done extensive field work in villages throughout the southern and southeastern Balkans. Her research interests include dialectology (the relations between different geographical varieties of speech), folklore (especially the language of oral epic), and sociolinguistics (especially the relation between language and identity as connected with the breakup of Yugoslavia).

Faculty web site: <http://slavic.berkeley.edu/faculty.html>

**Vision Science 24, Section I
The Human Eye (1 unit, P/NP)
Professor Richard C. Van Sluyters
Friday 2:00-4:00, 394 Minor Hall, Class number: 38192**

This seminar will meet approximately every other week throughout the semester, beginning the first week of the semester.

This seminar will include a series of instructor-led discussions on the structure and function of the human eye and its appendages. The use of a standard clinical instrument to view the eye will be demonstrated. Students will then employ this instrument to observe one another's eyes. Digital images of the iris will be

captured and provided to each student. Examples of the types of topics to be discussed include the following: Why is the cornea so clear and the sclera so white? Why is the iris so beautifully colored? What is the fluid in the eye, where does it come from, and where does it go? How do the skull and bony orbit protect the eye without hindering its performance? How do the appendages of the eye—the eyelids and eyebrows—work, and what are their functions? How does the eye adjust its focus from far to near, and why do we lose this ability with age? How do contact lenses work, and what happens to the cornea when laser refractive surgery is performed? What structural and functional changes in the eye are found in various ocular diseases?

Professor Richard C. Van Sluyters joined the faculty of the School of Optometry in 1975, and currently serves as the School's Associate Dean for Student Affairs. He received his undergraduate training at Michigan State University, studied optometry at the Illinois College of Optometry and was a graduate student at Indiana University. He holds doctorates in optometry and vision science and was a postdoctoral fellow at Cambridge University in England. He teaches courses on the anatomy and physiology of the eye and visual system.

Faculty web site: <http://vision.berkeley.edu/VSP/content/faculty/facprofiles/vansluyters.html>

Vision Science 24, Section 2

Myths, Mysteries and Discoveries in Medicine (1 unit, P/NP)

Dr. Patsy Harvey

Wednesday 11:00-12:30, 491 Minor Hall, Class number: 38193

This 90-minute seminar will meet for the first nine weeks of the semester, from January 17 through March 14, 2018.

Throughout the centuries, people sought to understand the reasons for diseases, disabilities and death. Intriguing explanations, myths and superstitions were developed in an attempt to describe and prevent their medical maladies. In this course, we will discuss early and current explanations of health problems, with special considerations given to nutrition and various cultures in the US and around the world. We will also discuss recent changes in health care and imagine future roles and discoveries of medicine.

Students enrolled in this seminar should be curious about people's beliefs and misconceptions about health and diseases, including our own myths about vision.

Dr. Patsy Harvey received her Doctor of Optometry and Masters in Public Health from UC Berkeley. She currently teaches at the UC Berkeley School of Optometry, including courses on Systemic Diseases, Geriatrics, and the History of Medicine and Optometry. During her international travels and clinical work, she developed a fascination with health beliefs in other countries and times, and enjoys discussing their beliefs and myths with others.

FRESHMAN AND SOPHOMORE SEMINARS

Most of the following courses are limited to 20-25 students. First- and second-year students are given priority for enrollment. Some of these courses fulfill Letters and Science breadth requirements; for details consult *A Guide for Students in the College of Letters and Science: Earning Your Degree*. If a course is designated as requiring the consent of the instructor, or if you would like additional information, please contact the undergraduate assistant in the department offering the seminars.

History 39S, Section I

It's the End of the World: Apocalyptic and Millenarian Movements in the Atlantic World, 1500-2000 (4 units, LG)

Professor Mark Emerson

Friday 10:00-12:00, 3205 Dwinelle Hall, Class number: 41341

This seminar explores apocalyptic beliefs and hope for the end of the world in the early modern Atlantic world and/or the desire for the transformation of the world and society—a yearning for a future egalitarian world led by a savior figure. We will examine topics such as the history of apocalyptic ideas and millenarian traditions, early modern movements in Europe, millenarian hopes for the New World, colonial dreams and rebellions, and nineteenth century undertakings from Brazil (Juzeiro and Canudos) to the United States (Millerites and kingdom of Matthias).

Mark Cooper Emerson is a Visiting Professor of History. His specialty is the social and cultural history of Portugal and Brazil, 1500-1800. He has published on numerous aspects of early modern and colonial Atlantic societies. He is currently writing a dual biography of two popular female mystics in the seventeenth-century Atlantic world and has a long-term project analyzing popular modes of resistance to the Inquisition in Europe and the Atlantic world.

Legal Studies 39D, Section I

Current Political and Moral Conflicts and the U.S. Constitution (2 units, LG)

Mr. Alan Pomerantz

Monday 10:00-12:00, 238 Kroeber Hall, Class number: 32639

The debate about politics and morals has moved steadily into the realm of the Supreme Court, but people differ on what exactly the role of the Court should be. Some have strongly argued that the Court's interpretation and application of the Constitution have adversely affected our fundamental rights and usurped powers from other branches of government. This position claims the Court has created an "Imperial Judiciary", a supreme authority, not a supreme court. Others argue as strongly that the Court has acted properly to find and protect evolving fundamental freedoms and individual rights in the face of unprecedented political and governmental efforts to limit them. This position claims the Court has, in fact, fulfilled the role envisioned for the Court by the Constitution. This seminar will follow the Socratic method in examining moral and political issues that have a constitutional basis and the Court's participation in the debate on topics such as transgender and gay rights (including gay marriage); "sincerely held religious beliefs" as a defense to compliance with anti-discrimination laws; abortion; privacy; limitations on speech including "hate" speech, college speech codes, trigger warnings and micro-aggressions; and euthanasia. We will read Supreme Court cases, as well as political and legal commentary from across the political spectrum. The prime focus of the seminar is to encourage students to develop their critical thinking skills. Accordingly, students are expected to develop, support and defend their own views and opinions regarding the relevant topics.

Alan J. Pomerantz, Esq., is a practicing lawyer and Senior Counsel at Pillsbury Winthrop Shaw Pittman, a major international law firm. A graduate of the NYU School of Law, he also studied under the Fulbright Program in Chile and received an advanced legal degree from the University of Amsterdam (Netherlands). He has lectured and taught widely, including at the NYU School of Law, NYU College of Arts and Science,

the University of Amsterdam, Columbia Graduate School, and the University of Concepcion (Chile). He has published numerous articles and contributed to several treatises on legal topics. Mr. Pomerantz is recognized by several peer publications as one of the world's leading lawyers. He is also the recipient of the 2015 Fulbright Commission Global Citizens Award, and the 2016 Global Award for his legal work. Mr. Pomerantz has participated in important and controversial matters affecting individual rights, including the right of public artistic expression, the right of privacy for acts of consenting adults, and numerous free speech cases.

Legal Studies 39D, Section 2

Current Political and Moral Conflicts and the U.S. Constitution (2 units, LG)

Mr. Alan Pomerantz

Monday 2:00-4:00, B51 Hildebrand Hall, Class number: 32640

The debate about politics and morals has moved steadily into the realm of the Supreme Court, but people differ on what exactly the role of the Court should be. Some have strongly argued that the Court's interpretation and application of the Constitution have adversely affected our fundamental rights and usurped powers from other branches of government. This position claims the Court has created an "Imperial Judiciary", a supreme authority, not a supreme court. Others argue as strongly that the Court has acted properly to find and protect evolving fundamental freedoms and individual rights in the face of unprecedented political and governmental efforts to limit them. This position claims the Court has, in fact, fulfilled the role envisioned for the Court by the Constitution. This seminar will follow the Socratic method in examining moral and political issues that have a constitutional basis and the Court's participation in the debate on topics such as transgender and gay rights (including gay marriage); "sincerely held religious beliefs" as a defense to compliance with anti-discrimination laws; abortion; privacy; limitations on speech including "hate" speech, college speech codes, trigger warnings and micro-aggressions; and euthanasia. We will read Supreme Court cases, as well as political and legal commentary from across the political spectrum. The prime focus of the seminar is to encourage students to develop their critical thinking skills. Accordingly, students are expected to develop, support and defend their own views and opinions regarding the relevant topics.

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Near Eastern Studies 39B, Section I

The Abrahamic Religions (3 units, LG)

Professor Manuel Oliveira

Tuesday and Thursday 2:00-3:30, 271 Barrows Hall, Class number: 32982

This seminar aims to introduce students to the three major monotheistic religions.

While Judaism, Christianity and Islam share common biblical roots, their differences and similarities vis-à-vis an understanding of their particular position in the world often placed them in confrontation, despite periods of complementary convergence. We will survey some of the theological/ spiritual dimensions of these Abrahamic traditions and explore the significance of their heritage to human civilization. This seminar may be used to satisfy the Philosophy and Values breadth requirement in Letters and Science.

Manuel Oliveira is an Adjunct Professor in the Department of Near Eastern Studies of UC Berkeley. Before coming to the US, he co-founded the Institute for Human Studies and Intelligent Sciences in Europe. He has served in the European Commission as Expert in the 6th and 7th Framework Programmes and in the current Horizon 2020 in Economics and Human Sciences, and as a Member of the Ethics Panel in Science, Economy and Society. He was a Visiting Scholar at the Graduate Theological Union at Berkeley and at the Columbia University School of Law, and a Senior Fellow at Harvard University's Center for the Study of World Religions, the Center for Jewish Studies, and the Kennedy School of Government. He works in the fields of Modern Jewish Thought, the Abrahamic Religions, and the complex relations between Judaism and Christianity.

Faculty web site: <http://nes.berkeley.edu/faculty/oliveira.html>

**South and Southeast Asian Studies 39, Section 1
Southeast Asian Performing Arts (2 units, LG)**

**Dr. Maria Josephine Barrios-Leblanc, Ms. Cynthia Aban and Ms. Ninik Lunde
Tuesday 9:00- 11:00, 33 Dwinelle Hall, Class number: 17243**

The course focuses on Southeast Asian Performance—the music of Vietnam, Indonesian dances, and Philippine theater and music. Discussions shall be guided by the following questions: How have geography, religion, social structures, customs, and beliefs shaped indigenous performing art forms? How are performing traditions revitalized in contemporary times? How have experiences of colonialism and social movements informed the work of performing artists? How can we read/view these works today? **We hope to attract students interested in one, both, or all of the following: the Southeast Asian region, the performing arts (music, dance, theater), and history.**

Maria Barrios-Leblanc has a Ph.D. in Filipino (Philippine Literature) from the University of the Philippines (UP). Before coming to UC Berkeley, she served as Associate Professor and Associate Dean of the UP College of Arts and Letters. She has written/edited more than a dozen books including language textbooks, poetry collections and research on Philippine drama and literature.

Faculty web site: <http://sseas.berkeley.edu/people/faculty/joi-barrrios-leblanc>

Cynthia Aban is a singer and kulintang player with the multi-awarded performing band Grupong Pendong which utilizes indigenous instruments in creating contemporary music. Before coming to UC Berkeley, she was a Ph.D. student at the University of the Philippines studying Filipino psychology.

Faculty web site: <http://sseas.berkeley.edu/people/faculty/chat-aban>

Ninik Lunde has a Master's degree in Linguistics from the University of Wisconsin. She taught Indonesian language at UW Madison for five years and has been teaching beginning and intermediate Indonesian since 1993 at UC Berkeley. She has created audio-visual materials for her classes. Her academic interests include linguistics and comparative literature. In addition to language teaching, she also has been performing Javanese, Balinese and Sumatranese dances on campus, in the Bay Area and at dance festivals.

Faculty web site: <http://sseas.berkeley.edu/people/faculty/ninik-lunde>

South and Southeast Asian Studies 39, Section 2

Island Imaginations: Exploring the Short Story in the Philippines, Indonesia, Malaysia and Singapore (2 units, LG)

Lecturer Karen Llagas and Professor Sylvia Tiwon

Friday 10:00- 12:00, 204 Dwinelle Hall, Class number: 17244

The Philippines, Indonesia, Malaysia and Singapore are multicultural island nations in Southeast Asia with strong story-telling traditions. We will read and discuss the short story as a modern narrative form through which writers have explored questions of nation and identity in colonial and postcolonial times. The seminar introduces students to some of the major contemporary themes including romance, resistance, gender, the challenges of modernization and the new global order.

Karen Llagas lectures in UC Berkeley's Beginner and Intermediate Filipino classes; she teaches Tagalog privately and in group classes in the San Francisco Bay Area and online.

Sylvia Tiwon is an Associate Professor in the Department of South and Southeast Asian Studies. She teaches literature, gender, and oral and cultural studies of Southeast Asia with a focus on Indonesia. Her areas of interest include national and pre-national literatures, oral discourse and mythologies, as well as socio-cultural formations at the national and sub-national levels.

Faculty web site: <http://sseas.berkeley.edu/people/faculty/sylvia-tiwon>

**South and Southeast Asian Studies 39, Section 3
Contentious Politics and Southeast Asian Literature (Focus on Vietnam and the Philippines) (2 units, LG)
Dr. Maria Josephine Barrios-Leblanc and Lecturer Hanh Tran
Friday 2:00-4:00, 106 Wheeler Hall, Class number: 17245**

Do you like debates? How do you think people can debate about politics through literature? This course looks into the dynamics of literature and politics in Vietnam and the Philippines by asking the following questions: How have writers articulated their beliefs on colonialism, human rights, gender and class through poetry and fiction? When does ideology inform literary techniques? How can we study specific genres such as prison literature, testimonial literature, guerrilla literature, and underground newspapers and literary magazines? **All readings and discussions will be in English.**

Maria Barrios-Leblanc has a Ph.D. in Filipino (Philippine Literature) from the University of the Philippines (UP). Before coming to UC Berkeley, she served as Associate Professor and Associate Dean of the UP College of Arts and Letters. She has written/edited more than a dozen books including language textbooks, poetry collections and research on Philippine drama and literature.

Faculty web site: <http://sseas.berkeley.edu/people/faculty/joi-barrrios-leblanc>

Hanh Tran holds an M.A. degree in South and Southeast Asian Studies with a concentration in Political Studies and Literature. He has been a lecturer of Vietnamese language and literature at UC Berkeley since 2006. He has also guest lectured and co-taught several seminars on Southeast Asian Literature and Movies. His current research interest is in Southeast Asian Material Culture and History of Art. He Also sponsored several DeCal courses on Vietnamese culture through films.

SOPHOMORE SEMINARS

The following courses are limited to 15 students. Each is offered for one or two units of credit. Second-year students will be given priority for enrollment. Courses designated P/NP may be taken pass/no pass only; courses designated LG may be taken for a letter grade or on a pass/no pass basis. If a course is designated as requiring the consent of the instructor, or if you would like additional course information, contact the undergraduate assistant in the department offering the seminar.

Bioengineering 84, Section I
Introduction to Interactive Fiction (1 unit, P/NP)
Professor Ian Holmes
Tuesday 10:00-11:00, 41 Evans Hall, Class number: 41118

Interactive Fiction (IF) is a genre of literature where the reader has an opportunity to influence the outcome of the story. It often (though by no means always) takes the form of a text-centric computer game. This class will survey the history of IF, from its experimental roots (e.g. Jorge Luis Borges' "Garden of Forking Paths"), through the first commercial phase of the 1980's ("Choose Your Own Adventure" novels, Infocom text adventures), the hobbyist phase of the 90's and 00's (Graham Nelson's reverse-engineering of the Infocom Z-machine), and the current "text renaissance." Participants in the class will create one short work of interactive fiction themselves, and play many others. Guest lecturers will include celebrated authors from the IF community. **Anyone is welcome to this class. Realistically, we expect students to fall into two categories: those mainly interested in the humanities who have done very little programming, and those who have some coding experience but have not written much prose. Both types of participant are welcome; in particular, it deserves emphasis that NON-PROGRAMMERS WILL NOT BE AT A DISADVANTAGE. If anything, it's the other way around: it is much easier to write—by trial and error—a computer program that makes a machine do something, than it is to write prose that makes a human feel something. But don't worry if you've not written much prose (or much code). The first step is to get you playing some IF games and thinking critically about them.**

Ian Holmes is a computational biologist and part-time game developer. Starting in the late 1980's he created and sold two independent games, in the RPG/adventure and first-person shooter genres. His subsequent career has focused mainly on artificially intelligent systems for molecular biology and genomics. Recently, he has resumed a serious interest in computer games, and is perpetually working on several side projects and experimental prototypes.

Faculty web site: <http://biowiki.org/IanHolmes>

Economics 84, Section I
Buddhist Economics (2 units, P/NP)
Professor Clair Brown
Wednesday 3:30-5:30, 2521 Channing Way, Berkeley, Class number: 23464

Meeting dates are Wednesdays, from January 24 through March 28, 2018.

In Buddhist Economics, we will explore basic economics concepts and ask how Buddha might have taught them. Some questions that we address are these: What creates happiness? What is an equitable distribution of income? How is our own well-being related to the well-being of others? Does economic growth and having more income make people better off? How would Buddha revise the basic assumptions of modern economics?

Many students in my Econ I class at UC Berkeley were frustrated with the assumption that “more is better”---having more income and what it buys is what

makes people better off. They also were shocked that economics did not compare the wellbeing across different income groups---the rich benefited just as much as the poor from another dollar of income, and income per capita compared quality of life across countries. As a practicing Buddhist, I asked “How would Buddha have taught Econ I?”

In the economic model, it makes sense to go shopping if you are feeling pain, because buying things makes you feel better. Yet we know from experience that consuming more does not relieve pain. What if we lived in a society that did not put consumption at its center? What if we follow instead the Buddhist mandate to minimize suffering, and are driven by compassion rather than desire? To explore these questions with an alternative economic model, I developed this Sophomore seminar “Buddhist Economics”. Most of the required reading is from my book, **Buddhist Economics: An Enlightened Approach to the Dismal Science, Bloomsbury Press, 2017.**

Let’s explore together!

Clair Brown has published research on many aspects of the labor market, including high-tech workers, labor market institutions, firm employment systems and performance, the standard of living, wage determination, and unemployment. Clair taught Econ I for many years, and practices Tibetan Buddhism. Her books include *American Standards of Living, 1919-1988* (Blackwell, 1994), *Work and Pay in the United States and Japan* (Oxford University Press, 1997), *Economic Turbulence* (University of Chicago Press, 2006), and *Chips and Change: How Crisis Reshapes the Semiconductor Industry* (MIT Press, 2009, 2011). Clair is working on developing a holistic measurement for economic performance for California. She is also is a faculty leader in the Development Engineering program for graduate students.

Her book: *Buddhist Economics: an enlightened approach to the dismal science*, Bloomsbury Press, 2017.
<http://amzn.to/2kMmtmI> Book trailer (2 min): <https://youtu.be/88RX5A2iezs> Blogs, podcasts, reviews at <http://buddhisteconomics.net>
www.facebook.com/Buddhist-Economics-973198039490789

Faculty web site: http://www.irl.berkeley.edu/faculty/brown/Brown_CV.pdf

English 84, Section I

High Culture/Low Culture and the Films and Writings of Woody Allen (2 units, P/NP)

Professor Julia Bader

Wednesday 1:00-4:00, 300 Wheeler Hall, Class number: 23820

We will examine the films and writings of Woody Allen (specifically "The Insanity Defense") in terms of themes, narration, comic and visual inventiveness and ideology. The course will also include a consideration of cultural contexts and events at Cal Performances and the Pacific Film Archive.

Sophomores interested in learning about cultural studies, acquiring film criticism skills and expanding their cultural horizons with emphasis on techniques of film comedy would be the ideal audience.

Julia Bader is a Professor Emerita in the English Department and specializes in the modern period, both British and American, with an emphasis on fiction, film, and feminism.

Faculty web site: <http://english.berkeley.edu/profiles/11>