SPRING 2009

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Freshman and Sophomore Seminars
University of California, Berkeley
301 Campbell 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
- Success, Seminars, and You – a web page full of good ideas and helpful links to support students in registering for a seminar and getting the most out of their seminars before, during and after taking a seminar

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 February 4, 2009.

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.

Architecture 24, Section 1
Explorations of the Architecture Profession (1 unit, P/NP)
Professor Mike Martin
Wednesday 3:00-5:00, 270 Wurster Hall, CCN: 03702

This seminar will meet for five weeks, beginning March 4, 2009 and ending April 8, 2009.

This seminar will examine the historical foundations of the architectural profession, the role of education in preparing professionals, the structure of contemporary architectural practice and the changing context of the future of architectural profession. These aspects will be introduced by reading and discussing selected literature and case studies.

Mike Martin is a Professor Emeritus of Architecture and former Undergraduate Dean of the College of Environmental Design and Chair of the Architecture Department. He studied architecture at the University of Colorado, the University of Washington and the University of California at Berkeley. He is the former Head of the Architecture Department at the California Polytechnic State University in San Luis Obispo. He is an architect specializing in the study of design education and its relationship to design methods and architectural practice with an emphasis on knowledge production in the profession. He is a Fellow of the American Institute of Architects and an active participant in the dialogue between education and professional practice.

Astronomy 24, Section 1
Space, Time, and the Cosmos (1 unit, P/NP)
Professor Alex Filippenko
Thursday 1:00-3:00, 544 Campbell Hall, CCN: 06659

This seminar will meet eight times out of the following ten times: January 22, February 5, 12, 26, March 5, 19, April 2, 16, 30 and May 7, 2009. Food for Thought dining arrangements will be discussed in class.

We will consider the nature of space and time, especially in the context of our understanding of the overall properties of the Universe. The major topics from the following two best-selling books will be discussed: "A Briefer History of Time," by Stephen Hawking, and "The Fabric of the Cosmos: Space, Time, and the Texture of Reality," by Brian Greene. Our journey will take us through the basics of the two pillars of modern physics: quantum mechanics and Einstein's general theory of relativity. We will also explore string theory, which attempts to unify these two great fields by postulating the existence of many hidden dimensions in which packages of energy vibrate. **Though the seminar is intended for non-science majors, the discussion will be held at a fairly high level; thus, students must have already successfully completed at least one of the following courses: Astronomy 10 (or C10), L&S C70U, Astronomy 7A, or Astronomy 7B. This seminar is part of the Food for Thought Seminar Series.**

Alex Filippenko received his B.A. (1979, Physics) from UC Santa Barbara and his Ph.D. (1984, Astronomy) from the California Institute of Technology. He joined the UC Berkeley faculty in 1986. An observational

astronomer who makes frequent use of the Hubble SpaceTelescope, the Keck ten-meter telescopes, and Lick Observatory, he engages in research on exploding stars, active galaxies, black holes, gamma-ray bursts, and observational cosmology. Having written over 560 articles on his research, Filippenko has received numerous awards and is one of the world's most highly cited astronomers. His group's discovery that the expansion of the Universe is accelerating with time was named the "Top Science Breakthrough of 1998" by the editors of Science magazine. A dedicated and enthusiastic teacher, he has won the campus Distinguished Teaching Award and has been voted "Best Professor" six times in the Daily Cal's annual "Best of Berkeley" survey; he was also named the 2006 CASE/Carnegie National Professor of the Year among doctoral and research institutions. Besides being an avid tennis player and hiker, he enjoys world travel and is addicted to observing total solar eclipses.

Chemistry 24, Section 1
Order, Disorder, Chaos and Fractals (1 unit, LG)
Professor Alex Pines
Monday 2:00-3:00, 221 Stanley Hall, CCN: 11306

The seminar will discuss the notions of disorder-order transitions that arise from the competition between cooperative inter-particle or interpersonal interactions and disruptive fluctuations. Examples will be drawn from physics, chemistry, biology, engineering, sociology, voting, etc., and include such phenomena and systems as paramagnet-ferromagnet, gas-liquid, liquid-liquid crystal, random coil-ordered polymer, denatured-folded protein, incoherent-coherent laser light, conductivity-superconductivity, independent-cooperative voting, etc. The dynamics and geometry of such systems will also be outlined, including the possibility of oscillations, chaos and associated fractal structures and the onset of irreversibility. Demonstrations illustrating these principles and phenomena ranging from chemistry, biology and attempts at random number generation to critical fluctuations and social influence will be presented. Assignments will include statistical assessment of various experiments including coin flipping and cooperative interaction simulation, and the evaluation of the fractal dimensions of various forms of nature ranging from mountains and clouds to cauliflowers and kidneys. The course will be informal, and of a popular semi-quantitative nature, so as to allow non-experts to appreciate the ubiquitous role of chaos and fractals and the general relationship between dynamics and geometry. **Enrollment is by instructor approval only. If you are interested in taking this seminar, you will need to sign up on the waiting list and attend the first class meeting on January 26, 2009. At the meeting, Professor Pines will give a brief quiz and interview to ensure a minimum of mathematical and computer background, as well as diversity of fields of interest, and distribute CECs to selected students. While not essential, high school chemistry, physics and mathematics, especially AP, would be advantageous. Professor Pines is looking forward to hearing about each student's interest in the seminar topic. This seminar is not appropriate for freshmen majoring in mathematics, computer science or engineering – candidates from those majors will not be considered as their majors have similar, more quantitative courses. This class is appropriate for freshmen majoring in (or planning to major in) the physical sciences, life sciences or non-science/general majors who have interests in an introduction to these topics from a more conceptual approach.**

Professor Pines, PhD MIT, is a world-renowned teacher of chemistry and physics. He has taught courses across the spectrum from advanced quantum mechanics to his UC Distinguished Teaching Award winning Freshman Chemistry 1A and his Innovation Award winning Digital Chemistry and ChemQuizzes. He is a world leader in the development and application of nuclear magnetic resonance (NMR) spectroscopy and magnetic resonance imaging (MRI). His work and his group, the "Pinenuts", have been recognized by many prizes and he is a member of the National Academy of Sciences and a Foreign Member of the Royal Society of London.

Chicano Studies 24, Section 1
The Chicano Civil Rights Movement (1 unit, P/NP)

Professor Carlos Munoz Jr.
Tuesday 2:00-3:00, 206 Wheeler Hall, CCN: 13006

The seminar will consist of examining the multifaceted dimensions of the 1960s Chicano Civil Rights Movement via documentary films. **This is an Equity and Inclusion Theme seminar.**

Professor Carlos Muñoz, Jr. is a Professor Emeritus in the Department of Ethnic Studies. He is the award-winning author of Youth, Identity, Power: The Chicano Movement, and is working on a book on the topic of the seminar.

Civil and Environmental Engineering 24, Section 1
Two Field Trips in Environmental Engineering (1 unit, P/NP)
Professor John Dracup
Wednesday 6:00-7:00, 406 Davis Hall, CCN: 13909

This seminar will begin during the second week of the semester on Wednesday, January 28, 2009 from 6:00 - 7:00 p.m. in 406 Davis Hall. It will also meet for two pre-field trip lectures/discussions concerning the science/engineering aspects of each field trip on Wednesdays, March 4 and 11 from 6:00 - 7:00 p.m. in 406 Davis Hall. The stream restoration field trip will be on Saturday, March 7 and the wetland restoration field trip will be on Saturday, March 14. Pizza and soft drinks will be provided at the Wednesday evening class meetings. Lunch arrangements at the Field trips will be discussed in class.

Two Saturday field trips will be to 1. A wetland restoration site and 2. A stream restoration site. All field trips will be in the San Francisco Bay area and last approximately six hours in duration. Transportation will be provided to and from the Berkeley campus. Attendance is mandatory at all three seminar meetings and both field trips for a passing grade in the class. Field trips will be interactive: wear clothing that you don't mind getting wet or dirty. **Enrollment is limited to twenty freshmen interested in environmental issues.**

Dr. John Dracup is a Professor of the Graduate School in the Department of Civil & Environmental Engineering. He has taught and conducted research at UCLA and U.C. Berkeley for forty-two years. His expertise is in water resource engineering and hydrology. His recent awards include 1. Inauguration into the "Order of the Black Blouse" by the Water Rights Court of Valencia, Spain; 2. Designation as a Diplomat of the American Academy of Water Resource Engineers of the American Society of Civil Engineers; and 3. An Honorary Professorship at the Universidad Católica San Antonio De Murcia, Spain. He swims competitively with Pacific Masters Swimming.

Classics 24, Section 1
The Meaning of Envy (1 unit, P/NP)
Professor Ellen Oliensis
Tuesday 2:00-3:00, 204 Dwinelle Hall, CCN: 14726

Envy is generally considered a marginal emotion today, but in antiquity it had a much higher profile: it could kill a person or topple a city. This seminar will be devoted to exploring the physics, erotics, and politics of this underrated emotion. Readings will include ancient texts on envy (e.g., Hesiod, Herodotus, Catullus, Ovid, Plutarch) as well as a selection of modern essays (psychoanalytic, philosophical, and sociological). **The class is open to any freshman who is interested in reading, thinking, and talking about envy.**

Ellen Oliensis joined the UC Berkeley faculty in 1999. As an Associate Professor in the Department of Classics, she enjoys teaching ancient literature in translation as well as classes on Latin poetry. Her research focuses on Latin poetry of the late Republic and early Empire (currently her favorite poet is

Ovid). She has long believed that envy deserves more attention than it tends to receive, and she is excited about teaching this class.

Earth and Planetary Science 24, Section 2
Oceans in the News (1 unit, P/NP)
Professor Jim Bishop
Wednesday 10:00-11:00, 325 McCone Hall, CCN: 19041

Not one week goes by without major articles about the oceans in print/online media such as The San Francisco Chronicle, New York Times, etc. News items: Pollution?, an ice-free Arctic Ocean?, Law of the Sea?, Fisheries?, Economics and Commerce?, Sea Level Rise?, An ocean fix for the CO2 problem?, Ecological discoveries? and more. We'll delve into the details of several of these focus areas over the course of the term. Students will be graded on active participation, short written assignments, and in-class team presentations. Participants will have an opportunity to experience the San Francisco Bay from the water. **The seminar will close within two weeks of the start of classes.**

Jim Bishop is a Professor in the Department of Earth and Planetary Sciences. His research focuses on understanding how the oceans sequester atmospheric carbon dioxide. He loves to go to sea and has logged about 1.5 years at sea during 32 oceanographic expeditions. For more information regarding Professor Bishop, visit his faculty webpage at http://eps.berkeley.edu/development/view_person.php?uid=212268.

Education 24, Section 1
Schooling While Black: The African American Tradition of Critical Educational Thought and Action (1 unit, LG)
Professor Daniel Perlstein
Wednesday 2:00-4:00, 2327 Tolman Hall, CCN: 23523

This seminar will meet the first eight weeks of the semester.

Educational projects of asserting, transmitting and reconstructing African American humanity, of claiming a place in American life or of laying the groundwork for separate Black institutions or culture, have been a central element of the the Black freedom struggle. They have engaged such thinkers as Frederick Douglass, W.E.B. DuBois, Mary McLeod Bethune, Bayard Rustin, and bell hooks, to name just a few. In recent years, the purported interests of Black children have justified educational reforms ranging from No Child Left Behind to vouchers and charter schools. And yet, reformers have often ignored the long-standing African American tradition of critical educational thought and action. This seminar explores the ways African American educators and intellectuals have conceptualized the tasks of schools and the contribution they might make to the liberation of youth. For the first session, please read (or re-read) The Narrative of the Life of Frederick Douglass (chapters 5-8) and Up From Slavery (Chapters 2, 3, 8 and 14). You can find them both online. **Enrollment is limited to freshmen and sophomores. This is an Equity and Inclusion Theme Seminar.**

Dan Perlstein is a historian whose work focuses on efforts to create more equitable and humane schools. His research has examined race and class conflicts in urban education, the pedagogical visions of movement activists in SNCC and Black Panther Party, school violence and progressive pedagogy. His writings can be found both in academic journals and in such activist publications as Transforming Teacher Unions and Putting the Movement Back Into Civil Rights Teaching.

Energy and Resources Group 24, Section 1
The Science, Technology, Policy, and Politics of California Air Pollution (1 unit, P/NP)

Professor Robert Sawyer
Wednesday 2:00-4:00, 74 Hesse Hall, CCN: 27453

This seminar will meet six Wednesdays plus two field trips. The first seminar meeting will be during the first week of classes on Wednesday, January 21, 2009. The dates for the remaining five Wednesday meetings and two field trips will be announced in class on January 21. Please note this seminar will meet in 74 Hesse Hall, not 180 Barrows Hall as temporarily noted in the online Schedule of Classes.

California experiences the nation's worst air quality. Its innovative regulatory program is a model for the nation and the world. This seminar examines current California air pollution issues including health-based air quality standards and their attainment, who did kill the electric car and its likely rebirth, growth eroding emissions reduction, motor vehicles that clean the air, and California's role in addressing global warming. The seminar will meet for two hours on six Wednesday afternoons plus two field trips, dates to be determined. The seminar requires a short paper and presentation.

After forty years on the Berkeley faculty, Professor Sawyer, the Class of 1935 Professor of Energy Emeritus, accepted the appointment of Gov. Schwarzenegger to head California's air quality and climate change programs as chair of the the California Air Resources Board, a position he held for eighteen months. While at Berkeley, his teaching and research focused on air pollutant formation and control, motor vehicle emissions, energy and environment, and regulatory policy. This seminar is an unusual opportunity to explore air pollution and climate change issues with a professor who also led California's regulatory program.

English 24, Section 2
Ang Lee Films and James Schamus' Screenplays (1 unit, P/NP)
Professor Richard Hutson
Monday 12:00-1:00, 108 Wheeler Hall, CCN: 28084

For this seminar, we will look at four of Ang Lee's films and at two of the novels that are the sources of two of the films. Two of the screenplays were written by Lee's producer and friend, James Schamus: The Wedding Banquet and Ride with the Devil. Students will be expected to screen the films on their own, outside of class, and are expected to participate in class discussions. Students are also required to read two (of three) of the novels that are the source of the screenplays: Sense and Sensibility, The Ice Storm and Daniel Worrell's Woe to Live On, also entitled Ride with the Devil. (The last-named book is out of print and is available as a used book from on-line bookstores.) There will be a short paper (four to six double-spaced pages) due at the end of the class. **This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.**

Richard Hutson is an Associate Professor of English and former Director of the American Studies Program. He divides his teaching between the English Department and the American Studies Program. He has a Ph.D. in English and History from the University of Illinois, Urbana-Champagne. Professor Hutson has been at UC Berkeley since 1964, interrupted by a year of teaching at the University of Leeds in northern England. His recent publications include a number of essays on filmed Westerns and on writings from the late nineteenth- and early twentieth-century U.S.

Environmental Science, Policy, and Management 24, Section 2
Issues in Natural Resource Conservation (1 unit, P/NP)
Professor David Wood
Friday 9:00-10:00, 106 Mulford Hall, CCN: 29133

There is one optional field trip to a Bay Area location 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; global warming; 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.

Ethnic Studies 24, Section 1
Tourism in Mexico and Cuba (1 unit, LG)
Professor Alex Saragoza
Wednesday 4:00-5:00, 251 Dwinelle Hall, CCN: 30832

This seminar will examine tourism and travel from diverse and comparative perspectives. Using Mexico and Cuba as reference points, the seminar will particularly discuss tourism as a means of economic development, the politics of tourism, the environment and tourism, the social dimensions of tourism, the spatial effects of tourism, and the representation of tourism. Toward this end, the seminar will address various types of tourism and travel, such as cultural tourism, sex tourism, beach tourism, ecotourism, adventure tourism, political tourism, educational travel, vacation travel, and the like. In this light, the seminar will take centrally into account issues of race, gender, place and class. The seminar will also address conceptual and theoretical aspects of tourism and travel, e.g., globalization, neoliberalism, and transnationalism. The seminar will incorporate different approaches, e.g., visual imagery, performance, music, dance, as a means of discussing the issues noted above.

Alex M. Saragoza formerly served as Chair of the Center for Latin American Studies at Berkeley for four years, and he also served as the campus Director of International Education programs for three years; he also led two study tours to Cuba for UC Berkeley Extension in 2002 and 2003 (before the current travel restrictions were imposed by the White House); he has visited Cuba on several occasions and is currently conducting research on a comparative study of Mexican and Cuban tourism. A specialist on modern Mexico, he is an associate professor of history in the Department of Ethnic Studies.

Ethnic Studies 24, Section 2
Culture, Gender and Sexuality in Ang Lee's "Father Knows Best" Trilogy: Pushing Hands, Eat Drink Man Woman, and The Wedding Banquet (1 unit, P/NP)
Professor Sau-ling Wong
Thursday 12:00-1:00, 2505 Tolman Hall, CCN: 30835

Students are expected to watch the films outside class; they can be viewed in the Media Resource Center in Moffitt Library.

In this seminar, we will analyze three of Ang Lee's films in Chinese, Pushing Hands, Eat Drink Man Woman, and The Wedding Banquet, in terms of the workings of culture in the gendered and sexual behaviors of the characters. Commonly referred to as the "'Father Knows Best' trilogy," these films all feature an aging Chinese patriarch in conflict with apparently Westernized adult children (two of the films are set in the U.S.) over issues like marriage, child-bearing, and homosexuality. Grading will be based on regular attendance, active participation in class, and a short (4- to 6-page) paper at the end of the course.
This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.

Sau-ling C. Wong, Professor of Asian American Studies and Ethnic Studies, holds a Ph.D. in British and American Literature from Stanford University, and has been teaching at UC Berkeley since 1981. She is author of Reading Asian American Literature: From Necessity to Extravagance, editor of Maxine Hong Kingston's The Woman Warrior: A Casebook, and co-editor of A Resource Guide to Asian American Literature. She has also published many articles on various aspects of Asian American literature, such as gender and sexuality, autobiography, and canon formation.

Geography 24, Section 1
The City (1 unit, P/NP)
Professor Richard Walker
Friday 10:00-12:00, 575 McCone Hall, CCN: 36423

This seminar will meet the first eight weeks of the semester.

San Francisco and the Bay Area are quite distinctive among American cities, as you may know or will find out from living here. Radical politics, unique architecture, peculiar race relations, strong labor unions, a vigorous counterculture, and much more distinguish this city from the rest of the USA. In this course, we will read and discuss books (and some articles) on the history of San Francisco, Oakland and the Bay Area (including Silicon Valley). These will include Brechin's "Imperial San Francisco," Self's "American Babylon," Wollenberg's "Berkeley: A City in History," Walker's "The Country in the City," and Broussard's "Black San Francisco," among others. From those we'll try to suss out the development of the peculiar character of this urban area (as well as seeing how it conforms to the larger compass of US city building, local politics, and urban lifestyles). **This is an Equity and Inclusion Theme seminar.**

Professor Walker is a senior faculty member in the Geography Department and head of the California Studies Center on campus. He is a long-time student of American cities in general, and the Bay Area in particular. He has written books on the greening of the Bay Area, California agribusiness, and industrial geography, and many articles on suburbs, urban landscapes, and Bay Area history. He is currently at work on a book on the urbanization and urban landscape of the San Francisco metro area.

History 24, Section 1
The Japanese Family as Seen in the Japanese Novel (1 unit, P/NP)
Professor Irwin Scheiner
Thursday 2:00-4:00, 2303 Diwnelle Hall, CCN: 39204

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

This semester I propose that we read Japanese novels that take the Japanese family as their subject. All of the novels I have selected were written between the late nineteenth century and the decade or so after the end of World War II. These were years of great social and economic change, extensive urbanization and industrialization and, of course, debilitating defeat in 1945 after a punishing war. In spite of these extraordinary changes many Japanese social scientists have argued that the the "traditional" family persisted and remained strong. We will read six or seven novels (and, I hope, look at a couple of pertinent films) over a period of eight weeks, meeting every other week. We will read, for example, about an elite extended family as it disintegrates; a farm family facing impoverishment (and the growing into adulthood of a young daughter); the estrangement from family and home of a young college-educated male at the turn of the nineteenth century; an elegant portrayal of four sisters from a wealthy traditional household as they deal with (or hope for or reject) the conventional marriages of their class. And, finally, we read a novel about a frightened young husband preparing for the birth of his child in the confused decade following the end of the Pacific War. Our readings will include novels by these distinguished novelists: Natsume Soseki, Shimazaki Toson, Tanazaki Junichiro and Oe Kenzaburo. **I want students who will be willing to discuss our readings in class meetings. I want students who will be sufficiently engaged to forget about their shyness. I understand that all of us are**

shy but I hope that we can all overcome this and have a hearty discussion of our readings. I will, also, ask that every student write two book reviews during the semester. I will read them and ask, if necessary, for revisions. Revising is an important part of writing.

Professor Irwin Scheiner has taught history at Berkeley for over forty years. His lecture courses have covered the period from 1600-1912, from the once-called "feudal" Tokugawa period into the Meiji era (1868-1912), when the Japanese modernized their institutions and created an autocratic and powerful industrial society. He has given small undergraduate and graduate seminars on intellectual dissidence and social protest in both the Tokugawa period and modern Japan. His work has dealt with, for example, the unexpected conversion of samurai to Christianity and, ultimately, into criticism of the modern Imperial state; peasant rebellion in the Tokugawa and Meiji periods; and the development of a socialist movement in the twentieth century. Now retired, Professor Scheiner is continuing his work on Tokugawa peasant society.

History 24, Section 2
US Supreme Court Cases on Race and Gender (1 unit, P/NP)
Professor Richard Herr
Tuesday 12:00-2:00, 2303 Dwinelle Hall, CCN: 39207

This seminar will meet for eight weeks, beginning February 3, 2009 and ending March 31, 2009. There will be no seminar meeting on March 24, 2009.

We will read Supreme Court cases on issues of race and gender and place them in their historical setting. Plessy (separate but equal, 1895), Brown v. Board of Education (separate is not equal, 1954), Roe v.Wade (woman's right to terminate her pregnancy, 1973) will be highlighted but other less prominent cases will be covered, noting how the court has modified its positions. **There are no requirements to enroll, only an interest in the subject. This is an Equity and Inclusion Theme seminar.**

Richard Herr, an active member of the History Department from 1960 to 1993, is a specialist in Spanish and French history. He has taught Western civilization (History 4D and 5) and World Civilization (UGIS 55B, which he initiated). Recently he has written on problems of group identity in modern Europe and the US.

History of Art 24, Section 1
Classic Movies as Visual Art (1 unit, P/NP)
Professor David Wright
Thursday 9:00-12:00, 104 Moffitt Library, CCN: 05463

This seminar will meet the first twelve weeks of the semester. Attendance at the first class is
essential. Food for Thought dining arrangements will be discussed in class.

This seminar will devote twelve Thursday mornings to looking thoughtfully at Classic Movies, treating them as visual art, analyzing particularly the camera work and editing, also the staging and lighting, always seeking to understand how these aspects contribute to the total expressive effect of the movie. Each week one movie will be analyzed closely and students will write a brief report on a specific aspect of it. Usually extracts of another movie or shorts will also be shown, to expand students' knowledge of the medium. The movies analyzed will range from The Last Man (Germany 1924) to Bicycle Thieves (Italy 1949), all of them general release movies widely seen in their time. The only Hollywood movie analyzed will be Citizen Kane (by Orson Welles, 1941). The movies will be projected on a large screen, normally from DVD, allowing us easily to go back to specific episodes for detailed analysis and discussion. No

reading; no other written work. **This seminar is part of the Food for Thought Seminar Series.**

David H. Wright has been a devoted still photographer since childhood and continues to make all the slides for his lectures (which are mostly on Rome and the Dark Ages). He completed the undergraduate requirements in Physics at Harvard soon after the War, but switched to Fine Arts, provoked by his photography. He spends about three months a year traveling in Europe for his research, incidentally visiting many of the venues of the movies studied in this course, and deepening his knowledge of the social history reflected in them.

Integrative Biology 24, Section 1
The Darwinian Revolution (1 unit, LG)
Professor Brent Mishler
Thursday 10:00-11:00, 5053 Valley Life Sciences Building, CCN: 43003

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: 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 Professor in the Department of Integrative Biology and Director of the University and Jepson Herbaria. His research interests are in the systematics and evolution of plants, especially mosses. His lab applies methods ranging from microscopy and computer-assisted morphometrics, through tissue culture and DNA sequencing. He is also interested in the theory of systematic biology, as well as the philosophy and history of science.

Integrative Biology 24, Section 2
Animal and Human Navigation: Which Way Is Home? (1 unit, LG)
Professor Roy Caldwell
Monday 2:00-3:00, 5192 Valley Life Sciences Building, CCN: 43006

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. At the end of the semester, each student will be required to write a short review paper discussing navigation and orientation by an animal of his or her choice. **This seminar is designed for students with a general interest in animal biology and more specifically animal behavior. Registration for this seminar is by instructor approval only. Interested students should put their names on the waitlist and then attend the first class meeting.**

Roy Caldwell is a Professor of Integrative Biology with a background in insect migration and marine invertebrate animal behavior.

Integrative Biology 24, Section 3
How and Why Do Birds Sing (1 unit, P/NP)
Professor George Bentley
Tuesday 2:00-3:00, 5053 Valley Life Sciences Building, CCN: 43009

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 Assistant 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. For more information regarding Dr. Bentley, visit http://ib.berkeley.edu/research/interests/research_profile.php?person=17.

Integrative Biology 24, Section 4
Plants of the UC Berkeley Botanical Garden (1 unit, LG)
Professor David Ackerly
Wednesday 12:00-2:45, UC Berkeley Botanical Garden, CCN: 43012

The class will meet eight Wednesdays at 12:00 p.m. at the Hearst Mining Circle to take the shuttle bus to the Botanical Garden, and return to the Mining Circle by 12:40 p.m. The eight Wednesday meeting dates are January 21, February 4, February 25, March 4, March 18, April 1, April 15 and April 29, 2009.

The UC Botanical Garden is home to thousands of wild-collected plant species from all over the world. In this seminar, we will spend each class in a different part of the garden, examining plants from California, the New World deserts, temperate forests, the tropics, and more. Based on our observations, we will pose questions about the diversity of plant form and function: why are some leaves small and others big? Why are desert plants often succulent? How did cactus get their thorns? Why do some plants drop their leaves in winter or summer? In the final several classes, students will work in small groups to conduct independent mini-projects, and then share the results with the entire group. Our goal is to learn how scientists turn simple observations into hypotheses and research projects, and at the same time to enjoy the great diversity of the Botanical Garden's plant collection. **This seminar is intended for students who enjoy being outdoors and are curious to learn more about plant ecology and evolution. This is a great introduction for possible Integrative Biology majors who are curious about the department. Enrollment is limited to fifteen freshmen.**

Professor Ackerly joined the faculty at UC Berkeley in 2005. His research focuses on the ecology and evolution of plant diversity, focusing on the form and function of woody plants. He has worked in temperate and tropical forests of New England, Japan, Brazil and Mexico, and currently focuses his research on the flora of California.

Integrative Biology 24, Section 5
Evolution in Action (1 unit, P/NP)
Professor Craig Moritz
Monday 10:00-11:00, 5053 Valley Life Sciences Building, CCN: 43014

This seminar will meet for thirteen weeks, beginning the third week of the semester on February 9, 2009 and ending on May 11, 2009. The seminar will also meet for a two hour tour of the Museum of Vertebrate Zoology and a discussion of research therein on a date and time to be arranged with the seminar participants.

The traditional view of evolution as slow—think millions and millions of years—has recently been challenged with numerous examples of evolution occurring on contemporary time scales, often within decades. Many examples of contemporary evolution reveal a direct or indirect role for humans as a powerful evolutionary force. This seminar will explore the basics of evolution including natural selection and other processes that are driving contemporary evolutionary divergence in natural populations. We will draw on examples from invasion biology, emergent diseases, and studies of global climate change, among others, to illustrate how evolutionary processes affect current issues in ecology and conservation biology.

Craig Moritz is a Professor in Integrative Biology and the Director of the Museum of Vertebrate Zoology. He teaches undergraduate classes in Evolution (IB 160) and Molecular Ecology (IB C149). His research interests include evolutionary biogeography and conservation— historical biogeography and speciation processes, effects of quaternary climate change on species—and community-scale phylogeography and on speciation-extinction dynamics, predicting biodiversity distribution in montane tropics and other highly endemic systems, impacts of climate and land use change on genetic and species diversity, developing conservation strategies that protect evolutionary dynamics; molecular evolution & ecology; evolution of animal mitochondrial DNA and coevolution of mitochondrial and nuclear genomes, population genetic methods for inferring demographic and speciation history.

Integrative Biology 24, Section 6
Humans Evolving (1 unit, LG)
Professor Leslea Hlusko
Wednesday 3:00-5:00, 5053 Valley Life Sciences Building, CCN: 44101

This seminar will meet the first eight weeks of the semester.

In this seminar we will read and critically review a recently published non-fiction book written for the general public about human evolution /human biology. Each week we'll read and critically evaluate a chapter. Students will also be asked to do research into sections of the book to further evaluate the author's claims and interpretations. The goals of the course are 1) to develop the critical thinking skills needed to understand biology as it is presented to the general public, and 2) to develop the skills needed to maximize one's undergraduate experience here at UC Berkeley.

Professor Leslea Hlusko is interested in the genetic basis of mammalian skeletal variation and evolution with a focus on primates. Her research includes paleontological field projects in Tanzania and Ethiopia as well as genetics research done in collaboration with the Southwest Foundation for Biomedical Research. As such, she approaches human biology from the perspectives of paleontology and biomedicine. She received her undergraduate degree from the University of Virginia and a Ph.D. from Penn State

University. Professor Hlusko was a Professor at the University of Illinois for four years before moving to Berkeley in 2004. Please feel free to visit her lab web site for more information http://ib.berkeley.edu/labs/hlusko/.

Landscape Architecture 24, Section 1
The River on Film (1 unit, P/NP)
Professor G. Mathias Kondolf
Monday 5:00-8:00, 315C Wurster Hall, CCN: 48503

This seminar will meet for eight weeks beginning January 26, 2009. The additional seven meeting dates will be announced in class.

Filmmaking and large dam construction both developed in the twentieth century. By virtue of their scale and symbolic importance, large dams have long been popular subjects of films, from government propaganda pieces, to adventure epics, to evocations of river life. Recently, a film depicting the drying up of a major California river sparked a political controversy. This course involves viewing classic (and not-so-classic) films dealing with rivers, other natural waters, floods, and dams. In addition, this course will feature Director Ang Lee's film The Ice Storm as part of the On the Same Page program this term, which will provide opportunities to encounter Director Lee during his planned visit to Berkeley. Course requirements include viewing films, readings, participating in discussion, and short (two-page) research paper requiring use of the PFA library. Students enrolled in the class are admitted free to selected PFA screenings. The format of this course is lecture, film viewing, and seminar discussion. Nick Edwards, a film consultant, will guest lecture. **This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.**

Dr. G. Mathias (Matt) Kondolf is Professor of Environmental Planning at UC Berkeley and a fluvial geomorphologist specializing in environmental river management and restoration of rivers and streams, conducting research in California and other Mediterranean-climate regions. He is a principal investigator in the National River Restoration Science Synthesis project, a national-level study of river restoration, a member of the Environmental Advisory Board to the Chief of the US Army Corps of Engineers, and a member of the National Research Council Committee on Hydrology, Ecology, and Fishes of the Klamath River Basin. Dr. Kondolf was an author of the CALFED Ecosystem Restoration Program Strategic Plan. He developed the restoration flow regime adopted in the 2006 settlement to restore salmon in the San Joaquin River below Friant Dam.

Linguistics 24, Section 1
Language Myths (1 unit, P/NP)
Professor Larry Hyman
Wednesday 10:00-11:00, 175 Dwinelle Hall, CCN: 52251

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 less known languages which 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.

Linguistics 24, Section 2
Language and Politics in Southern Africa (1 unit, P/NP)
Professor Sam Mchombo
Monday 11:00-12:00, 14 Haviland Hall, CCN: 52254

Food for Thought dining arrangements will be discussed in class.

This seminar will focus on political developments in Southern Africa and the use of language in fostering national identity and attaining cultural emancipation. We will look at case studies representative of the dynamics of the region. The topics covered will include a brief history of the peoples of Southern Africa; family structure, kinship systems and traditional political institutions; cultural practices and religious beliefs; the impact of contact with western culture and civilization on language issues and political organization; language and its role in fostering national identity in post-independence Africa; models of national language policy in multi-ethnic societies; language use and democratic practice and human rights; the impact of AIDS on economic development and linguistic ecology; prospects of mother-education, and the use of African languages in science and technology. Since the course is a seminar, students will be expected to participate actively in the class. There will be a course reader. There will be no examinations. Grades will be based on one 500-word paper and class participation. **This seminar is an Equity and Inclusion Theme seminar and is part of the Food for Thought Seminar Series.**

Sam Mchombo is an Associate Professor in the Department of Linguistics, which he joined in 1988. He received his B.A. from the University of Malawi and Ph.D. from the University of London. He pioneered and taught courses in Linguistics and African Language Structure in what is now the Department of African Languages and Linguistics in the University of Malawi. From 1985-1988 he was a member of the Linguistics faculty at San Jose State University, teaching courses on general linguistics, syntax, and semantics. His research focuses on grammatical theory and African linguistic structure. Recently, he has also focused on aspects of African politics, delivering talks at the World Affairs Council on emergent democracies, as well as human rights in Africa. His publications include Theoretical Aspects of Bantu Grammar (1993), The syntax of Chichewa (Cambridge University Press, 2004), and "Democratization in Malawi: Its Roots and Prospects," published in a volume edited by Jean-Germain Gros called Democratization in Late Twentieth-Century Africa. Other works include papers on "National Identity, Democracy and the Politics of Language in Malawi and Tanzania," as well as "The Role of the Media in Fostering Democracy in Southern Africa," both published in The Journal of African Policy Studies, "Religion and Politics in Malawi" in Issues in Political Discourse Analysis (2005), and "Sports and Development in Malawi" in Soccer and Society Vol. 7 No. 2-3, 2006. He has delivered invited lectures and conference presentations in Hong Kong, Europe, Mexico, and in Africa. In Spring 2003, he was appointed Distinguished African Scholar by the Institute for African Development at Cornell University.

Materials Science and Engineering 24, Section 2
Physics and Materials Science of Skateboarding (1 unit, P/NP)
Professor Daryl Chrzan
Thursday 3:00-4:00, 122 Latimer Hall, CCN: 53203

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. **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.

Materials Science and Engineering 24, Section 3
Materials and Weapons of War through History (1 unit, P/NP)
Professor J. W. Morris Jr.
Friday 2:00-3:00, 348 Hearst Mining Building, CCN: 53206

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.

Mathematics 24, Section 1
The Mathematics of Gambling (1 unit, P/NP)
Professor F. Alberto Grunbaum
Tuesday 11:00-12:30, 939 Evans Hall, CCN: 54182

This seminar will meet the first ten weeks of the semester.

People have gambled using dice or tossing coins for several centuries. In fact, several important areas of mathematics were developed to answer questions posed by gamblers. These pieces of mathematics eventually found unexpected applications in physics, chemistry, and several parts of engineering. We will discuss a number of questions that a gambler may consider of interest. The three guiding principles in the selection of material will be 1) it will be very elementary; 2) it will show that common sense cannot always be trusted; and 3) it will illustrate the interconnection between mathematics and several physical sciences.

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

Mathematics 24, Section 2
What is Happening in Math and Science? (1 unit, P/NP)
Professor Jenny Harrison
Friday 3:00-4:00, 891 Evans Hall, CCN: 54185

In this seminar, we will discuss the latest developments in science and math. Students will present short oral reports from articles of their choice in the Science Times, Scientific American, Science News, or articles in What is Happening in the Mathematical Sciences. Discussion and debate are encouraged

especially when controversial or challenging issues arise, e.g., cloning of organs, string theory, stem cell research, and geopolitics of global warming. Students are encouraged to think of applications and possibilities of new research projects. Brainstorming and creative thinking are encouraged! **Students considering a major in math or science have found this seminar a useful resource to help clarify their choice.**

Jenny Harrison obtained her Ph.D. in mathematics in Warwick, England. She has taught at Oxford, Princeton, and Yale, as well as UC Berkeley. Her research interests include a new quantum calculus that applies equally to charged particles, fractals, smooth surfaces, and soap films. Applications of this theory to sciences may arise during this seminar.

Mathematics 24, Section 3
Flipping Coins and Other Fun Problems in Probability Theory (1 unit, P/NP)
Professor Nicolai Reshetikhin
Tuesday 1:00-3:00, 740 Evans Hall, CCN: 54187

This seminar will meet the first ten weeks of the semester.

The goal of this course is an introduction to probability and its applications. Flipping a coin and estimating how many times it will land on one side and how many times it will land on the other side is a good illustration to how determinism enters into randomness. We will start with this example (after a short review of basic principles of probability). We will compute the probability of a coin landing "n" times on one side after "N" flips. Then we will discuss random processes and an important class of them known as Markov processes. We will also discuss the question known in probability theory as large deviations and will see that sometimes there is an element of determinism in randomness. We will consider some simple combinatorial examples such as pile of squares to illustrate this phenomenon. This seminar will start with a series of introductory lectures, and then, towards the end of the seminar, students will give presentations. The list of suggested reading will be given at the first seminar and will be posted at the seminar's web site before the beginning of the semester. **Knowledge of elements of probability theory is desirable but not required.**

Some information about Professor Reshetikhin's research, teaching and scientific interests can be found on http://www.math.berkeley.edu/~reshetik

Mechanical Engineering 24, Section 1
Art and Science on Wheels (1 unit, P/NP)
Professor Benson Tongue
Wednesday 12:00-1:00, 5 Evans Hall, CCN: 55803

This seminar will examine two devices near and dear to my heart—the automobile and the bicycle. Both of these have undergone a long history of change and innovation; both inspire passion in their users and both embody technical as well as artistic excellence. Some issues we will look at will be efficiency, alternative power sources, environmental impact, dynamics, aerodynamics and handling. Along the way we'll dispel some myths, and ideally people will leave with a deeper appreciation for what bicycles and cars truly represent. **Enrollment is limited to twelve students.**

Benson H. Tongue is a Professor in the Department of Mechanical Engineering and has been a member of the faculty since 1988. His interests lie in the fields of vibrations, dynamics and controls, not to mention Scottish dancing, bicycling and bird watching. He is the author of Principles of Vibrations and Dynamics: Analysis and Design of Systems in Motion.

Media Studies 24, Section 1
Keeping Informed in the Digital Age (1 unit, P/NP)

Professor Thomas Goldstein
Wednesday 12:00-1:00, 189 Dwinelle Hall, CCN: 56702

This seminar will explore what keeping informed means in the digital age. It will also offer strategies on how to be well informed. **I look for eager, enthusiastic students who want to know how to figure out what is going on in the world.**

Tom Goldstein, Director of the Media Studies Program, is the former Dean of the journalism schools at Berkeley and Columbia. He was a reporter at the New York Times, the Wall Street Journal and other newspapers.

Molecular and Cell Biology 90A, Section 1
Evolution–Creatures, Not Creation (1 unit, LG)
Professor Jeremy Thorner
Friday 12:00-1:00, 2030 Valley Life Sciences Building, CCN: 57838

The advent of molecular biology, recombinant DNA methodology, and the capacity to obtain the complete nucleotide sequence of any genome (from a bacterium to a human) has confirmed the close relationships among all organisms at the genetic and biochemical level, and has confirmed the major tenets of the theory of evolution that were based on the fossil record and other more circumstantial and empirical evidence based on field observations of populations. This course will discuss the unique physical and chemical properties of both water and carbon, and other molecules and elements on which the life forms on our planet are based; the principles of the scientific method and its application to our observations of the natural world; how the term "theory" is applied in science; and the forces that influence organismal survival, adaptation and speciation. Readings will range from Charles Darwin to Steven Jay Gould to James D. Watson.

Jeremy Thorner is a Professor in the Division of Biochemistry and Molecular Biology in the Department of Molecular and Cell Biology. He joined the Berkeley faculty on 1 July 1974, and has been here on this campus ever since. His current research addresses the mechanisms by which cells respond to and decode changes in their extracellular environment and induce the appropriate changes in metabolism, growth and proliferation rate, and cell shape, that allow the cell to cope properly with the changed circumstances. For more information regarding Professor Thorner, please visit his faculty web page at http://mcb.berkeley.edu/faculty/BMB/thornerj.html.

Molecular and Cell Biology 90B, Section 1
Being Human in the Age of Technology (1 unit, P/NP)
Professor Harry Rubin
Thursday 4:00-5:30, 2066 Valley Life Sciences Building, CCN: 60271

Thomas Hobbes, the 17th century philosopher, described life as nasty, brutish and short. Modern technology has made it easier and longer, but serious questions have arisen whether we value human life as we should. To guide us through these questions, we will read and discuss "In the Shadow of Progress" by Eric Cohen, which is a commentary on the benefits and problems raised by the advances in science and technology. In addition to this required text, readings from at least one other book will be provided.

Harry Rubin has taught and done research in cell biology and virology at UC Berkeley for fifty years. He has also been the faculty adviser for a course on "Jewish Medical Ethics" since its inception in the DE-Cal program more than ten years ago.

Molecular and Cell Biology 90B, Section 2
Development and Evolution: The Role of History in Biology (1 unit, P/NP)

Professor David Weisblat
Wednesday 11:00-12:00, 55 Evans Hall, CCN: 60292

Dramatic advances in understanding the mechanisms of animal development have been made using "model" organisms such as the fruitfly Drosophila melanogaster. But even a perfect understanding of development in one species would not explain the dramatic differences among animals. For this, we must appreciate that developmental processes and outcomes are the products of evolution, a historical process. In this seminar, we will consider biology, and development in particular, within its historical context, evolution. **Students interested in any aspect of science are welcome. A limited number of sophomore seats are available in this freshman seminar. Interested sophomores should email name and SID to slindley@berkeley.edu to request a Course Entry Code (CEC).**

Professor David Weisblat became interested in natural history growing up in the Michigan countryside and originally wanted to be a forester. During undergraduate and graduate school, he studied biochemistry and neurophysiology. He arrived at Berkeley as a postdoc, planning to study the neurobiology of the leech. Here, however, his interests were redirected to developmental biology, and the question of how changes in developmental mechanisms have given rise to the remarkable diversity of present-day animals. The diversity of peoples and their cultures fascinates him. Professor Weisblat also enjoys cycling, native plants gardening, various crafts, languages, sailing, cooking & eating.

Molecular and Cell Biology 90D, Section 1
These Viruses that Make Us Sick (1 unit, P/NP)
Professor Laurent Coscoy
Friday 11:00-12:00, 41 Haviland Hall, CCN: 57844

The medical consequences of viral infections of humans have altered our history and have resulted in extraordinary efforts on the part of the virologist to study, understand and eradicate these agents. Content will address viral discoveries, mechanisms of diseases and vaccines. **This seminar is open to all freshmen interested in life sciences. A background in high school biology will be useful; AP biology is particularly appropriate preparation for the material we will cover.**

Laurent Coscoy is an Assistant Professor in the Department of Molecular and Cell Biology. He completed his Ph.D. degree at the Pasteur Institute in Paris, France, and his postdoctoral training at the University of California in San Francisco, USA. His laboratory is interested in understanding how viruses modulate the host-cell environment to escape the immune response of their hosts.

Molecular and Cell Biology 90E, Section 1
Readings in and around "The Female Brain," by Louann Brizendine (1 unit, P/NP)
Professor Walter Freeman
Monday 12:00-1:00, 189 Dwinelle Hall, CCN: 57847

"...pioneering neuropsychiatrist Louann Brizendine, M.D., brings together the latest findings to show how the unique structure of the female brain determines how women think, what they value, how they communicate, and who they love. While doing research as a medical student at Yale and then as a resident and faculty member at Harvard, Brizendine discovered that almost all of the clinical data in neurology, psychology, and neurobiology focused exclusively on males. In response to the need for information on the female mind, Brizendine established the first clinic in the country to study and treat women's brain function. In The Female Brain, Dr. Brizendine distills her findings and the latest information from the scientific community in a highly accessible book that educates women about their unique brain/body/behavior." (From the Publisher's Description, Amazon) Dr. Brizendine's research and book will be the focus of our discussions about the female brain in this freshman seminar.

Walter J Freeman studied physics and mathematics at M.I.T., English and philosophy at the University of Chicago, medicine at Yale University, internal medicine at Johns Hopkins, and neurophysiology at UCLA. He has taught brain science in the University of California at Berkeley since 1959, where he is Professor of the Graduate School.

Molecular and Cell Biology 90E, Section 2
Music, Mind, Brain (1 unit, P/NP)
Senior Lecturer David E. Presti
Wednesday 3:00-4:00, 2319 Tolman Hall, CCN: 57850

Music has a deep and mysterious impact on the human psyche and on human behavior. This seminar will explore music, the brain, the human mind, and how they are related. Content will range from the biophysics of sound sensation and the neurophysiology of auditory perception to an exploration of the evolution of music, from its roots to modern genres.

David Presti has taught neuroscience in the Department of Molecular and Cell Biology for eighteen years. He also teaches neuroscience to Tibetan monks in India and is interested in how science can address the connection between what we know as the brain and what we call the mind.

Natural Resources 24, Section 2
Global Environment Theme House Freshman Seminar (1 unit, P/NP)
Professors James Bartolome and Rachel Morello-Frosch
Thursday 5:00-6:00, Foothill 4 - Classroom A (4301 Foothill 4), CCN: 61306

After the formal sessions, the professor and students may continue their discussion informally over dinner in the Dining Commons. Food for Thought dining arrangements and field trip arrangements will be discussed in class.

The goal of this Freshman Seminar is to bring students and faculty together to explore issues such as global environmental change, policy and management of natural resources, sustainable rural and urban environments, and environmental leadership. The seminar will provide students and faculty a forum to exchange ideas, challenge one another's thinking, and share experiences in a small group setting. Students will have the opportunity to do research and teach their peers about regional to global environmental issues in preparation for Theme Program field trips and guest speakers. **Course enrollment is restricted to Global Environmental Theme House participants. Obtain CEC from the instructor. This seminar is part of the Food for Thought Seminar Series.**

James Bartolome is a Professor in the Ecosystem Science Division of the Department of Environmental Science, Policy and Management. He received a B.A. in Biology from UC Santa Barbara and a Ph.D. in Wildland Resource Science from UC Berkeley. His research interests are conservation, use and restoration of rangeland ecosystems.

As an environmental health scientist, Professor Rachel Morello-Frosch uses quantitative and community-based participatory research methods to examine socioeconomic and structural drivers of environmental health disparities. The focus of her current work is on the relationship between social inequality, segregation, and health risks from air pollution; the ethical and scientific challenges of chemical biomonitoring and personal exposure assessment; children's environmental health; and the intersection of economic restructuring, environmental justice, and climate change. She is also interested in understanding how environmental health movements reshape scientific thinking and modify regulatory approaches toward addressing environmental health problems.

Near Eastern Studies 24, Section 1
Ancient Egypt at Berkeley: Egyptian Archaeology in the Hearst Museum (1 unit, LG)

Professor Carol Redmount
Tuesday 1:00-2:00, 271 Barrows Hall (first meeting) and Exhibit Gallery in Hearst Museum, CCN: 61415

The first seminar meeting will be on Tuesday, January 27, 2009 in 271 Barrows Hall. Future seminar meeting locations will be announced in the first class.

The Hearst Museum has one of the most important collections of ancient Egyptian artifacts in the United States and the best west of Chicago. Most of the almost 19,000 ancient Egyptian objects in the museum came from excavations undertaken in the early 1900s by George Reisner, with funding provided by Phoebe Apperson Hearst. Only a very tiny fraction of this collection is ever displayed in the museum, due to space constraints. In this seminar, we will examine the background and history of the collection, its housing and treatment in the museum, and various objects from the collection. Students will learn to use various resources of the museum and have the opportunity to work with ancient objects. **First year students with no background in the field are encourage to enroll.**

Carol Redmount is an Associate Professor in the Near Eastern Studies Department. She specializes in the archaeology of Egypt and the southern Levant, and directs the new UC Berkeley excavations at El-Hibeh, a three-thousand-year-old provincial town and cemetery site in Middle Egypt. She began her archaeological fieldwork the summer of her freshman year in college and hasn't stopped excavating since. She first worked in Egypt in 1978 and lived in Cairo for three years in the mid-1980s. She also has taken part in archaeological research in Cyprus, Israel, Jordan, Tunisia, and the United States.

Near Eastern Studies 24, Section 2
Islam and Imaginative Literature: The Making of a Problematic Relation (1 unit, LG)
Professor Muhammad Siddiq
Tuesday 2:00-3:00, 271 Barrows Hall, CCN: 61418

This course explores the status of imaginative literature in Islamic contexts. Beginning with the attitude of the Qur'an towards poetry and poets (which we will compare to the views of Plato and Aristotle on the subject), the course will examine the perimeters of literary expression and the theological constraints placed on it in various phases of Islamic history up to the present. Students are expected to write several short, informal, but analytical essays. In addition, regular attendance and participation in class discussion will figure in determining the overall grade in the course.

Professor Muhammad Siddiq is trained in Comparative Literature with special expertise in Arabic, Hebrew, and English. He is currently working on a project that examines the poetics of Palestine in the works of the major Palestinian poet Mahmoud Darwish.

Near Eastern Studies 24, Section 3
Reading the Gospel of Mark (1 unit, P/NP)
Professor Daniel Boyarin
Tuesday 1:00 - 2:00, 252 Barrows Hall, CCN: 61420

In this course we will read the Gospel of Mark closely. Although the reading will be in English, reference will be made to the original Greek (no Greek background required). Special attention will be paid to literary features of the text and its relationship with Hebrew Scriptures as well.

Daniel Boyarin is the Hermann P. and Sophia Taubman Professor of Talmudic Culture in the Department of Near Eastern Studies. He is also an affiliated member of the Department of Women's Studies, and a member of the core faculty in the minor program in Lesbian, Gay, Bisexual and Transgender Studies. He

has published several books, the most recent of which are Unheroic Conduct: The Rise of Heterosexuality and the Invention of the Jewish Man and A Radical Jew: Paul and the Politics of Identity.

Nuclear Engineering 24, Section 2
Society, Environment, and Nuclear Power (1 unit, P/NP)
Professor Joonhong Ahn
Monday 3:00-4:00, 321 Havilland Hall, CCN: 64006

Lectures and discussions will be made on societal aspects of nuclear power utilization, for such topics as environmental impacts and safety of geologic disposal for radioactive wastes, development of societal agreement, and political, institutional, and historical insights on nuclear power utilization. Keynote lectures by the instructor and invited speakers from outside will be given. Students will select a topic of interest, and contribute to class discussions.

Joonhong Ahn is Professor of Nuclear Engineering at UC Berkeley, where he has taught since 1995. He holds a Ph.D. from UC Berkeley and a D.Eng from the University of Tokyo, where he has recently been named Fellow of the School of Engineering. He teaches undergraduate and graduate courses in radioactive waste management, covering broad aspects of radioactive waste management as well as safety assessment aspects of deep geologic repositories.

Nutritional Sciences and Toxicology 24, Section 1
Classic Asian Martial Arts Movies (1 unit, P/NP)
Professor George Chang
Wednesday 11:00-12:00, Unit Two All Purpose Room, CCN: 64605

This is a Food for Thought Seminar. Students are urged to keep the Wednesday 12:00-1:00 p.m. time slot open for seminar lunches. Unit Two is located at 2650 Haste Street, between College and Bowditch.

Do you like classic Asian martial arts films? Or wonder how Jet Li and Jackie Chan became stars? Or want to see the early work of today's greatest martial arts director? Do you want to see the obscure Japanese movie that inspired the Star Wars films? Then this is the seminar for you. In this seminar you'll view selected films during open hours at the Moffitt Media Center. Then you'll work with four or five other students to lead discussions about certain aspects of these films. We'll start with 'Crouching Tiger, Hidden Dragon,' and then move on to classics such as the 'Seven Samurai,' Jet Li's 'Shaolin Temple,' Bruce Lee's 'Chinese Connection,' Jackie Chan's 'Snake in the Eagle's Shadow,' and Toshiro Mifune's 'Hidden Fortress' (the inspiration for Star Wars). In spring 2009, "Classic Asian Martial Arts Movies" will be held in the Unit 2 All Purpose Room to enhance the living-learning connection in the residence halls. **This seminar is part of the Food for Thought Seminar Series. After seminars, students and faculty can continue their discussions over lunch at the Crossroads Dining Commons.**

Professor Chang received an A.B. in chemistry from Princeton, where he also studied boxing, and a Ph.D. in biochemistry from Cal, where he also studied Tai Chi. He has been a martial arts movie fan for over four decades. In 2005 Professor Chang became the inaugural professor in Cal's new Residential Faculty Program.

Physics 24, Section 1
Everyday Nukes (1 unit, P/NP)
Professor Robert Jacobsen
Wednesday 11:00-12:00, 395 LeConte Hall, CCN: 69441

Food for Thought dining arrangements will be discussed in class.

Nuclear power, nuclear weapons and even the radioisotopes in a smoke detector are surrounded by a host of technical, political and even psychological issues. In this seminar, we'll work through some of these and try to reach our own conclusions about them. What are the tradeoffs in using nuclear power to reduce climate change? What are the benefits, costs and risks of medical nuclear technology? How are decisions about these things made? We'll pick a few topics and investigate them in depth. **No previous physics required. Seminar will involve some reading and web browsing between classes. This seminar is part of the Food for Thought Seminar Series**

Bob Jacobsen is an experimental high-energy physicist and ex-computer engineer. His previous project involved hundreds of physicists and thousands of Linux computers at sites around the world; his next one definitely won't.

Physics 24, Section 2
Physics For The Twenty-first Century (1 unit, P/NP)
Professor Kam-Biu Luk
Tuesday 11:00-12:00, 395 LeConte Hall, CCN: 69444

Physics is commonly considered the foundation of the pyramid of science. Besides revealing how Nature works, advances in physics offer us new tools that are beneficial to the other fields and can have profound impacts on our lives. This course will provide a broad overview of the status and prospects of physics at the beginning of the twenty-first century. **The intended audience would be students who are interested in science and are willling to read articles, and present and discuss current developments in physics.**

Kam-Biu Luk is a professor in the Physics Department. He is an experimentalist in particle physics. His current research interest is in neutrino physics, in particular investigating how neutrinos can transform from one type to the other as they travel.

Physics 24, Section 3
The Big Bang (1 unit, P/NP)
Professor Bernard Sadoulet
Thursday 11:00-12:00, 395 LeConte Hall, CCN: 69446

Food for Thought dining arrangements will be discussed in class.

The following topics will be covered in this seminar: the Big Bang, the synthesis of the elements, the cosmic microwave background radiation, the matter-antimatter asymmetry in the universe, the dark matter puzzle, gravitational collapse and the formation of large-scale structure, the birth and death of stars, planetary systems, the emergence of life, and searching for extraterrestrial intelligence. We will use as our text Stephen Hawking and Leonard Mlodinow's "A Briefer History of Time " (Random House 2005). **Prerequisite: first, a curious mind! In addition, an advanced placement course in physics in high school, or an introductory physics course (7A or 8A, which can be taken concurrently with this course). This seminar is part of the Food for Thought Seminar Series.**

Bernard Sadoulet is a Professor of Physics and was appointed in the Physics Department at Berkeley in 1985. He was a particle physicist at LBNL and at CERN who had the chance of being involved in the discovery of the J/Psi and the W and Z vector bosons (which led to two Nobel Prizes). Professor Sadoulet was the Director of the Center for Particle Astrophysics from 1989 to 2001 and is now Director of the UC Institute of Particle Physics and Cosmology. He is a member of the UC Berkeley Divisional Council of the Academic Senate. His research speciality is Experimental Particle Cosmology, in particular the problem of Dark Matter. His interests include science policy, education, and university

involvement at the service of the community. For more information regarding Professor Sadoulet, please visit his faculty web page at http://physics.berkeley.edu/research/faculty/Sadoulet.html.

Plant and Microbial Biology 24, Section 1
Plants as Sources of Fiber, Food and Fuel (1 unit, P/NP)
Professor Russell Jones
Wednesday 10:00-12:00, 2525 Tolman Hall, CCN: 70318

This seminar will meet for eight weeks on the following dates: January 28; February 18, 25; March 4, 11; April 1, 22 and 29, 2009. Food for Thought dining arrangements will be discussed in class.

There is intense interest and concern about how plants are used for fiber, food and fuel. This course will explore the fundamentals of agriculture and forestry that underpin the production of plants for fiber food and fuel. The course will examine Malthusian ideas about agricultural production as well as large-scale industrial food production, especially the impact of the brewing industry on society. There will be a discussion of contemporary issues surrounding the use of plants as sources of fuel with an emphasis on agriculture and the impact that fuel production is likely to have on the production of food. The Berkeley campus is uniquely placed for a seminar covering these topics and guest speakers from various parts of campus will be invited to present their views on issues of topical interest. Among the speakers I plan to invite are Chris Sommerville, Dan Kammen and David Zilbermann. **This course would be suitable for all freshmen and no science background will be assumed. This seminar is part of the Food for Thought Seminar Series.**

Russell Jones has been a faculty member in Botany/Plant Biology/PMB since 1966 and has taught a wide range of courses including lower-division general biology classes (Biology 1 and Biology 11), upper-division courses (Plant Physiology and Biochemistry) as well as graduate courses in plant physiology and biochemistry. He has previously taught freshman seminars focused on beer and beer making, an area of plant physiology and cell biology that encompasses part of his professional research interests, as well as the historical role of brewing.

Portuguese 24, Section 1
Endangered Cultures and Languages (1 unit, P/NP)
Professor Ana Maria Martinho
Tuesday 2:00-3:00, 106 Mulford Hall, CCN: 86606

In today's world a growing number of cultures are close to extinction or under different sorts of pressure. It is believed that approximately every two weeks a culture disappears with all its knowledge, traditional archives and language. Such loss is in many ways irrecoverable, but there are some groups that are struggling to keep their heritage alive and even to voice it at a global scale. Our course will focus on such positive approaches to this reality. We will start by drawing a general picture of the situation at a world scale and will then evolve to a focused discussion of some success stories. Many institutions are working on supporting a sustainable development of indigenous cultures and of minorities namely through local filmmaking and indigenous storytelling. We will therefore take a close look at their work and discuss it in class. The students are asked to actively engage in class discussions and to put forward their own experiences, research and knowledge on this subject, through oral or written testimonies, videos and pictures. A reader with texts and the plan for the course will be provided. Other documents and information will be available online. **This is an Equity and Inclusion Theme seminar.**

Ana Maria Martinho was born in Portugal and has also lived in the US before 2006 and in Africa for short-term stays. She is since July 2006 an Assistant Professor in the Department of Spanish and Portuguese where she teaches at undergraduate and graduate levels. She offers courses like "Ethnography and Literature." "Nation and Gender in Africa and Brazil," "Colonial History," and "Culture Media and Politics in Lusophone Countries." Her main interests are Portuguese and Luso-African Cultures and

Literatures; Education and Development in Africa; Atlantic Cultures; African Diaspora and Emigration. She travels frequently to Africa and has worked with universities across the world, from Mozambique to South Africa, Thailand, Australia, Venezuela and Brazil. Currently she has projects in Guiné-Bissau and Angola in the fields of Education & Development and Higher Education. She has also an extensive cooperation record of working with non-profit organizations and governmental offices (EU - Belgium; Foreign Affairs Ministry-Portugal) as a consultant, evaluator or collaborator in training and project planning. She has published extensively and is currently preparing the publication of a book on Luso-African cultures and literatures. She plans to do fieldwork in Angola, Cabo Verde and Guiné-Bissau in 2009.

Psychology 24, Section 1
Brokeback Mountain: Psychological Study of an Ang Lee Film (1 unit, P/NP)
Professor Mary Main and Dr. Erik Hesse
Wednesday 5:00-6:00, 3105 Tolman Hall (The Beach Room), CCN: 74074

This psychology seminar will be held in the Beach Room in Tolman Hall, which is used for faculty meetings, special lectures, and courses–like this one–requiring an LCD projector for film. All but two meetings will be one hour in length. Two meetings, however, will be three hours in length, allowing us to view the entire two-hour film as well as having time for immediate discussion. These two longer meetings (5 to 8 pm) are scheduled for Wednesday January 28 and for Wednesday February 11. The instructors will provide food and beverages for these two meetings.

This year the On the Same Page program is celebrating the films of Ang Lee, and instructors in all departments have been encouraged to teach a course focusing on one of his films. We have selected "Brokeback Mountain" from among his many outstanding works because of its special relevance to the psychology of romantic, long-lasting relationships, and how they may transcend gender and culture. "Brokeback Mountain" involves a complex romantic and sexual relationship between two Wyoming men, who meet as cowboys in 1963. The relationship spans a period of twenty years, during which time both men get married and have children, while maintaining their intensive and seemingly unbreakable love for each other through infrequent visits set in the high country of the west. This film provides an opportunity to consider the meaning of love from a wide vista. In addition, we will consider the directorship of Ang Lee, which Annie Proulx described as going well beyond her original Pulitzer-nominated short story; the screenplay; and the several actors who, under Lee's direction, deliver stunning psychological portraits of unforgettable complexity and subtlety. The "trailer" for Brokeback Mountain can be found on the web, and may assist students wanting to learn more about film content. Meetings will generally consist of discussion of the short story, the screenplay and the film, and timely attendance at and active and informed participation in these discussions is the sole requirement for students. **This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.**

Mary Main is a Professor in Psychology specializing in the field of human attachments. She is known for discoveries relating to the presence and continuing effects of early attachments (parent-child relationships) in adulthood.

Erik Hesse is a Lecturer in Psychology who also specializes in the field of human attachment. He is known for discoveries related to identifying the after-effects of untoward experiences, such as early loss of parents and other attachment-related trauma.

Public Health 24, Section 1
Women, Weight and Food (1 unit, P/NP)
Professor Barbara Abrams
Tuesday 9:30-11:00, 111 Haviland Hall, CCN: 75502

This seminar will meet for ten weeks, beginning January 20, 2009 and ending April 7, 2009. The seminar will not meet on March 17 and 24, 2009.

The United States combines the most abundant food supply in the history of the world with a cultural obsession with thinness and perfection that affects women's body images, sexuality, and sense of power. In this seminar, we will study these relationships from medical, public health, cultural, social, historical, economic, psychological and political perspectives. Topics include food, physical activity, psychological health, obesity and eating disorders, the effectiveness and drawbacks of various dieting regimens, views of beauty, eating and weight in different subcultures, cultures and societies, the food industry and social messages underlying media advertising. Through readings, discussion and experiential exercises, we will attempt to arrive at a definition of healthy weight and strategies for healthy eating for women. **Enrollment is limited to twelve students.**

Dr. Abrams is a Professor of Public Health. She teaches courses in epidemiology, nutrition, maternal and child health and women's health. Prior to teaching at UC Berkeley, she worked as a nutritionist and taught in the Department of Obstetrics, Gynecology and Reproductive Sciences at UC San Francisco. Her research focuses on the relationship between maternal nutrition health outcomes for women, particularly during pregnancy, postpartum, and menopause. She also recently conducted a study that addresses the prevention of HIV transmission from mother to child.

Rhetoric 24, Section 1
The Rhetoric of Almost Everything (1 unit, P/NP)
Professor Thomas O. Sloane
Tuesday 9:00-11:00, 7415 Dwinelle Hall, CCN: 77860

This seminar will meet for eight weeks on the following dates: January 20, January 27, February 3, February 10, February 17, February 24, March 3 and March 10, 2009.

This seminar is an introduction to the elements of rhetorical analysis: how to analyze anything from politics to poetry and beyond. Most reading materials will be available online. Credit will depend upon regular class participation, short oral reports, and a final two-paragraph written summary. **This course is designed for students with varied interests–politics, English literature, history, music, architecture, ad inf. (almost).**

Emeritus Professor Thomas O. Sloane has been at Berkeley since 1968. He has published extensively on rhetoric and humanism, and served as the editor-in-chief of the recent Encyclopedia of Rhetoric for Oxford University Press.

Rhetoric 24, Section 2
Arguing with Judge Judy: Popular "Logic" on TV Judge Shows (1 unit, LG)
Professor Daniel F. Melia
Friday 11:00-12:00, 204 Dwinelle Hall, CCN: 77862

Food for Thought dining arrangements will be discussed in class.

TV "Judge" shows have become extremely popular in the last 3-5 years. A fascinating aspect of these shows from a rhetorical point of view is the number of arguments made by the litigants that are utterly illogical, or perversions of standard logic, and yet are used over and over again. For example, when asked "Did you hit the plaintiff?" respondents often say, "If I woulda hit him, he'd be dead!" This reply avoids answering "yes" or "no" by presenting a perverted form of the logical strategy called "a fortiori" argument ["from the stronger"] in Latin. The seminar will be concerned with identifying such apparently popular logical fallacies on "Judge Judy" and "The People's Court" and discussing why such strategies are so widespread. It is NOT a course about law or "legal reasoning." **Students who are interested in logic, public disputation, argumentation, and popular notions of fairness will**

probably be interested in this course. This is NOT a law course or even a pre-law course. This seminar is part of the Food for Thought Seminar Series.

Professor Melia belongs to the Rhetoric department and the Program in Celtic Studies. His scholarly interests include Classical rhetorical theory, oral discourse, and medieval Celtic literature and languages. His recent publications concern Aristotle and orality and the forms of early Irish poetry. He is a former Jeopardy! champion.

Rhetoric 24, Section 3
Chaucer and the Man of Law's Tale (1 unit, LG)
Professor Marianne Constable
Wednesday 4:00-6:00, 7415 Dwinelle Hall, CCN: 78319

This seminar will meet for eight weeks, beginning January 21, 2009 and ending March 18, 2009. This seminar will not meet on February 25.

Read Chaucer's Canterbury Tales for fun! Learn something about the history of the English language. Learn what it means to read rhetorically. And learn a little about law and legal discourse. At the first seminar meeting, there will be a handout and we will go over lines 1-42 and 309-330 of the Prologue. We will then begin with the Man of Law's Tale and see how far we get into the other Tales. The seminar will be as much like a reading group as possible, following the group's interests and pace in discussion and reading. Regular attendance and participation will be required. Students taking the course for a grade will have a short paper due after the class ends. **I would like students interested in doing close reading. No previous exposure to Chaucer (or to formal law or legal studies) is required. Enrollment priority will be given to students who attend on the first day.**

Marianne Constable is a Professor of Rhetoric. She specializes in legal rhetoric and philosophy and thinks it might be fun to teach something different. She regularly works with undergraduate research apprentices and won an undergraduate research mentoring award in the humanities.

Rhetoric 24, Section 4
Prosecuting Genocide and Crimes against Humanity at International Tribunals (1 unit, LG)
Professor David Cohen
Thursday 10:00-12:00, 7415 Dwinelle Hall, CCN: 78322

This seminar will meet the whole semester but have various weeks off to prepare for longer assignments.

Our seminar will examine the development of the new war crimes tribunal established by the UN and the Cambodian government to provide justice for victims of the Khmer Rouge Genocide (1975-79). We will examine the genocide itself, the years of negotiation that led to the creation of the court, and the challenges facing this "hybrid" national/international institution as it prepares for it first trial, which is scheduled to begin in March 2009. We will also read materials about other international tribunals for comparative analysis.

David Cohen is the Director of the Berkeley War Crimes Studies Center. The Center engages in research programs on war crimes and human rights trials from World War II to today. The Center also monitors trials and conducts judicial training programs for war crimes and human rights tribunals in Sierra Leone, Rwanda, East Timor, Cambodia, and Indonesia.

Spanish 24, Section 1
Talking Funny: Language Variation in Spanish and English Literary Texts (1 unit, LG)

Professor Milton Azevedo
Tuesday 11:00-12:00, 106 Dwinelle Hall, CCN: 86172

This seminar analyzes language through the literary representation of regional and social varieties of Spanish and English (as in Mark Twain's Adventures of Huckleberry Finn or Guillermo Cabrera Infante's Tres Tristes Tigres) and discusses social and cultural implications of language variation. It is taught in English with readings in both English and Spanish. Regular class attendance is a strict requirement, and grades will be based on required participation in class discussions and a final oral presentation on an individual project. The reader will be available at the Copy Central on 2560 Bancroft Avenue. **The ability to read and understand spoken Spanish is essential to follow this course successfully. PLEASE NOTE: THIS IS NOT A CONVERSATION COURSE. Students interested in taking a course focusing on conversation or otherwise improving their ability to speak Spanish should see the Undergraduate Assistant in the Department of Spanish and Portuguese.**

Professor Milton Azevedo specializes in Hispanic Linguistics and his research focuses on applications of linguistics to literature. He has taught Freshman Seminars since spring 1999.

Spanish 24, Section 2
REVOLUTION! Latin American Cinema (1 unit, P/NP)
Professor Natalia Brizuela
Wednesday 2:00-3:00, 123 Dwinelle Hall, CCN: 86175

Food for Thought dining arrangements will be discussed in class.

This course will explore the cultural and political significance of film analysis through a close reading of representative Latin American films from the 1960's and 1970's. During this period of social and political revolt, film was deemed an instrument of change, and underwent some of the most radical, challenging and interesting changes in its still short life. We will watch and discuss a number of feature and documentary films produced during this period that deploy the experimental poetics and politics of the "national popular" (and its critique) in Cuban "nuevo cine," Brazilian "cinema novo," and parallel manifestations in Argentina and Bolivia. We will also learn some fundamental film language to help us not only better discuss the films but also understand the radical nature of these films' propositions. **The films to be viewed all have subtitles. No knowledge of Spanish is necessary, although always welcome. This seminar is part of the Food for Thought Seminar Series and is an Equity and Inclusion Theme seminar.**

Natalia Brizuela is Assistant Professor of Latin American literatures and cultures. Author of a number of essays on topics ranging from gender and sexuality, photography and State formations, visual culture and poetry, travel narratives, and the essay genre, she has completed a book-length manuscript on photography and the field of cultural-political production in nineteenth-century Brazil as well as an edited volume of critical essays on Argentine avant-garde escritor maldito Osvaldo Lamborghini. Professor Brizuela's areas of research lie at the intersection of Latin American literature and visual technologies/new media. Specializing in Argentine, Brazilian and Chilean literature and culture, her current work is interested in articulating relationships between regimes and devices of vision -in particular photography and film- and the field of literary production in the nineteenth and twentieth centuries.

Theater, Dance, and Performance Studies 24, Section 1
Underworlds: Interwar Images of Organized Crime in American and European Theatre and Cinema (1 unit, P/NP)
Professor Mel Gordon
Wednesday 4:00-6:00, 30 Dwinelle Hall, CCN: 88041

Much of what American and European audiences understood about each other's cultures in the 1920s and 1930s was through a mutual and sustained interest in criminality and gangland activities. Popular entertainment, during the Prohibition and Depression eras, featured lawlessness and organized violence among the urbanized underclasses as a mirror-like reflection of the social and political struggle in their respective nations. This course will analyze the performed presentations of outlaw behavior during the interwar period and how they portrayed unique national aspirations and communal identities. It will focus on crime dramas that played out in the immigrant communities of New York, Chicago, Berlin, Paris, and London. Topics will include underworld codes of honor, the role of the New Woman, legalized injustice, assimilation and success, and the proper ethics of Capitalist competition. Students will be graded on attendance, classroom participation, and one paper.

Professor Mel Gordon is the author of fourteen books on acting, theatre, and popular culture. He has worked on Broadway and in Hollywood as a writer, director, and historical consultant.

Theater, Dance, and Performance Studies 24, Section 2
Kung-Fu and Cowboy Flicks Redux: Ang Lee's Films as Genre Revisionism (1 unit, P/NP)
Professor Abigail De Kosnik
Tuesday 12:00-2:00, 340 Moffitt Library - Berkeley Center for New Media (BCNM) Commons, CCN: 88348

This seminar will meet for eight weeks, beginning January 20, 2009 and ending March 10, 2009.

This freshman seminar will examine four of Ang Lee's films as experimentations and revisions of well-established cinematic genres. The films (and genres) we will discuss are The Wedding Banquet (romantic comedy), The Ice Storm (family drama), Crouching Tiger Hidden Dragon (martial arts/kung-fu), and Brokeback Mountain (cowboy/western). We will talk about how these films reinforce, defy, expand, and/or reject the conventions of genre movies, and ask what Lee's body of work means for the future of film narrative and cinematic style. By looking to the past for inspiration with a revisionist eye, what challenge is Lee presenting to future filmmakers? **Students who are "cinephiles," i.e. avid moviegoers who have watched a great deal of film and can talk about cinema from many different periods, are highly desirable for this seminar. However, there are no prerequisites. This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.**

Abigail De Kosnik is an Assistant Professor in the Berkeley Center for New Media and the Department of Theater, Dance & Performance Studies. Her research and teaching focuses on issues of digital culture and technology, especially as they relate to minority discourse, cultural studies, and popular film and TV. She also produces "media theater," which combines digital media with live performance.

Vision Science 24, Section 1
The Human Eye (1 unit, P/NP)
Professor Richard C. Van Sluyters
Friday 2:00-4:00, 394 Minor Hall, CCN: 66403

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 standard clinical instruments to view the exterior and interior of the eye will be demonstrated. Students will then employ these instruments to observe one another's eyes. Digital images of the iris will be captured and provided to each student. Examples of the 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?

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.

Vision Science 24, Section 2
Myths, Mysteries and Discoveries in Medicine (1 unit, P/NP)
Professor Patsy Harvey
Thursday 2:00-3:30, 394 Minor Hall, CCN: 66406

This seminar will meet the first ten weeks of the semester.

Throughout the centuries, people sought to understand the reasons for diseases 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 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.

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.

Anthropology 84, Section 1
Race, Gender, and Social Life in Colonial Honduras: Reading over the Shoulder of People in the Past (1 unit, LG)
Professor Rosemary Joyce
Thursday 11:00-12:00, Room 101 2251 College Ave, CCN: 02518

This seminar introduces students to how we learn about people in the past through the use of archival documents. Working with digital copies of documents from the colonial Spanish archives in Sevilla, Spain, Guatemala, and Comayagua, Honduras, we will "read over the shoulder" of the writers whose words form one of our most immediate links to Spanish colonial Honduran life. Students will learn how to locate archival documents online; how to read colonial handwriting; and how we can begin to understand more about society from even brief documents, like receipts for serving as a courier. Working together, we will discuss several longer documents about the lives of native Americans who were obliged to work for Spanish citizens and petitioned for relief, about free black residents of a military fort, and about illegal trade in sugar, rum, and tobacco. Knowledge of Spanish will allow students to gain the most from this seminar. **This course is ideal for students interested in Latin American history, ethnic studies, or Central America, past and present, as well as those who simply want to learn how researchers use original documents. Because the documents under examination are in Spanish, those with Spanish language skill will be able to do more with the original documents. Non-Spanish-reading students will, however, be able to work with English translations that will also be discussed.**

Rosemary Joyce is an anthropological archaeologist whose fieldwork takes place in Honduras, ranging from the earliest villages (ca. 1500 BC) to the colonial period that began 3000 years later. Her current research project explores the archaeology of eighteenth-century Fort Omoa, on the Caribbean coast, where native Americans and people of African descent were engaged in the project of mutual defense of the Honduran colony against pirates and the British.

Astronomy 84, Section 1
The Restless Universe (1 unit, P/NP)
Professor Jonathan Arons
Thursday 10:00-11:00, 501 Campbell Hall, CCN: 06660

The Universe began in fire, 14 billion years ago. It will end in ice, self-repelled by mysterious "dark energy." In between, dark and ordinary matter collapsed into galaxies; galaxies cannibalized each other; giant black holes formed and merged in galaxies' centers, powering spectacular intergalactic jets; ordinary matter in galaxies collapsed into stars; stars exploded, spewing out the elements from which we are made; neutron stars and black holes, the collapsed remnants of the stars that made the heavier elements, create their own spectacular displays through accelerating ultra-high energy charged particles; gas in galaxies collapses to form stars; gas and dust around newly formed stars collapses to form planets; and rocky fragments left over from planet formation bombard newly formed planets, affecting the conditions for life to form. We will investigate and discuss some of these varied responses of matter to the force of gravity, through readings and study projects. The choice of topics will somewhat reflect the interests of the class. Some background in physics (Physics 7A) will be needed, and previous or concurrent exposure to astrophysics (Astronomy 7A and/or 7B) will be helpful. **Please e-mail a couple of paragraphs on your background, why you want to take the class and any preferences you may have**

on the topics to be covered to the professor (arons@astro.berkeley.edu) before the first day of class.

I am a professor of theoretical astrophysics and plasma physics in the Astronomy Department and the Physics Department at UC Berkeley. I am also a member of the Theoretical Astrophysics Center. Aside from my professional life as a teacher and researcher in Astrophysics and Plasma Physics, I am deeply involved with playing the 'cello, primarily in chamber music groups.

I was born in Philadelphia, Pennsylvania on August 16, 1943, and lived there for 18 years; I received my B.A. in Physics from Williams College in 1965 and my Ph. D. in Astronomy from Harvard University in 1970. I was a postdoctoral Fellow at the Princeton University Observatory and the Institute for Advanced Study for two years before coming to Berkeley in 1972.

I am fascinated by the physics of compact astrophysical objects, especially neutron stars. I am intrigued by the bizarre behavior of fully ionized plasmas, which mix long-range electromagnetic forces with kinetic particle behavior. I merge these interests by studying the magnetospheres of neutron stars and their interactions with their environs, and their role in the acceleration of the highest energy cosmic rays. I also have interests in the magnetized accretion disks around black holes, whose physics has similarities to that of the outflows from rotation powered pulsars. In a new adventure, I am studying the interactions between stellar magnetic fields and the recently discovered planets around nearby solar type stars.

English 84, Section 1
High Culture, Low Culture: Film Genres and the Cinema of Ang Lee (2 units, P/NP)
Professor Julia Bader
Thursday 2:00-5:00, 300 Wheeler Hall, CCN: 28171

The course will examine the formal techniques, expectations, experiences and thematic concerns of some of Ang Lee's films, in the context of Hollywood and foreign films. We will also take advantage of the resources of Cal Performances and the Pacific Film Archive. **This seminar is part of the On the Same Page initiative: http://onthesamepage.berkeley.edu.**This seminar may be used to satisfy the Arts and Literature requirement in Letters and Science.

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

English 84, Section 2
Human Relationships in Literature, Art, and Culture (1 unit, P/NP)
Dr. Craig Buckwald
Wednesday 4:00-5:00, 202 Wheeler Hall, CCN: 28173

What do literature, art, and other cultural productions have to say about personal and social relationships—arrangements that are often central to our debates, with ourselves and others, about who we are and what we should do?

This course will allow students to begin answering this question with respect to a diverse group of influential and provocative texts from the ancient world to the present. Specifically, we will ask What is really going on in a given relationship? What is the relationship's place in the big scheme of things? And what cultural ideas and values underlie, or are challenged by, the way the text presents the relationship?

Emphasizing close reading and close discussion rather than a lot of reading, this course is meant equally for those with a particular interest in the above-mentioned subject, and for those simply wishing to gain more experience analyzing how a poem, painting, popular film, or other creative or non-creative piece works.

Our reading/viewing/listening list will be subject to some modification depending on the interests of seminar members. But it will include two short books—John Berger's Ways of Seeing and Freud's Five Lectures on Psycho-Analysis—plus a course reader with manageable excerpts or pieces from Homer, Marie de France, Chaucer, Milton, Keats, Marx, Christina Rossetti, and perhaps a few others. To end the semester, we will all watch a Hollywood film, listen to some contemporary music, or experience some other high-profile production of popular culture.

Requirements: Regular attendance and participation, a paragraph offering observations and/or engaged questions brought to each meeting, and shared responsibility with a few others to lead a portion of one class.

Dr. Buckwald has research and teaching interests in nineteenth- and twentieth-century British literature and culture, literature and the arts, and the epic (classical to modern), among other areas. He has taught at UC Berkeley and Stanford.

English 84, Section 3
Reading Walden Carefully (1 unit, P/NP)
Professor Mitchell Breitwieser
Monday 3:00-4:00, 109 Wheeler Hall, CCN: 28765

We will read Thoreau's Walden in small chunks, probably about thirty pages per week. This will allow us time to dwell upon the complexities of a book that is much more mysterious than those who have read the book casually, or those who have only heard about it, realize. We will also try to work some with online versions of the book, using the wordsearch command to identify words such as "woodchuck" or "dimple" that reappear frequently, in order to speculate on patterns Thoreau is trying to establish. Regular attendance and participation, along with a loose five-page essay at the end, are required.

Mitchell Breitwieser has taught American literature in the Berkeley English department for twenty-nine years.

Environmental Sciences 84, Section 1
Discussions and Investigations of Campus Issues in Sustainability (1 unit, LG)
Professor William Berry
Wednesday 4:00-5:00, 55A McCone, CCN: 30627

There are a number of on-going campus programs on sustainability that include the climate change initiative, the planning of green buildings, issues in waste disposal, and the green room and suite. We will become familiar with these projects and take part in one or two of them. Students working on local environmental issues and those considering joining a student environmental issue group are encouraged to join the discussion to share their experiences. **Students may be able to earn 2 units. Talk to Professor Berry for details.**

Professor Berry teaches a number of courses in basic environmental science and has both research and teaching programs in impacts of climate change on environmental changes and on biodiversity. He directs an internship program in which students assist Bay Area environmental science teachers.

History 84, Section 1
Utopias and Dystopias: Thwarted Ideals (1 unit, P/NP)
Professor Sheldon Rothblatt
Wednesday 3:00-5:00, 3104 Dwinelle Hall, CCN: 39231

This seminar will meet for eight weeks of the semester, beginning January 28 and ending March 18, 2009.

Utopias are perfect communities. Dystopias are ideals gone astray. Western thinkers have long been engaged in imagining perfect societies. The utopian genre goes back to Plato's "Republic," but its more modern history begins with Sir Thomas More in the sixteenth century who coined the word "utopia" to describe an ideal England. Utopias provide startling and frightening perspectives on contemporary societies. We will read four utopian novels, starting with More. We then move to the twentieth century to read Aldous Huxley's totalitarian novel, "Brave new World," and two feminist novels, "Herland" (herland) by Charlotte Perkins Gilman and the brilliant "Woman at the Edge of Time" by Marge Piercy. Lectures, class discussions, oral presentations and two short critical essays. **No prerequisites, but students should enjoy reading original and serious novels that refer to twentieth-century social and political history.**

Sheldon Rothblatt is Professor Emeritus of History, UC Berkeley. His scholarly areas are Modern Britain and Modern Europe. He is former chair of the Department of History and former Director of the Center for Studies in Higher Education on the Berkeley campus. He was also the first Dean of Freshman and Sophomore Studies in the College of Letters and Science. He is a Fellow of the Royal Historical Society of Britain and a Foreign Member of the Royal Swedish Academy of Sciences.

Natural Resources 84, Section 1
Global Environment Theme House Sophomore Seminar (1 unit, P/NP)
Professors Rachel Morello-Frosch and James Bartolome
Thursday 5:00-6:00, Foothill 4 - Classroom A (4301 Foothill 4), CCN: 61309

After the formal sessions, the professor and students may continue their discussion informally over dinner in the Dining Commons. Food for Thought dining arrangements and field trip arrangements will be discussed in class.

The goal of this Sophomore Seminar is to bring students and faculty together to explore issues such as global environmental change, policy and management of natural resources, sustainable rural and urban environments, and environmental leadership. The seminar will provide students and faculty a forum to exchange ideas, challenge one another's thinking, and share experiences in a small group setting. Students will have the opportunity to do research and teach their peers about regional to global environmental issues in preparation for Theme Program field trips and guest speakers. **Course enrollment is restricted to Global Environmental Theme House participants. Obtain CEC from the instructor. This seminar is part of the Food for Thought Seminar Series.**

As an environmental health scientist, Professor Rachel Morello-Frosch uses quantitative and community-based participatory research methods to examine socioeconomic and structural drivers of environmental health disparities. The focus of her current work is on the relationship between social inequality, segregation, and health risks from air pollution; the ethical and scientific challenges of chemical biomonitoring and personal exposure assessment; children's environmental health; and the intersection of economic restructuring, environmental justice, and climate change. She is also interested in understanding how environmental health movements reshape scientific thinking and modify regulatory approaches toward addressing environmental health problems.

James Bartolome is a Professor in the Ecosystem Science Division of the Department of Environmental Science, Policy and Management. He received a B.A. in Biology from UC Santa Barbara and a Ph.D. in Wildland Resource Science from UC Berkeley. His research interests are conservation, use and restoration of rangeland ecosystems.

Optometry 84, Section 1
Stewardship of the Earth and Its Peoples: A Sixty-Year Perspective (1 unit, P/NP)

Professor Stanley Klein
Monday 2:00-3:00, 394 Minor Hall, CCN: 65506

This seminar examines current problems facing our planet and its inhabitants and seeks to learn how society can find solutions. The number sixty in the title of the seminar was chosen because the students taking the course will, on average, live an additional sixty years that could be devoted to stewardship of the Earth.

In the first two weeks seminar members will discuss and prioritize ecological and other well-being problems that are likely to face the Earth and its peoples during the next sixty years. The remainder of the seminar will be devoted to examining what resources are available on the Berkeley campus and surrounding region that are relevant to these problems. We will discuss how Berkeley area resources could be brought together for solving some of these important problems. Both practical considerations and utopian long range visions will be included. There will be readings from Berkeley area authors, from Paul Hawken's amazing book "Sacred Unrest" and from current news articles. The seminar grade will be based on class participation.

Professor Stanley Klein received his Ph.D. and Masters in Physics from Brandeis University. He currently teaches at the UC Berkeley School of Optometry. His fields of expertise include modeling of spatial vision and its application in image compression, non-linear systems analysis, and corneal topography and contact lens design. For further information, please visit his website at cornea.berkeley.edu.

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. Most of these courses fulfill Letters and Science breadth requirements; 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.

Comparative Literature 41C, Section 1
Tragedy and Novel (4 units, LG)
Mr. Paul Haacke
Tuesday & Thursday 9:30 - 11:00, 20 Wheeler Hall, CCN: 17278

In contrast to traditional theories of the modern novel, which consider its origins in the ancient epic, this course will examine how novels have both inherited and subverted many of the time-honored conventions of tragedy. We will start with Aristotle's key concepts of the genre (mimesis and plot, empathy and terror, recognition and reversal, character and error) and examples of tragic drama by Sophocles and Euripides. For the rest of the semester we will consider how tragic concepts, methods and themes have been developed and transformed in novels more often categorized in terms of the gothic, science fiction, romanticism, realism, modernism, postmodernism, or post-colonialism. In addition to reading challenging fiction, criticism and philosophy, assignments will include a short diagnostic essay, regular written responses, one mid-term essay, and one final essay.

Paul Haacke is a graduate student instructor in the Department of Comparative Literature at UC Berkeley.

Comparative Literature 41E, Section 1
Documentary Film: Fact and Fiction (4 units, LG)
Ms. Maya Barzalai
MW 4:00 - 5:30, 243 Dwinelle Hall, CCN: 17281

In addition to the seminar discussion meetings on Mondays and Wednesdays from 4:00 - 5:30 p.m. in 243 Dwinelle Hall, this seminar will also meet on Mondays from 2:00 - 4:00 p.m. in 203 Wheeler Hall for film screenings.

The popularity of documentary film has risen greatly over the past decade (witness the success of Fahrenheit 9/11 and The March of the Penguins, among many others), but the genre also has a long history, dating back to the silent films of the 1920s. Discussing films produced largely in the United States and Europe, this course surveys some of the major developments in documentary filmmaking. The course focuses primarily on the ways in which documentary film has been used, from its very inception, to observe the lives of "others," to expose the unbelievable, unrecognized, or darker sides of existence. In traveling to foreign places, but also in scrutinizing their own societies, documentary filmmakers have traditionally laid claim to a more "authentic" and even more critical or ethical mode of viewing societies and conflicts than that offered by fictional film. In this course, we will investigate the cultural and aesthetic codes involved in staging (and, at times, challenging) visual authenticity as well as the major changes that these codes have undergone over time and across continents. How have documentaries announced their truth value in the past, how do they do so today, and what is at stake in the attempt to document the lives of others? Also, how may we account for the presence of fictional elements, suspense, visual excess, and poetic modes within the scope of the documentary?
Class discussion will center on theoretical and formal issues such as the filmmakers' position vis-à-vis their subjects, the degree of self-reflexivity, the manipulation of background information, sound and voice-over, and the use of different shooting and editing techniques. We will also explore the ways in which documentaries are circulated, received, and popularized, taking into account their cultural and legal

ramifications. Course requirements include group presentations and individual responses to the viewings. Final projects should be comparative, examining documentaries across time, place, and/or culture.

Maya Barzalai is a graduate student instructor in the Department of Comparative Literature at UC Berkeley.

Computer Science 39J, Section 1
The Art and Science of Photography: Drawing with Light (2 units, P/NP)
Professor Brian Barsky
Friday 12:00-2:00, 405 Soda Hall, CCN: 26248

On the first day of instruction, go directly to 405 Soda Hall at 12:10.

This seminar explores the art and science of photography. Photographs are created by the control and manipulation of light. We will discuss quality of light for the rendering of tone, texture, shade, shadow, and reflection. The seminar examines the photographic process from light entering the lens through the creation and manipulation of the final image. Some typical topics are composition and patterns, mathematics of perspective projection, refraction, blur, optics of lenses, exposure control, color science, film structure and response, resolution, digital image processing, the human visual system, spatial and color perception, and chemical versus electronic processing. **The seminar is open to freshmen only. Although this seminar is offered through the Computer Science Division, the focus of this seminar is not computer science. The focus of this seminar is photography, and it is not limited to digital photography but embraces also film photography. Students should have experience using a camera with manual control of exposure and focus and that either has interchangeable lenses of different focal lengths or has a zoom lens. Students must have such a camera to complete the course assignments. Ideally, students should have access to both a film camera and a digital camera. It is helpful, but not essential, for students to have an interest in science (at least chemistry and physics). Class assignments will be based on color slides, prints, and digital images. Although print film assignments are welcome, the darkroom facilities are outside the control of the class. Student work will be critiqued in class. Participation and attendance at all classes and other course-related activities is required to receive a "pass" grade, except for prior arrangement with the instructor or documented emergencies. Committee Education Policy states that faculty may decline to enroll students in a class who cannot be present at all scheduled activities. To read an interesting article about this seminar, please see http://inst.eecs.berkeley.edu/~cs39j/fa06/engnews/http://inst.EECS.Berkeley.EDU/~cs39j/ This seminar is part of the Food for Thought Seminar Series.**

Brian Barsky received his Ph.D. from the University of Utah in Computer Science and joined the UC Berkeley faculty in 1981. His research interests are CAD/CAM, computer-aided geometric design and modeling, computer graphics, geometric modeling, visualization in scientific computing, and computer-aided cornea modeling and visualization.

Computer Science 39K, Section 1
Information Technology Goes to War! (2 units, P/NP)
Professor Randy H. Katz
Wednesday 4:00-6:00, 310 Soda Hall, CCN: 26251

Necessity drives invention. In this seminar, we will examine the intertwined historical development of information technology, broadly defined as computing, communications, and signal processing, in the twentieth century within the context of modern warfare and national defense. Topics include cryptography/cryptanalysis and the development of the computer; command and control systems and the development of the Internet; the war of attrition and the development of the mathematics of operations

research; military communications and the development of the cellular telephone system; precision munitions and the development of the Global Positioning System. While we will endeavor to explain these developments in technical terms at a tutorial level, our main focus is to engage the students in the historical sweep of technical development and innovation as driven by national needs, and discuss whether this represents a continuing framework for the twenty-first century. **This course requires NO background in information technology or computer science–ANY freshman or sophomore student at Berkeley has the necessary technical background. An interest in military affairs, economics, politics, history, and/or technology is essential. This is not a lecture class–class meetings are organized around live play where students form teams and interact with each other to illustrate the concepts to be discussed. A desire to participate and "play along" is important–no "wall flowers" please!**This seminar may be used to satisfy the Historical Studies requirement in Letters and Science.

Randy Howard Katz received his undergraduate degree from Cornell University, and his M.S. and Ph.D. degrees from the University of California, Berkeley. He also holds a Doctor of Philosophy degree (Honoris Causa) from the University of Helsinki. In 1983 Katz joined the faculty of UC Berkeley, where he is currently the United Microelectronics Corporation Distinguished Professor in Electrical Engineering and Computer Science. He is a Fellow of the ACM and the IEEE, and a member of the National Academy of Engineering and the American Academy of Arts and Sciences. He has published over 250 refereed technical papers, book chapters, and books. His introductory computer engineering textbook, Contemporary Logic Design, for which he received the ASEE Frederic E. Terman Award, has been used at over 200 colleges and universities. He has supervised forty-five M.S. theses and thirty-nine Ph.D. dissertations (including one ACM Dissertation Award winner and nine women). His recognitions include thirteen best paper awards, three best presentation awards, the Diane McIntyre Distinguished Teaching Award, the Berkeley Distinguished Teaching Award, the ACM Karl V. Karlstrom Outstanding Educator Award, the Outstanding Alumni Award (Berkeley Computer Science Division), the CRA Outstanding Service Award, the Air Force Exceptional Civilian Service Decoration, and the IEEE Reynolds Johnson Information Storage Award. In the late 1980s, with colleagues at Berkeley, he developed Redundant Arrays of Inexpensive Disks (RAID), a $15 billion per year industry sector. While on leave for government service in 1993-1994, he established whitehouse.gov and connected the White House to the Internet. His current research interests are the design of large-scale Internet Datacenters.

Earth and Planetary Science 39A
Geological Influences in California Society Today (2 units, LG)
Professor Richard Allen
Monday 4:00-5:00, 365 McCone Hall, CCN: 19042

Field trip dates Apr 30-May 3, 2009. For additional field trip and meeting schedule details and updates, visit website:
http://seismo.berkeley.edu/~rallen/eps39a

The theme of this course is the influence of geology in California society. The focus is a 4-day field trip to explore California. As a freshman seminar, the class involves close personal interaction between students and faculty. For the interaction to work, it is essential that all enrolled students be prepared for the learning experience and to become engaged as active participants. Toward this end, the field trip is preceded by two or three one-hour lectures and two or three video presentations. Students are expected to attend one logistical meeting prior to the trip. The continuous four-day trip will visit geological and historical localities in various parts of California. Topics emphasized on the trips vary: societal impacts of dams, the Gold Rush, resource conservation, the geology of Yosemite as a national park, water resource issues, volcanic and seismic hazards, and glacial geology. Three nights will be spent camping out. Accordingly, each student will need to bring appropriate gear including a sleeping bag and a tent or make arrangements to share space in a tent. More details on equipment to bring and preparations to make will be supplied at the logistical meetings. **Enrollment is limited to ~60 freshman students with a wait-list of ~10. This course is restricted to freshmen only unless the**

instructors consent is obtained. Any questions about this course should be directed to Prof Richard Allen.

Richard Allen is an Associate Professor in the Department of Earth and Planetary Science. He is a seismologist interested in natural disasters. His research includes the determination and interpretation of earth structure using synthesized seismological techniques, the development of earthquake alarm systems, and assessment of natural hazard mitigation strategies in the US. For more information regarding Professor Allen, visit his faculty website at http://seismo.berkeley.edu/~rallen.

Engineering 39B, Section 1
Introduction to Computational Engineering Science (1.5 units, P/NP)
Professor John Verboncoeur
Tuesday 3:30-5:00, 101 Wheeler Hall, CCN: 27738

This seminar introduces the program in Computational Engineering Science, a multidisciplinary field linking together elements of biology, chemistry, applied mathematics, physics, and all great areas of engineering. The course includes a series of lectures and guest speakers with topics ranging from multidisciplinary real-world projects to introductions to modeling and simulation. Small projects illustrate the progression from problem definition to modeling to simulation to interpretation and comparison with experiment and observation. There are no prerequisites. **Priority is given to Engineering Science students.**

John Verboncoeur is an Associate Professor-in-Residence in the Department of Nuclear Engineering. His research interest is computational physics.

Engineering 39E, Section 1
Engineering in K-12 Math and Science Education (1.5 units, P/NP)
Professor George Johnson and Dr. George Gagnon
Thursday 3:30-5:00, 2525 Tolman Hall, CCN: 27740

This seminar will explore the development and use of engineering-based projects in K-12 science and math education. Students enrolling in this seminar should be interested in pre-college math and science education, and be willing to spend time in local classrooms during the course of the semester. A field placement in a local elementary or middle school will be arranged for each student. Project-based learning is a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks. It is an increasingly popular mode of instruction that takes advantage of students' inherent drive to learn and their capability to do significant work. Students in this seminar will study the basis for this instructional approach, examine the structure of well designed projects, and work in groups to create projects that they will take into local K-12 classrooms.

George Johnson is a Professor in Mechanical Engineering and is co-PI for the Berkeley component of California Teach, a new program aimed at increasing the number of students who enter the fields of math and science teaching at the pre-college level. His research is in the broad area of solid mechanics, with an emphasis on materials characterization. Much of his work focuses on understanding the macroscopic mechanical behavior of materials in terms of the underlying microstructure (grain size, shape, orientation, defect distribution, etc.).

Dr. George W. Gagnon is Director of Cal Pre-Engineering Partnerships (PEP). He received his B.S. Ed. in Elementary Education with an emphasis in math and science in1969, his M.A. Ed. in Elementary Education with an emphasis in reading and writing in 1970, and his Ed.D. in Teacher Education with an emphasis in learning and communications in 1978, from the New School and Center of Teaching and Learning at the University of North Dakota. He has been an elementary and middle school teacher, school principal, teacher educator, and classroom coach for 30 years. His research is on diagnostic assessment, teacher professional development, and constructivist learning.

History 39C, Section 1
The Palestinians (4 units, LG)
Professor Beshara Doumani
Wednesday 2:00-4:00, 204 Dwinelle Hall, CCN: 39224

Who are the Palestinians? When and how did they become a people? And what do their experiences from Ottoman times to the present tell us about the modern world? This seminar introduces students to new scholarship that unsettles nationalist narratives of the past and goes beyond the dramas of war and politics into the social and cultural dimensions of everyday life. Aside from debunking pervasive myths and suggesting fresh perspectives, this innovative scholarship provides important insights about the very practice of producing knowledge through historical research and writing. The overall pedagogical aim of the course is to acquaint students with the skills necessary for critical readings of texts, for constructive debate, and for writing succinct and insightful essays.

This seminar may be used to satisfy the Historical Studies or Social and Behavioral Sciences requirement in Letters and Science.

Beshara Doumani specializes in the social and cultural history of the early modern and modern Middle East. His abiding interest is in recovering the history of communities, places, and time periods that have been silenced or erased by conventional scholarship. His books include Rediscovering Palestine: Merchants and Peasants in Jabal Nablus, 1700-1900; and Family History in the Middle East: Household, Property and Gender (editor).

History 39D, Section 1
Animals in European History (4 units, LG)
Professor Peter Sahlins
Friday 10:00-12:00, 201 Wheeler Hall, CCN: 39939

Drawing from the developing interdisciplinary field of "Animal Studies," this seminar introduces students to a wide variety of historical approaches to the study of animals in history, and, specifically, to human-animal relations in Europe from the Middle Ages to the twentieth century. The seminar explores the philosophical and literary quarrels and debates about the relations of animals and humans against the backdrop of the transformations of European society in the pre-modern and modern period. Topics include animals in the Christian tradition, animals and the Scientific Revolution, animals as entertainment, and the early development of the animal rights movement. In each case, we will read historical documents alongside the work of contemporary historians trying to write a new kind of history of Europe. **European history background not necessary but helpful; students who have studied animals in other fields (life sciences, social sciences) or with relevant work and life experience are encouraged to enroll. The course is not "about" animals in themselves, but about changing social practices and cultural frameworks of human-animal relations in European history.**This seminar may be used to satisfy the Historical Studies or Social and Behavioral Sciences requirement in Letters and Science.

Professor Sahlins has published books about boundaries, forests, foreigners, and the problem of national identity in early modern France. He is currently working on animals and the law in the pre-modern (and post-modern) world.

History 39E, Section 1
The 'Confucian' Classics (4 units, LG)
Professor Michael Nylan
Wednesday 12:00-2:00, 204 Dwinelle Hall, CCN: 39942

This course will first explore the content of the Five 'Confucian' Classics and the Four Books, after which it will examine the history of the reception of those texts and of Confucius himself during the twentieth and twenty-first centuries. **Students who combine an interest in history, politics, philosophy, and ethics are most welcome to the class. The primary source reading for this course is sometimes challenging, so freshman and sophomores who are willing to dig deeply into sources will feel more comfortable in this course.**This seminar may be used to satisfy the Arts and Literature or Historical Studies requirement in Letters and Science.

I have long been interested in the history of Confucianism, a fact demonstrated by numerous publications. In book form, these publications include The Five 'Confucian' Classics, The 'Great Plan' Chapter of the 'Book of Documents', and a forthcoming work, Lives of Confucius (Random House).

Italian Studies 39C, Section 1
"The Idea of a Christian Poet": T. S. Eliot and Dante (1.5 units, P/NP)
Professor Steven Botterill
Thursday 3.30-5:00, 72 Evans, CCN: 47383

The American-born British poet Thomas Stearns Eliot (1888-1965) was the dominant figure in English-language poetry in the middle decades of the twentieth century, and his influence remains considerable today, even though his legacy is increasingly contested by contemporary writers and critics. Eliot's work is pervaded by his interests in religion, literary tradition, and cultural history; and in all these areas he drew deeply on the example of the medieval Italian poet Dante Alighieri (1265-1321), author of the Divine Comedy. In this course we will examine closely the relationship between the greatest poet of the European Middle Ages and (arguably) the greatest of our own time. We will read all Eliot's major poems and some of his minor ones, alongside selections from the Divine Comedy in English translation. We may also look at some of Eliot's own extensive critical writings on Dante, as we seek to understand how religious belief and poetic art come together in the work of both authors to offer an articulate and provocative challenge to the assumptions of an increasingly secular and prosaic culture.

No religious commitment of any kind is required for participation in this course, but students will be expected to have a serious interest in religion as a cultural phenomenon and some experience in the close reading of poetry.

The only requirements for this course are attendance and participation in discussion of the assigned readings; there will be no papers or exams.

Professor Botterill was born in England, and holds bachelor's, master's, and Ph.D. degrees from the University of Cambridge. He has taught Italian literature and culture at Berkeley since 1986. The author of two books and numerous articles on Dante, as well as several articles on other aspects of medieval Italian literature, he is a two-time elected member of the Council of the Dante Society of America, and was editor of the Society's journal, "Dante Studies," from 2003-08. He is currently finishing a book entitled "Dante and the Language of Community" and planning one on Dante's ethics. His interest in Eliot dates back over thirty years, to a high-school production of Eliot's play "Murder in the Cathedral."

Journalism 39H, Section 1
Satellite Radio: Breaking the Bonds of Earth (1.5 units, P/NP)
Professor William J. Drummond
Friday 12:30-2:00, 104 North Gate Hall, CCN: 48006

Dramatic changes have taken place in the listening habits of consumers. Traditional AM and FM radio face a challenge from programming sources literally not of this earth. Satellite radio entered the scene only about five years ago and has made significant inroads. Two services are available: XM and Sirius. Both

services offer a wider selection of music as well as talk and entertainment programming than terrestrial radio. This seminar will listen to and critique satellite radio. Students should be prepared to listen critically and write about their reactions to what they are hearing. The class will also examine other advances in audio technology. The goal is to develop an understanding of market forces in present-day radio programming.

William J. Drummond joined the faculty in 1983 after a career in public radio and newspapers. He continues to produce occasional public radio reports and documentaries. From 1979 to 1983 he worked in Washington for National Public Radio, where he was the first editor of Morning Edition before moving on to become National Security Correspondent. He has produced documentary-length radio programs on a wide range of subjects: Native Americans and welfare reform; jazz diva Betty Carter; Allensworth: the pioneering Negro colony in the California Central Valley; a profile of a psychiatrist whose specialty is interviewing serial killers; the early Jim Crow days in Las Vegas; an examination of why Americans are turned off by the political system; and a look at the tension between Malcolm X and Martin Luther King, as seen through the eyes of youth. His honors include a 1989 citation from the National Association of Black Journalists for "Outstanding Coverage of the Black Condition," the 1991 Jack R. Howard Award for Journalism Excellence, and a 1994 Excellence in Journalism Award from the Society of Professional Journalists' Northern California Chapter for an advanced reporting class experiment in civic journalism. He was a member of the planning committee that created the Public Radio International program The World.

Journalism 39J, Section 2
Covering the Mission District in San Francisco (2 units, LG)
Professor Lydia Chavez
Wednesday 9:00-11:00, 104 North Gate Hall, CCN: 48008

Students will work for missionlocal.org, a web site created by J-school Students to cover San Francisco's Mission District. You will translate articles into Spanish, write short articles in English or collect audio and take photographs for slide shows. This seminar will teach you the importance of local coverage, the importance of community and how to write a news story. You must be willing to spend time in the Mission District. **Students must be fluent in Spanish.**

Lydia Chavez, a former reporter for The New York Times, has written books and articles on affirmative action, Cuba and immigration.

Legal Studies 39B, Section 1
The Nature of Judicial Authority (2 units, LG)
Professor Robert Berring
Wednesday 2:00-4:00, 203 Wheeler Hall, CCN: 51503

We will read several judicial opinions and seek to discover the ways in which courts use authority and craft law. What are the sources of law and how are they used? How can courts create law? We will explore the intersection of law, morality and political pressure. The role of statutes will be included as will some discussion of the Constitution. **This seminar is open to any freshman or sophomore with an interest in the legal system and how judicial decisions are made.**This seminar may be used to satisfy the Social and Behavioral Sciences requirement in Letters and Science.

Professor Robert Berring is a Professor of Law and former Interim Dean at Boalt Hall Law School. He teaches in the areas of legal information, Chinese law, Contracts and Legal eEhics. He has written a series of articles on the nature of legal authority, which he is turning into a book. He is a winner of the University of California's Distinguished Teaching Award. Most spring semesters he teaches an undergraduate course in the Legal Studies Department.

Mathematics 39A, Section 1
Seminar for Teaching Math in Schools (2 units, LG)
Professor Hung-Hsi Wu
Monday 2:00 - 4:00, 45 Evans Hall, CCN: 54202

The course includes a field placement in a local school. Students will have to log in observations in an online journal. There will be three main components to the course:
1. Important mathematics content for school mathematics; 2. Collaborative problem solving;
3. Discussions about classroom observations and issues of teaching practice. The last two strands will take up much more time than the first. Grading will be based on participation in the discussions, homework, and a final project: a lesson plan appropriate for the classroom of each students' field placement. There will be no required text. There will be short weekly homework to do. **Prerequisite: Math 1A**

Hung-Hsi Wu is Professor of Mathematics and has taught at Berkeley since 1965. He works in differential geometry and in recent years has been mostly interested in school mathematics education and the history of mathematics.

Physics 39, Section 1
Teaching Science (2 units, P/NP)
Professor Roger Falcone
Friday 12:00-2:00, 200 LeConte Hall, CCN: 69447

Students will be expected to support science teaching in a local K-12 classroom throughout the course of the semester.

The seminar is for students who are interested in improving their ability to communicate scientific knowledge, and considering a career in teaching science in K-12 schools. It will combine instruction in inquiry-based science teaching methods and learning pedagogy with supervised teaching activities in a local school. Students will practice, with support and mentoring, communicating scientific knowledge through presentations and hands-on activities. The seminar builds on the successful Communicating Science series for upper-division students, which is taught in collaboration with the Lawrence Hall of Science. This seminar is an introduction to a new program for undergraduates called Cal Teach, which is described at http://calteach.berkeley.edu/. It is the first in a series of courses that will prepare undergraduate students in the sciences, mathematics, and engineering for careers in teaching at the K-12 level, while supporting their regular programs for the bachelor's degree in these subjects.

Professor Falcone has been teaching at UC Berkeley in the Physics Department since 1983 and served as Department Chair from 1995 to 2000. He is also affiliated with the Energy and Resources Group on campus, Lawrence Berkeley National Laboratory, and the Stanford Linear Accelerator Center. His research group conducts experiments in atomic, molecular, and solid state physics using ultrafast-pulse lasers and x-rays. His other activities include working with Berkeley's Lawrence Hall of Science and other groups on kindergarden-to-twelfth-grade education issues, and occasional studies related to national security.

Mr. John Erickson has been teaching at the Lawrence Hall of Science since 1986. He has taught in all subject areas at LHS, with an emphasis in physical sciences and astronomy, for students at the level of preschool through adult. His work includes curriculum development and teacher training in the content and methods of LHS curriculum materials.

Dr. Greg Schultz received his PhD from the UCLA Astronomy & Astrophysics program in 1999, and since then has been with UC Berkeley's Center for Science Education at the Space Sciences Lab (CSE@SSL; http://cse.ssl.berkeley.edu/). He came to Berkeley as a National Science Foundation (NSF) Science Education Postdoctoral Fellow, and is now on staff as an Education/Outreach Scientist and Teacher Educator. His work has been primarily focused on teacher education, teacher professional development,

and science curriculum development, in particular within the subjects of astronomy, space science, physics, and earth science. He works closely in these regards with colleagues at the Lawrence Hall of Science.

Psychology 39I, Section 3
Dognition: How Dogs Think (2 units, P/NP)
Professor Lucia Jacobs
Tuesday 2:00 - 3:30, 3105 Tolman Hall, CCN: 75401

Dog cognition: what do dogs know and how do they know it? Do dogs think like their relatives (wolves and foxes) or has our 15,000 year history shaped their thought in new directions? These questions have been debated for hundreds if not thousands of years but substantial research on this topic has only blossomed in the last decade. The goal of this seminar is to discuss why dogs are similar to their cousins and why they are not and what is the cognitive basis of their special relationship with people. We'll read and discuss the current findings on dog cognition, have field trips to Berkeley dog parks to observe what we've learnt and have guest lectures from famous dog trainers based in the Bay Area. **This course would be wide open - the only requirement is an interest in dogs. Planned outings to the Ohlone Dog Park shouldn't restrict the class participation based on limited mobility, as it is a few blocks from campus.**

Professor Jacobs is an animal behaviorist who studies the evolution of cognition as an Associate Professor in Psychology. She studies learning, memory and problem solving in tree squirrels, kangaroo rats, deer mice, pet dogs and people – sometimes in the lab but more often in the field, training wild animals to test themselves on mazes. She and her graduate students have recently started studying problem solving and insight in pet dogs. Because everyone knows something about dog behavior, they're a perfect species to engage Berkeley students about the fun of studying cognition in animals and this seminar is a great way to introduce this to new students on campus.

Public Health 39C, Section 1
Nutrition Issues: Biological Bases and Policy Implications (1.5 units, LG)
Professor Zak Sabry
Tuesday & Thursday 2:00 - 3:30, 256 University Hall, CCN: 77003

This course will track issues that are currently covered in the scientific literature and in the media. The students and the instructor will work together to assess the research methods and the scientific evidence behind the reports in the literature they cover. Since nutrition is a natural science, integral to human biology, understanding current issues and concerns will require exploration of the associated biological and environmental principles. The strong reliance on food to provide us with nourishment further requires us to focus on the social, economic and political factors that influence the food supply, and its nutritional quality and safety. This raises issues of public policy that would have a direct impact on nutrition and population health.

Professor Sabry is concerned with public health issues of food and nutrition. His research has focused on the assessment of nutritional status in populations, and the development of nutrition and health programs, with both national and international perspectives.

Public Health 39E, Section 1
The Medical Detectives (2 units, P/NP)
Professor Arthur Reingold
Wednesday 10:00-12:00, 116 Haviland , CCN: 75503

Have you read newspaper stories about SARS or the bird flu in Hong Kong or Ebola virus in Africa or the recent E. coli outbreak from bagged spinach? Have you wondered who investigated these public health

problems and how they did it? In this course, you will learn who these medical detectives are and the ins and outs of how they solve these real-life mysteries. This seminar may be used to satisfy the Social and Behavioral Sciences requirement in Letters and Science.

Professor Arthur Reingold is a licensed physician who has devoted the past twenty years to studying infectious diseases and how to prevent them. He worked at the Federal Centers for Disease Control and Prevention in Atlanta for eight years before joining the faculty at UC Berkeley and UCSF in 1987. He has been involved in investigations of Legionnaires' Disease, toxic shock syndrome, epidemic meningitis in Africa and Nepal, and numerous other infectious diseases in the United States and in various countries in Latin America, Africa, and Asia.

Public Health 39G, Section 1
Unnatural Causes . . . Is Inequality Making Us Sick? (2 units, LG)
Professor Darlene Francis, Dr. Emily Jacobs and Dr. Katherine Saxton
Friday 12:00-2:00, Location: TBA, CCN: 75508

This interdisciplinary seminar will explore the large and disturbing socio-economic and racial/ethnic disparities in health . . . and search for their causes. Growing evidence suggests that there is more to health than bad habits, no access to medicine or unlucky genes! The social circumstances in which we are born, live and work become 'biologically embedded' and put us at risk for stroke, heart disease, asthma, diabetes, poor mental health and academic achievement.

This seminar will explore why some populations get sicker more often in the first place, i.e. the role of inequality, racism, poverty, segregation and neglect in breeding disease and despair. **We hope to attract students from diverse academic backgrounds interested in understanding and exploring the interface between the social and biological worlds.**

Darlene Francis is trained as a neurobiologist. Her basic research interests focus on understanding how social factors become biologically embedded to affect health and well-being.

Emily Jacobs is a cognitive neuroscientist. Her research explores individual differences in cognition from a genes and hormones perspective.

Kat Saxton is an epidemiologist studying the effects of stress and social place (in childhood) on development and gene expression

South and Southeast Asian Studies 39G, Section 1
"Think Gender" in Indian Short Stories (2 units, LG)
Lecturer Kausalya Hart
Friday 8:00 - 10:00, Unit 3 2400 Durant Ave, CCN: 83112

In this seminar, students will read approximately twenty-five short stories from various languages of India translated into English. The stories will describe the relationships between men and women and how the society looks at the roles of men and women in Indian culture. The students will be expected to read the stories and to discuss and critique them in class. They will also be expected to write a three-page criticism of the stories assigned for each class. **Enrollment is limited to fifteen students.**This seminar may be used to satisfy the Arts and Literature or Social and Behavioral Sciences requirement in Letters and Science.

Kausalya Hart (M.A., Annamalai University, 1962) is the author of Tamil for Beginners, Tamil Madu, and Tamil Tiraippadam (advanced Tamil textbooks). She has prepared numerous Tamil language teaching aids (including a collection of Tamil movie videos), and a dictionary for modern Tamil. Her current research

involves the preparation of a dictionary of Tamil inscriptions. Her interests include Tamil literature, grammar, and inscriptions.

Undergraduate and Interdisciplinary Studies 39B, Section 1
Archival Research: Working with Primary Sources in the Humanities, Sciences, and Engineering (1.5 units, LG)
Professor James Casey, Mr. David Farrell and Mr. Peter Hanff
Wednesday 3:00-4:30, Stone Room, 373, Bancroft LIbrary, CCN: 89006

This seminar offers undergraduates from any major the opportunity to perform original research using primary sources from the archives of the Bancroft Library, or from other specialized libraries at the University or in the San Francisco Bay Area. Students will have direct access to the unique collections of original manuscripts, papers, early printed editions, photographs, paintings, and other items in the Berkeley archives. These cover literary, historical, philosophical, social, cultural, scientific, engineering, and artistic areas, spanning many centuries and different cultures. Bancroft has an especially rich collection of primary sources from California during the nineteenth and twentieth centuries (e.g., original documents, drawings, and paintings from the Gold Rush era; reports, engineering drawings, and photographs for the Golden Gate and Bay Bridge projects; an extensive archive on the poetry and fiction of the Beat Generation; and the papers of the Sierra Club and the Free Speech Movement). After some introductory sessions on the use of primary documents and artifacts in research, we will explore the Bancroft archives in areas of interest to the group. By mid-semester, several topics will be identified and participants will subsequently work individually or in pairs to pursue in-depth research on a topic of their own choosing and based on archival materials. Creativity and ingenuity in research are encouraged and everyone is expected to participate vigorously in the discussions. Library specialists will provide technical assistance. A presentation and research report will be due at the end of the semester. **In the past, we have found that the seminar works best when our students come from diverse cultural and academic backgrounds and are eager to engage in academic dialogue. We are particularly interested in attracting students from the sciences and engineering in addition to the humanities and arts, so that problems can be discussed from different angles, and interdisciplinary collaborations can take place. Enrollment is limited to twenty students and attendance is mandatory.**

James Casey is a Professor in the Mechanical Engineering and Bioengineering Departments. He works on theoretical mechanics, but also has an interest in the history of the mathematical sciences. He is a passionate proponent of discourse that crisscrosses disciplinary boundaries.

David Farrell is both Curator of the History of Science and Technology Program at Bancroft and University Archivist.

Peter Hanff, Deputy Director of the Bancroft Library, has an intimate knowledge of the archives at Bancroft and other Bay Area libraries, and a great commitment to the value of primary sources in undergraduate education.