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FALL 2010

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Freshman and Sophomore Seminars

University of California, Berkeley

301 Campbell Hall

Berkeley, CA 94720-2922

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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 September 27, 2010.

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FRESHMAN SEMINARS

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

African American Studies 24, Section 1
Language and Politics in Southern Africa (1 unit, P/NP)
Professor Sam Mchombo
Wednesday 1:00-2:00, 115 Barrows Hall, CCN: 00731

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 part of the Food for Thought Seminar Series.**

Sam Mchombo is an Associate Professor in the Department of African American Studies and was a member of the Department of Linguistics faculty from 1988 to 2009. 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.

Anthropology 24, Section 1

The Anthropology of Food and Identity (1 unit, P/NP)

Professor Christine Hastorf

Monday 12:00-1:00, Room 101 in 2251 College Avenue, CCN: 02465

Food for Thought dining arrangements will be discussed in class.

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Food is the backbone of society and sociability. Food is also the foundation of every economy. Food marks social differences, boundaries, bonds and contradictions. Eating is a continually evolving enactment of gender, family, community and self-identity. In this class we will think about how food creates society and solidarity and well being, whilst food scarcity damages the human community and the human spirit let alone the brain and bodily functions. Through completing small ethnographies we will explore our own identities through our food traditions, old and new. **This seminar is part of the Food for Thought Seminar Series.**

Dr. Hastorf (Ph.D., UCLA, 1983), Professor of Anthropology at the University of California, Berkeley, is known for her contributions to paleoethnobotany, agriculture, meaning and the everyday, food studies, political economy, and middle range societies in the Andean region of South America. Her current field work is in Bolivia, Peru and Italy. She is also writing a book on Food studies in archaeology.

Anthropology 24, Section 3
Anthropology, Bio-Technologies, Global Values, and Medical Ethics (1 unit, P/NP)
Professor Nancy Scheper-Hughes
Friday 1:00-2:00, Room 101 in 2251 College Avenue, CCN: 02467

This seminar will meet in a different location on September 3 and 17; the location for those dates will be announced in class.

This seminar is intended to complement the L&S On the Same Page challenge to incoming freshmen to "bring their genes to Berkeley." What does this project entail? What assumptions are being made about the relationship of genes to one's personal and medical destiny? The seminar will be asking critical questions about newly evolving biomedical technologies, clinical trials, human subjects risks and protections, and about the shape that new biomedical technologies take when they travel to new populations in other parts of the world. Medical research and biomedical technologies are often guided by latent and unexamined Western neo-liberal values about individual choice, human agency, responsibility, blame and accountability for disease and illness. These assumptions can come into conflict in non-western settings where local knowledge and core cultural values may understand the body, sickness, and suffering in very different ways. How do anthropologists, physicians and research scientists apply notions of value and moral thinking to a) personalized medicine, b) public health responses to the AIDS epidemic, and c) the transfer of reproductive and transplant technologies? In the face of conflicting values, is it possible to reach consensus for setting reasonable local, national, and global health policies, for guiding interventions and designing research projects? This seminar will expose students to medical anthropological thinking about medical genetics, personalized and "predictive" medicine. It will show the impact of the transfer of new technologies – transplant medicine and new reproductive technologies—to non-western settings. It will compare and contrast the way nations have responded to the HIV/AIDS epidemic and the social as well as the medical impact of the roll out of ARVS to new communities. We will explore the introduction of IVF (in vitro fertilization) to non-western settings and how these are reshaped by understandings of sexuality, family, and kinship. Finally, we will look at the commercialization of transplant medicine as the world has gradually come to accept the idea that kidneys can be bought and sold through transplant brokers. Taking these examples, I hope that students will get a sense of what a medical anthropological/ethnographic study of medicine, scientific research and practices is about, and what influences anthropological critiques of medicine and science have had on medical practices, medical research, medical ethics, and clinical trials. This freshman seminar is meant to provide a unique opportunity for freshman to meet in a small group with a professor for a non-lecture experience, where careful reading, the writing of short critical reaction papers (2 pages each week) and participating in discussion and leading discussion are the key requirements. You are expected to attend all of the seminars and have completed the assigned reading for that date BEFORE the class meets. Each week one student will co-facilitate the seminar with the professor. **Enrollment is limited to ten freshmen. This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

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Nancy Scheper-Hughes is Chancellor's Professor of Medical Anthropology at the University of California, Berkeley where she directs the doctoral program in Critical Studies in Medicine, Science, and the Body. Her research and writings concern vulnerability and resilience on the margins of the contemporary world. Her research and writings on Latin America, South Africa, Eastern Europe and the Middle East track the insidious invisibility of everyday violence, which often makes the vulnerable and exploited into their own

wardens and executioners. She is the author of two award-winning books, *Death without Weeping: the Violence of Everyday Life in Brazil*, and *Saints Scholars and Schizophrenics: Mental Illness in Rural Ireland*, and of several edited volumes including *Violence in War and Peace* (with Philippe Bourgois) and *Commodifying Bodies* (with Loic Wacquant). Among her many awards and book prizes, Scheper-Hughes was awarded the first Berkeley William Sloane Coffin Award in 2007 for moral leadership at University of California, Berkeley. The award is named for William Sloane Coffin, a chaplain at Yale University and, like Scheper-Hughes, an activist in the civil rights movement and the anti-war movement. View Scheper-Hughes on BBC's *Hardtalk* (YouTube) ; or online: <http://anthropology.berkeley.edu/nsh.html>.

Astronomy 24, Section 1

Cosmology and the Early Universe (1 unit, P/NP)

Professor Steven Beckwith

Thursday 2:00-4:00, 254 Sutardja Dai Hall, CCN: 06069

This seminar will meet ten weeks, beginning August 26, 2010. The remaining nine dates will be announced in class. Food for Thought dining arrangements will be discussed in class.

This course will discuss the modern theory of the origin of the universe, how the early evolution of matter shaped the universe we see today, and why we believe it is all true. This course will use an interplay of observations and theory to explore how science helps us understand our own origins. It will introduce the students to quantitative reasoning on a grand scale without relying on advanced mathematics. We'll explore predictions of the standard Big Bang cosmology and how our most powerful telescopes see the evolution of matter from early times. **My aim is to introduce interested students to modern cosmology and give them the tools to reason about the universe. I welcome students from all backgrounds and interests who are curious about the cosmos and prepared to embrace new concepts and tools to satisfy their curiosity. Although we will not use advanced mathematics, we will stress quantitative reasoning and the use of numbers and numerical predictions as a method of understanding nature. All students will learn to apply mathematical reasoning to understanding the fundamentals of cosmology. This seminar is part of the Food for Thought Seminar Series.**

Steven Beckwith is the Vice President for Research and Graduate Studies for the UC system and a Professor of Astronomy at Berkeley. He came to Berkeley most recently from Baltimore, Maryland, where he was the Director of the Space Telescope Science Institute, responsible for the science operations of the Hubble Space Telescope, and a Professor of Astronomy and Physics at Johns Hopkins University for nine years. Previously, he was Director of the Max Planck Institute for Astronomy in Heidelberg, Germany for seven years and a Professor of Astronomy at Cornell University for thirteen years. His research interests include the creation of galaxies in the early universe, the formation of planets around other stars, and the detection of life on extrasolar planets.

Chemical Engineering 24, Section 1

Chemical Engineering: What Is It and Where Is It Going? (1 unit, P/NP)

Professor David B. Graves

Tuesday 3:00-4:00, 121 Latimer Hall, CCN: 10103

This course is intended to be an introduction to chemical engineering, with descriptions of both traditional careers and the variety of new directions being taken in the profession. Traditional areas of

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employment include process, design and control engineering in the chemical, petroleum, food and pharmaceutical industries. Newer areas include biotechnology and life-science applications, environmental applications, and semiconductor manufacturing. The goal is to provide some context for students who have chosen chemical engineering as a major or who are simply interested in a better understanding of chemical engineering and its evolution as a profession. Basic chemical engineering concepts in physical and mathematical models will be illustrated in a series of case studies.

David B. Graves is a Professor in the Chemical Engineering Department. His research area is plasma processing for microelectronics manufacturing; the use of ionized gases for surface modification of thin solid films. He serves as a consultant to several semiconductor equipment and chip manufacturing companies.

Chicano Studies 24, Section 1
The Chicano Civil Rights Movement (1 unit, P/NP)
Professor Carlos Muñoz Jr.
Tuesday 2:00-3:30, 109 Wheeler Hall, CCN: 13103

The seminar will consist of examining the multifaceted dimensions of the 1960s Chicano Civil Rights Movement via documentary films.

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. For more information regarding Professor Muñoz, visit his faculty webpage at <http://ethnicstudies.berkeley.edu/faculty/munoz/>.

Civil and Environmental Engineering 24, Section 1
The Design and Construction of Biosand Filters for Developing Countries (1 unit, P/NP)
Professor John Dracup
Thursday 6:00-7:30, 544 Davis Hall, CCN: 13903

The first class meeting will be held on Thursday, August 26, 2010 from 6:00 - 7:30 p.m. in 544 Davis Hall. The second and third class meetings will be from 9:00 a.m. - 3:00 p.m. in 145 Davis Hall on Saturdays, August 28 and September 18, 2010. The fourth and final class meeting will be held on Monday, September 27, 2010 from 6:00 - 7:30 p.m. in 544 Davis Hall. Pizza and soft drinks will be served at all four of the class meetings.

The purpose of this seminar will be to build and test two biosand filters. The class of sixteen freshmen will be divided into two teams of eight students per team. Each team will build and test its own biosand filter. The first class meeting will consist of a one-hour lecture on the technology of biosand filters, their design and construction, and their use and effectiveness throughout the developing world. During the second class meeting, the two biosand filters will be constructed by the students, using the materials that will be made available. Construction requires that water be poured through the filter at various times before the next class meeting to insure that the bio layer is developing properly. During the third class, the quality of Strawberry Creek water will be measured and then poured into the filters. The quality of the effluent from the filter will be tested. At the fourth and final class meeting, each group will present its experience with the design, construction and testing of its Biosand filter as a written report and a power point presentation. **Enrollment is limited to eighteen freshmen interested in environmental issues. To obtain a passing grade, attendance at all of the four class meetings is mandatory.**

Dr. John Dracup is a Professor of the Graduate School in the Department of Civil & Environmental Engineering. He has taught and conducted research in the University of California system for over forty

years. His expertise is in water resource engineering and hydrology. His recent awards include being inaugurated into the "Order of the Black Blouse" by the Water Rights Court of Valencia, Spain; the designation of a Diplomat of the American Academy of Water Resource Engineering of the American Society of Civil Engineers; an Honorary Professorship at the Universidad Catolica St. Antonio of Murcia, Spain; and the "Agua para Todos" award from the Region of Murcia, Spain; he is a Fellow of the AGU, ASCE, AAAS and the AWRA. He swims competitively with Pacific Masters Swimming.

Classics 24, Section 1

Homer's 'Odyssey'—The Text and the Mythology (1 unit, P/NP)

Professor Anthony Bulloch

Wednesday 2:00-3:00, 211 Dwinelle Hall, CCN: 14727

This seminar is a study of the 'Odyssey' in both the cultural and historical context of ancient Greece, and as a mythic language through which to explore issues of identity, gender, sexuality, community, individuality, responsibility, etc.

Anthony Bulloch is a Professor of Classics at UC Berkeley and Assistant Dean in the College of Letters & Science, Office of Undergraduate Advising. Before coming to Berkeley he was a Fellow, Dean and Classics tutor at King's College in Cambridge and has authored books and articles on various authors and texts from the ancient Greek world.

Comparative Literature 24, Section 1

Reading and Reciting Great Poems in English (1 unit, P/NP)

Stephen Tollefson

Tuesday 4:00-5:00, 203 Wheeler Hall, CCN: 17278

People today do not have enough poetry in their heads, and everyone should be able to recite one or two of their favorite poems. In addition to its purely personal benefits, knowing some poetry by heart has practical applications: in a tough job interview, you can impress the prospective boss by reciting just the right line, say, from Dylan Thomas: "do not go gentle into that good night/rage rage against the dying of the light." Or at a party some time, you'll be able to show off with a bit of T.S. Eliot: "in the room the women come and go, talking of Michelangelo." In this seminar, we will read a number of classic poems as well as a number of other (perhaps lesser, but still memorable) poems, and discuss them. The poems cut across centuries and types. Students will be encouraged to find other poems for the group to read. Participants will be required to memorize and recite 50-75 lines of their choice, and to prepare a short annotated anthology of their favorite poems.

Steve Tollefson, a lecturer in the College Writing Programs, is the author of four books on writing and grammar as well as articles on a variety of subjects and several short stories. He is a recipient of the campus Distinguished Teaching Award.

Electrical Engineering and Computer Science 24, Section 1

Gadgets Electrical Engineers Make (1 unit, P/NP)

Professor Jeffrey Bokor

Thursday 10:00-11:00, 125 Cory Hall, CCN: 25245

This seminar is intended to offer a taste of how the hardware that is powering the information age really works. Electrical engineers must invest considerable effort to learn their science and math fundamentals. Eventually, though, the fun comes in building innovative and practical gadgets. We will side-step the science and math and get right into the hardware. We'll take a look at what's inside some of today's most exciting products and technology as well as look ahead at the future products that are just around the

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corner. Our focus will be on hardware and we will see how much fun engineers can have using their hands other than by typing on a keyboard.

Jeffrey Bokor received the B.S. degree in electrical engineering from the Massachusetts Institute of Technology in 1975, and the M.S. and Ph.D. degrees in electrical engineering from Stanford University in 1976 and 1980, respectively. From 1980 to 1993, he was at AT&T Bell Laboratories where he did research on novel sources of ultraviolet and soft X-ray coherent radiation, advanced lithography, picosecond optoelectronics, semiconductor physics, surface physics, MOS device physics, and integrated circuit process technology. He held management positions as head of the Laser Science Research Department at Bell Labs in Holmdel, NJ, from 1987 to 1990, and head of the ULSI Technology Research Department at Bell Labs in Murray Hill, NJ, from 1990 to 1993. Dr. Bokor was appointed Professor of Electrical Engineering and Computer Sciences at the University of California at Berkeley in 1993, with a joint appointment at the Lawrence Berkeley National Laboratory (LBNL). In 2004, he was appointed as Deputy Director for Science at the Molecular Foundry at LBNL, a major new nanoscale science research center. His current research activities include novel techniques for nanofabrication, new devices for nanoelectronics, quantum information processing, extreme ultraviolet lithography, optical metrology, and Fourier optics. He is a fellow of IEEE, APS, and OSA.

English 24, Section 1**Shakespeare's Hamlet (1 unit, P/NP)**

Professor Morton D. Paley

Wednesday 2:00-4:00, Central L45 in Unit III, CCN: 28037

This seminar will meet the first eight weeks of the semester, beginning September 1, 2010 and ending October 20, 2010.

Hamlet is perhaps the greatest, the most challenging, and at times the most frustrating play in the English language. In this course we will concentrate intensively on the text (which will be the only assigned reading). We'll consider questions of interpretation, motivation, staging, and poetics, among others. Some questions we'll address are: Does Hamlet think the flesh is "sullied" or "solid"? Did Gertrude know about Claudius' murder of old Hamlet? When Hamlet tells Ophelia "get thee to a nunnery," does he mean a brothel? Is Polonius' advice to Laertes sage or silly? Does Hamlet delay? Does he have an Oedipus complex? How old is he? How do we go about answering questions like these? During the course of our half semester, each of you will do a short (10-15 minute) seminar presentation (or, if you wish, a 20-30 minute presentation in collaboration with another student). There'll be a list of possible subjects for you to choose from, and we'll have a conference beforehand. Then you'll do a one-page write-up of what you presented, and I'll return it to you with written comments. By meeting six you'll write a short (1500-word) essay. It may grow out of your initial presentation, or be on an entirely different subject. There will be ample time for you to confer with me on this. I'll return your essay with my comments at meeting

seven. The text for this course is Hamlet, ed. G. R. Hibbard. New York: Oxford University Press (paperback), 1998. ISBN: 0192834169. Please bring the text with you every time, and for the first meeting please read Act I, scenes i-iii. **The only requisite for enrollment is that you be a freshman. No previous knowledge of Shakespeare is expected.**

Morton D. Paley's special interest is the relationship between British literature and the fine arts in the eighteenth and nineteenth centuries. He has written several books on aspects of this subject. His most recent is Samuel Taylor Coleridge and the Fine Arts, published by Oxford UP in 2008.

English 24, Section 2
Reading Walden Carefully (1 unit, P/NP)
Professor Mitchell Breitwieser
Thursday 4:00-5:00, 201 Wheeler Hall, CCN: 28040

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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 thirty-one years.

Environmental Science, Policy, and Management 24, Section 1
Issues in Natural Resource Conservation (1 unit, P/NP)
Professor David Wood
Friday 9:00-10:00, 106 Mulford Hall, CCN: 28975

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.

**Environmental Science, Policy, and Management 24, Section 2
Food Security, Waste, Water, and Everyday Chemicals (Are They Safe?) (1 unit, P/NP)**

Professor Gordon Frankie

Tuesday 10:00-11:00, 106 Mulford Hall, CCN: 28977

The course will examine several different and current aspects of food quality and security and what is and can be done to improve quality and security. The topic of waste is an old one, but recent studies have opened the issue again with a fresh new look at the complexities of waste that will be discussed in class. Water continues to be in short supply in California, and the shortages have caused a wide variety of problems, which will receive air time. Finally, the growing concern over the safety of everyday chemicals will be explored. Several recent books/reports will provide good reference material.

Gordon Frankie is Professor of Insect Biology in the College of Natural Resources at UC Berkeley. He received his Ph.D. in entomology from UC Berkeley in 1968. His research interests are in plant reproductive biology, pollination ecology, and solitary-bee biology. One of his current projects deals with surveying and recording relationships of native bees and their ornamental host plants throughout California, with the goal of developing a user-friendly book on urban bee ecology and urban bee gardening. His field research time is split between California and the seasonally dry tropical forests of Costa Rica. He teaches several lecture and field courses in applied conservation biology and environmental problem solving at UC Berkeley.

**Environmental Sciences 24, Section 1
Sustainability: The Future is Now (1 unit, P/NP)**

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Professor William Berry

Wednesday 4:00-5:00, 55A McCone Hall, CCN: 30827

This seminar includes a review of issues involved in sustainability of our resources and environment. Topics to be discussed include green buildings-sustainable architecture, the energy-transportation-air-quality-health connections, managing our wastes, uses and abuses of our water, and impacts of farming and marketing practices on our food and on enhancing use of organics.

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.

French 24, Section 1

Big French Novels (1 unit, P/NP)

Professor Michael Lucey

Monday 4:00-5:00, 204 Dwinelle Hall, CCN: 32329

Students enrolling in this seminar after the first class meeting should contact Professor Lucey at mlucey@berkeley.edu to obtain the syllabus and assignment for September 13th.

French literature has more than its share of enormously long novelistic masterpieces. We'll take a stab at

making our way through one of the more recent ones: Georges Perec's *Life: A User's Manual*, published to great acclaim in 1978. On the title page, instead of calling his book "a novel," Perec called it "novels." The book is a very elaborately constructed puzzle, and it is possible to take it apart and put it back together in any number of different ways. We will proceed initially in the most traditional way, starting at the beginning of the book and moving towards the end, but we might try switching reading practices a couple times during the semester. Along with reading as much of the novel(s) as we can, we'll also learn how Perec worked, all the tools he used to organize his material as he produced this incredibly inventive volume. We'll try to understand what his brand of formal complexity has to teach us about how we organize the materials of our own lives into meaningful structures. **Anyone who likes to read long novels is welcome. No knowledge of French is necessary.**

Michael Lucey teaches in the Departments of Comparative Literature and French. He is currently the Chair of the French Department. He has also studied jazz and classical piano for many years.

French 24, Section 2

How To Say I Love You: Marivaux in Action (1 unit, P/NP)

Professor Nicholas Paige

Tuesday 12:30-2:00, 413 Zellerbach Hall, CCN: 32332

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

Marivaux (1688-1763) is, after Molière, France's greatest comic playwright. He invented an entire way of speaking about love, known as *marivaudage*, and transformed comedy into what it still largely is today—an exploration of the internal obstacles that keep people apart. In this seminar, we will put on a short, one-act play of Marivaux's, to be staged publicly at the end of the course. Students should have serviceable French (high school study is fine), and be willing, of course, to try their hand at acting. Big and small roles will be available to suit the ambitions (and out-of-class time) of all students. This is a great way to keep your French up! **Students must have enough experience with French to allow them to be comfortable memorizing lines and speaking them in public. I will be contacting enrolled students before the first class meets to get a sense of their individual preferences and desires.**

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Professor Paige is a specialist in seventeenth- and eighteenth-century French literature. His latest research has attempted to come up with a new way of understanding the evolution of the novel, in particular the strange propensity of early novels to pretend that they were authentic documents. He frequently offers courses on the theater of the early modern period, as well as on modern French cinema.

History 24, Section 1

Scientific Revolutions (1 unit, P/NP)

Professor Cathryn Carson

Wednesday 12:00-2:00, 2303 Dwinelle Hall, CCN: 39246

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

How does science progress? Does it change smoothly or discontinuously? Build on past ideas or reject

and replace them? In this seminar we will read and think together about Thomas S. Kuhn's famous book *The Structure of Scientific Revolutions*. Kuhn's book will be our launching point for wide-ranging discussions about the nature and history of science.

Cathryn Carson is a historian of science. As an undergraduate she spent most of her time taking physics and math courses. Then in graduate school she switched over to history. At Berkeley she teaches courses on the history of physics and the history of science in America. She has written a book on Werner Heisenberg, one of the creators of quantum mechanics, and is working on two research projects, one on Berkeley's Museum of Vertebrate Zoology, the other on nuclear waste.

Industrial Engineering and Operations Research 24, Section 1
Overview of IEOR (1 unit, P/NP)
Professor Ken Goldberg
Wednesday 4:00-5:00, 3105 Etcheverry Hall, CCN: 41003

Industrial Engineers look at the big picture of what makes societies perform best. We design optimal combinations of people, information, materials, and equipment that produce innovative and efficient organizations. This seminar provides a general introduction to the field and profession. Each week a faculty member or graduate student from the IEOR Department will discuss his or her work in communications, ecommerce, entertainment, finance, food, health, logistics, manufacturing, medicine, pharmaceuticals, semiconductors, sports, travel, or transportation.

Ken Goldberg is Professor of IEOR at UC Berkeley, with appointments in EECS and the School of Information. Goldberg was named IEEE Fellow in 2005 and serves (2006-2009) as Vice-President of Technical Activities for the IEEE Robotics and Automation Society. He is Founding Chair of the IEEE Transactions on Automation Science and Engineering (T-ASE) Advisory Board. For more information regarding Professor Goldberg, visit <http://goldberg.berkeley.edu>.

Integrative Biology 24, Section 1
Biology: The Study of Life (1 unit, P/NP)
Professor Tyrone Hayes
Wednesday 5:00-6:00, 104 Dwinelle Hall, CCN: 43003

Food for Thought dining arrangements will be discussed in class.

Biology: The Study of Life is a course primarily designed for non-science majors. The course will examine scientific issues that we are confronted with in our everyday life: health and nutrition, reproduction, etc. The seminar will focus on current events and political issues that we are confronted with today: what is stem cell research? intelligent design? pesticide reform? bio-fuels? genetically modified organisms? **Non-science majors are encouraged to enroll. This seminar is part of the Food for**

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Thought Seminar series and part of the On the Same Page initiative:
<http://onthesamepage.berkeley.edu>.

Tyrone Hayes is a Professor of Integrative Biology. He received his Bachelor's degree from Harvard and his PhD from the Department of Integrative Biology, UC Berkeley. Professor Hayes is a developmental endocrinologist whose research focuses on the role of hormones in development and the impact of

pesticides on amphibian development and in human cancer. For more information regarding Professor Hayes, visit atrazinelovers.com.

Integrative Biology 24, Section 2

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

Professor George Bentley

Tuesday 2:00-3:00, 4110 Valley Life Sciences Building, CCN: 43006

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 3

The Stone Age (1 unit, P/NP)

Professor Tim White

Wednesday 3:00-5:00, 18 Hearst Gym, CCN: 43009

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

This seminar is an overview of human evolution and prehistoric archaeology. The seminar considers the methods and findings of human evolutionary studies, and introduces laboratory and field investigations into this topic. It will cover the biological and technological evidence of human evolution across the last six million years, and will focus on current debates about human origins. Hands-on experience with fossils and artifacts from around the world will be an integral part of the seminar. Students will be introduced to primary research papers and will be encouraged to critically evaluate published claims about human evolution and related subjects. **Enrollment is limited to first-semester freshmen and is by**

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instructor approval only. Interested students should add their names to the waitlist and attend the first class meeting. The instructor will give CEC numbers to the students to let them enroll after the first class meeting.

Professor Tim White has taught at all levels on the Berkeley campus for twenty-seven years, first in the Anthropology Department, and now in Integrative Biology. He conducts fieldwork in Africa and Eurasia and has made many discoveries relating to the topic of the seminar. He co-directs Cal's Human Evolution Research Center and is the Curator of Biological Anthropology in the Hearst Museum of Anthropology.

Integrative Biology 24, Section 4

The Age of Dinosaurs: What Do We Know? (1 unit, LG)

Professor Kevin Padian

Wednesday 12:00-1:00, 5192 Valley Life Sciences Building, CCN: 43012

Dinosaurs were big funny animals, and "Jurassic Park" was cool. But what's behind all this? In this seminar we use dinosaurs to explore how we know what we know about extinct life, and the methods and approaches that scientists use to study evolution in general. We also explore common myths, such as the idea that dinosaurs were slow and slow-witted, and that an asteroid drove them to extinction. Berkeley's Museum of Paleontology is the largest collection of fossils in any university in the world, and we use it on a weekly basis in this course. A notebook, some writing, and strong initiative in participation are required.

You don't need any preparation for this course except an interest in the subject and the desire to understand how science is constructed. This course is designed to be taken for a letter grade. Students who elect to take this seminar should enroll under the letter grade option.

Kevin Padian has been teaching at Berkeley for thirty years, mostly courses in evolution, paleontology, and the history of these fields. Research in his lab centers on how large-scale changes get started in evolution, particularly the major new adaptations in vertebrates such as flight, the emergence of dinosaurs, and the evolution of unusual structures and behaviors. He also spends a lot of time on the creation-evolution issue, educating the public about what science is and isn't.

Integrative Biology 24, Section 5

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

Dr. Thomas Carlson

Wednesday 10:00-11:00, 4110 Valley Life Sciences Building, CCN: 43015

In this seminar we will read Michael Pollan's *Omnivore's Dilemma*, Gary Nabhan's *Where Our Food Comes From* and other select literature on related topics. We will explore the ethnobiological systems around the world that generate thousands of different species of plants and animals eaten by humans. We will examine the historical, cultural, commercial, and biological factors that have resulted in the worldwide consumption of certain plant (e.g., corn) and animal (e.g., cows) species. We will also compare the nutritional qualities, health effects, and carbon footprint of industrial food, organic food, locally grown food, and food that is hunted or gathered.

Dr. Thomas Carlson is an ethnobotanist, botanist, and physician who has conducted food and medicinal plant research with numerous different ethnolinguistic groups in Africa, Asia, Oceania, and the Americas. He has published articles in a spectrum of different disciplines including pharmacology, chemistry, experimental biology, nutrition, botany, ethnobotany, and anthropology. Dr. Carlson teaches courses in medical ethnobotany, botany, California plant life, and human reproduction.

Linguistics 24, Section 1

Language Myths (1 unit, P/NP)

Professor Larry Hyman

Monday 9:00-10:00, 233 Dwinelle Hall, CCN: 52239

Everyone has preconceptions about language in general and languages in particular. But are these accurate? In this course we will discuss and evaluate a number of common language myths such as these: Are all languages equally complex? Are some more logical? More beautiful? Is there such a thing as a primitive language? Do some people speak more grammatically than others? Is the English language undergoing a process of decay? We will draw on facts from English, other languages that may be familiar to participants, and lesser known languages 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.

Materials Science and Engineering 24, Section 1**Materials in Music (1 unit, P/NP)****Professor Ronald Gronsky****Monday 2:00-4:00, 128 Hearst Memorial Mining Building, CCN: 53203**

The lab will also be available from 4:00-5:00 in case students wish to stay after class to use the equipment, play music, etc.

Is a rosewood fretboard any better than a maple one? Why does the same brass cymbal go from "crash" to "clunk" when aged? Can the tonal range of magnetic pick-ups be enhanced in single-coil, humbucking, or triple-wound configurations? Does it really matter if those strings are nickel wrapped? Is platinum better? The answer to these questions lies in the microstructure of materials, as illustrated in this hands-on seminar for musicians, poets, or engineers. We will establish the relationship between the acoustical signatures of various materials used in music and their microstructures, to show how performance (tone) can be optimized through microstructural manipulation. **Enrollment is limited to twelve freshmen.**

Professor Gronsky holds the Arthur C. and Phyllis G. Oppenheimer Chair in Advanced Materials Analysis in the College of Engineering and is a recipient (2001) of the Distinguished Teaching Award. He currently conducts research on the fundamental relationship between the atomic structure and properties of materials used in nanotechnology and biomedical applications.

Mathematics 24, Section 1**What is Happening in Math and Science? (1 unit, P/NP)****Professor Jenny Harrison****Tuesday 3:00-4:00, 891 Evans Hall, CCN: 53918**

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. This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

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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.

Mechanical Engineering 24, Section 1
Art and Science on Wheels (1 unit, P/NP)
Professor Benson Tongue
Thursday 10:00-11:00, B51 Hildebrand Hall, CCN: 55403

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: Reading the New York Times (1 unit, P/NP)
Professor Thomas Goldstein
Monday 9:00-10:00, B1 North Gate Hall, CCN: 56736

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
Your DNA (1 unit, LG)

Professor Jeremy Thorner
Friday 12:00-1:00, 107 Genetics and Plant Biology Building, CCN: 57847

The technology to obtain the complete nucleotide sequence of the DNA in the genome of any human at a reasonable cost gives each of us the opportunity to determine our genetic legacy from our parents and our relationship to the rest of the human race. However, with such knowledge come great challenges and great risks. This seminar will explore the nature of DNA, the organization of the human genome, the role of chromosomes, the laws of Mendelian inheritance, how DNA sequence is determined on a genomic scale, the molecular basis of mutations, polymorphisms, recombination, and transpositions, and the personal, medical, ethical, moral, and legal issues raised by our ability to learn the content of our own genetic constitution. **This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

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

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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, gene expression, 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 90C, Section 1
DNA and Destiny: What YOUR Genome Can and Can Not Tell You about Your Future, Where You Came from and the History of Mankind (1 unit, P/NP)
Professor Michael Eisen
Wednesday 4:00-5:00, 47 Evans Hall, CCN: 57853

We have entered the DNA Age. By the time you graduate, you will be able to get a complete readout of your own DNA for a few hundred dollars. There are lots of things you can already learn from your DNA—about your risk of disease and the history of your ancestors—but the science of interpreting the human genome is still in its infancy. And we don't really know how this powerful information will affect the ways we think about ourselves, how we see others and how they see us. This seminar will explore the things that YOUR DNA can and can not tell us about where you came from and where you are headed; what we can learn about human evolution from human genomes; the relationship between genes and race; and how society will integrate and use the information contained within our DNA. **The class is open to any freshman with an interest in his or her own DNA—no specific technical knowledge is required. This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

Michael Eisen as an associate professor of genetics, genomics and development in the Department of Molecular and Cell Biology. His research focuses on how genomes evolve, and how differences in DNA determine the way that animals look, function and behave. He has a long-standing interest in both the science and social impact of human genetics, and is an advisor to 23andMe—a company that offers genetic testing services to the public.

Molecular and Cell Biology 90D, Section 1 Viruses: From Flu to Ebola (1 unit, P/NP)

Professor P. Robert Beatty

Thursday 11:00-12:00, 2038 Valley Life Sciences Building, CCN: 57856

Food for Thought dining arrangements will be discussed in class.

This seminar will discuss the basic concepts related to viruses that are associated with human disease. The diseases caused by viruses include influenza A, ebola virus, measles, human immunodeficiency virus, Epstein-Barr virus, human papillomavirus, hepatitis B virus, and hepatitis C virus. The way these viruses cause disease will be discussed along with immune protection, vaccines and drug treatment. **The intended audience would be students who are interested in science and most specifically immunology and virology. A science background is not required but helpful. Students should not be afraid of reading articles discussing or reviewing current science research. This seminar is part of the Food for Thought Seminar Series.**

Professor Beatty is an infectious disease immunologist who has worked on Chlamydia, Epstein-Barr virus, Leishmania, and dengue virus over the last fifteen years. His research is focussed on dengue virus immunology especially testing drugs and vaccines to protect against severe disease. He teaches immunology classes at Cal in the Department of Molecular and Cell Biology.

Molecular and Cell Biology 90D, Section 2

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Personalized Medicine—DNA, Healthcare, and Privacy (1 unit, P/NP)

Professor Mark Schlissel

Wednesday 3:00-4:00, 2062 Valley Life Sciences Building, CCN: 57858

We are on the verge of a new era of Personalized Medicine in which your own individual genome sequence will be used to help direct your healthcare and suggest health-promoting behaviors. The human genome is made up of about 3 billion bits of information in the form of nucleotides symbolized by the letters A, G, C, and T that make up DNA. The DNA in your genome codes for tens of thousands of genes. Each of these genes provides the information code that allows your cells to make a particular protein. This code of A's G's C's and T's is greater than 99.9% identical from person to person, but it's the tiny differences that contribute to the uniqueness of each person. Rapid advances in DNA-based technologies have allowed scientists and physicians to start deciphering the contribution of an individual's own genes to his or her risk of disease, behavioral characteristics, and ways of interacting with their environment. These new technologies promise improvements in human health and self-awareness but also open up questions of an ethical, legal, and social nature. How can we assure the privacy of genetic information? How should DNA be used in law enforcement? Should private insurers or the government have access to your genome sequence for medical purposes? How can we teach individuals to appropriately consider the probability of disease based on their own gene sequences? Should a person's genetic information be controlled by his or her physician, or should individuals be free to have their genomes sequenced by for-profit companies? Would you want to know if your genes reveal a high risk of a lethal or debilitating disease later in life? This seminar will explore the science behind personalized medicine, and then move on to address how this information can be used with careful consideration of the ethical, legal, and social implications of this brave new world of human genetics. The seminar will involve presentations by the instructor, guest faculty, and students. **This seminar is part of the On**

the Same Page initiative: <http://onthesamepage.berkeley.edu>.

Dr. Schlissel received his undergraduate degree from Princeton University as a Biochemistry major and was trained in both clinical medicine and basic biology at Johns Hopkins University School of Medicine (M.D. & Ph.D.) and is Board Certified in Internal Medicine. He did a post-doctoral fellowship at the Whitehead Institute at MIT in the lab of the Nobelist David Baltimore. Dr. Schlissel was a professor at Hopkins Medical School from 1991-1999 before joining the faculty at Berkeley in 1999. He has served as the Vice-Chair of Molecular and Cell Biology, has taught MCB 150 (Molecular Immunology) and Bio1A, and is currently the Dean of Biological Sciences. Dr. Schlissel leads a twelve-person research lab studying the developmental biology of cells in the immune system and the origins of leukemia.

**Molecular and Cell Biology 90E, Section 1
Matter, Mind, Consciousness (1 unit, P/NP)**

Senior Lecturer David E. Presti

Wednesday 3:00-4:00, 2070 Valley Life Sciences Building, CCN: 57859

All that we know as humans comes to us by way of our mental experiences: our thoughts, feelings, perceptions, and conscious awareness. The prevailing assumption in contemporary science is that these mental processes will ultimately be completely understood in terms of physical processes in the brain and body. However, it is a deep mystery as to how the objective physical movements of ions and molecules in our brains might give rise to subjective experiences like thoughts and feelings. Some argue that the investigation of this mind-body problem is the most interesting question in all of science. We will consider this question from the perspectives of neuroscience, physics, and philosophy of mind. **Non-science majors are encouraged to enroll.**

David Presti has taught neuroscience at UC Berkeley for twenty years. For the past several years, he has also been teaching neuroscience to Tibetan monks in India.

Natural Resources 24, Section 1

Global Environment Theme House Freshman Seminar (1 unit, P/NP)

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Professors Peter Berck and Matthew Potts

Thursday 5:00-6:00, 4301 Foothill 4 - Classroom A, CCN: 61303

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.**

Peter Berck is a Professor of Agricultural and Resource Economics and Policy. He was an undergraduate at Cal, received a Ph.D. in Economics from MIT in 1976, and has been teaching at Cal ever since. His research has been on the economics of forestry, fisheries and water, on food security in developing nations, and on the costs of environmental regulation.

Matthew D. Potts is an Assistant Professor of Forest Ecosystem Management in the Department of Environmental Science, Policy and Management. He has an interdisciplinary background with training in mathematics, ecology and economics with a BS from the University of Michigan and a PhD from Harvard University. In addition, he has extensive international experience conducting field research in tropical forest throughout the world. His varied research interests include spatial aspects of resource management and epidemiology as well as how human actions, values, and ethics affect biodiversity conservation.

Near Eastern Studies 24, Section 1

Islam and Imaginative Literature: The Making of a Problematic Relation (1 unit, LG)

Professor Muhammad Siddiq

Tuesday 3:00-4:00, 252 Barrows Hall, CCN: 61439

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 2

Ancient Egypt at Berkeley: Egyptian Archaeology in the Hearst Museum (1 unit, LG)

Professor Carol Redmount

Monday 1:00-2:00, 18 Barrows Hall (first meeting) and Exhibit Gallery in Hearst Museum, CCN: 61441

The first seminar meeting will be in 18 Barrows Hall. Future seminar meeting locations will be announced in the first class.

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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 on display, due to exhibit space constraints. This year we are fortunate because the museum's newest exhibit will highlight Egyptian objects. In this one-credit 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 museum resources and have the opportunity to go behind the scenes in the museum as well as work with the ancient objects on display. **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 directs the 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 digging since. She has worked in the Middle East for over thirty years and lived for extended periods of time in Egypt, Israel and Jordan. Her archaeological experience also includes fieldwork in Cyprus, Tunisia and the United States.

Nutritional Sciences and Toxicology 24, Section 1

Film vs Reality: the Freshman Experience (1 unit, P/NP)

Professor George Chang

Wednesday 11:00-1:00, Unit Two Recreation/All-Purpose-Room, CCN: 64596

Food for Thought dining arrangements will be discussed in class.

How accurately do movies depict the freshman experience? What is the ideal freshman experience? Our seminar will examine these questions. First we will watch a selected film about college life. Then a team of students will spend a week researching a question raised by that film, and they will present their findings to the class. Next we'll watch another film, and another team of students will investigate another question. These two-week cycles will continue until the end of the semester. Discussion topics might include social life, study techniques, relationships, budgeting time and money, sleep deprivation, and roommates. **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 and a Ph.D. in biochemistry from Cal. He has been heavily involved in undergraduate affairs, serving on the Undergraduate Affairs Committee, the Committee on Courses, and the Committee for Undergraduate Scholarships and Honors of the Academic Senate. He has also served on ad hoc committees dealing with disabled students and the need to develop a sense of community on each of the UC campuses. His most exciting assignment in the 20th Century was to serve on The Chancellor's Commission to Study the University's Responses to a Diversified Student Body. In 2005 Professor Chang became the inaugural professor in Cal's new Residential Faculty Program.

Physics 24, Section 1

Siege Engines: High Tech for an Agrarian World (1 unit, P/NP)

Professor Bob Jacobsen

Thursday 12:00-1:00, 397 LeConte Hall, CCN: 69380

Food for Thought dining arrangements will be discussed in class.

The ballista, trebuchet and catapult were the high-tech wonder gadgets of the medieval age: If you had one, you could start a conversation just about anywhere. In this seminar, we'll study the physics, history,

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physics, technology, and physics of these devices. We'll examine how they were built, how they worked, and how they were used. We intend to build one or more model engines and measure their performance, but it is not yet clear how far that will go. There will be some reading required; involvement in building is optional. **No physics, engineering, technical, or mathematical background is required. Curiosity and willingness to get involved are required: this is not a seminar for leaning back and listening to what's happening in the front of the room. 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.

Plant and Microbial Biology 24, Section 1
Encounters with Plants: First-hand Experiences with the Culture, Lore, and History of Plants (1 unit, P/NP)
Professor Lewis Feldman
Tuesday 11:00-12:00, 104 Genetics and Plant Biology Building, CCN: 70306

This seminar is meant to provide students the opportunity to explore ways plants have influenced their lives, both personally and in an historical sense. Examples could include unique cultural uses of plants, perhaps as foods or medicines, or in a ceremonial way. As well, you could also use this seminar to explore an aspect of plants in which you may have an interest, and about which you would like to learn more, such as the ways plants figure into art (e.g., Rousseau's Jungle paintings). Plants too have recently been associated with controversial issues, such as genetically engineered foods. We want to use this seminar as a way of expanding our appreciation and understanding of this unique group of organisms. For the first few meetings we will have talks/discussions from individuals whose daily lives involve plants. During this first period we will go on a tour of the campus emphasizing particularly important plantings, especially of trees. We will also include a visit to the University Botanical Garden in Strawberry Canyon. For the remaining weeks each student will present a twenty-minute "seminar" on a plant topic in which he or she has an interest. This seminar should be based on readings and could also involve some personal, first-hand experiences with plants.

Lewis Feldman has been teaching about plants at Berkeley for more than thirty years. He regularly instructs in the plant section of Introductory Biology (Biology 1B). He is a member of the Department of Plant and Microbial Biology, where he conducts research on plant development, with a particular interest in understanding how plants are organized, and how patterns are established. He has also studied how plants detect and respond to gravity.

Plant and Microbial Biology 24, Section 2
Viruses, Health and Society (1 unit, P/NP)
Professor Andrew O. Jackson
Thursday 4:00-5:00, 104 Genetics and Plant Biology Building (GPB), CCN: 70308

Food for Thought dining arrangements will be discussed in class.

Viruses infect all forms of life and they have been found wherever scientists have looked for them. Anyone who has had the flu knows that viruses have the potential to disrupt the healthy body in just a short period of time, but most people do not have an appreciation of the enormous impacts of viruses on our public health, agriculture, wildlife and ecology. This seminar will focus on how viruses affect our health, agriculture and society. During the course, you will have the opportunity to learn about a number of topics that may be of interest to those enrolled, including how viruses caused the first stock market crash, eradication of small pox and ongoing efforts to eliminate polio, measles and mumps, how viruses evolve and spread, viruses causing cancer, the flu epidemic that everyone forgot, how viruses may be used to control insects and AIDS, and a host of other topics. Students will present two short seminars about

the impacts of specific viruses and their roles in issues of contemporary and historical importance. In preparation for each seminar, Professor Jackson will assist each student in preparation of Powerpoint slides (or Chalkboard if you wish), to assist his or her seminar, provide advice on how to access illustrative materials from the internet and books and how to obtain scientific information from the library and the internet. After each seminar we will discuss the topic in class and Professor Jackson will provide advice to each student on how to improve his or her presentation. **I am most interested in attracting students interested in biological sciences who are considering majoring in MCB, Microbial Biology, Chemistry or other areas with an interface into modern biology. I believe the skills developed in the course will prove to be of use for future presentations and that the subject matter will interest to the class as a whole. I will also try to provide advice to students who may be interested in working in labs and other undergraduate activities to prepare for scientific or professional careers. This seminar is part of the Food for Thought Seminar Series.**

Andy Jackson is a Professor in the Department of Plant and Microbial Biology and has been at UC Berkeley since 1985. He has taught Comparative Virology, an upper-division course, since 1991. This course provides an overview of viruses that infect bacteria, archaea, plants and animals, and helps prepare students for careers in biology, medicine and biotechnology. His research addresses plant viruses and the mechanisms used for their replication and pathogenesis. For more information about Professor Jackson's research, please visit his faculty website at <http://epmb.berkeley.edu/facPage/dispFP.php?l=15>.

Political Economy 24, Section 1

Rogues, Scoundrels, and Citizens: The Political Economy of Smuggling and Piracy (1 unit, P/NP)

Senior Lecturer Alan Karras

Tuesday 4:00-5:00, 108 Wheeler Hall, CCN: 71202

This seminar will examine four popular crimes—piracy, smuggling, the drug trade, and corruption—from both historical and political economy perspectives. Students will read widely in some of the more recent non-fiction (but incredibly fun) works in this area, as well as examine some original historical records. The seminar aims to teach students how to evaluate these pernicious crimes against the state. At the same time, it will give students the opportunity to connect the past and the present, which is an important skill to have in much international social science education. **First-year students who are interested in the connection between history and other social sciences, especially those who might not otherwise be aware of the Political Economy major, are encouraged to enroll.**

Alan Karras is Associate Director of and Senior Lecturer in the International and Area Studies Teaching Program. He is the author of *Smuggling: Contraband and Corruption in World History*, as well as several other books and articles on similar subjects. He currently serves as the Chair of the AP World History Development Committee for the College Board, as well as on the Boards of Editors for Cambridge University Press's forthcoming *Dictionary of World History* and the nine-volume *Cambridge World History*. In addition to smuggling and corruption, his research interests are in eighteenth-century Caribbean history, especially as it relates to more recent political economy.

Political Economy 24, Section 2

The Arctic: Changing Climate, Hidden Treasures, Big Power, and Endangered Lives

(1 unit, P/NP)
Dr. Beverly Crawford
Wednesday 3:00-4:00, 214 Haviland Hall, CCN: 71263

The world of the twenty-first century potentially faces three inter-linked tragedies: climate change, resource depletion, and resulting domestic and international conflict over 1) scarce resources, 2)

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population displacement, and 3) issues of sovereignty. The Arctic represents a microcosm in which these three crises are emerging simultaneously. Melting ice is opening the Hudson Bay and new areas of oil exploration, leading Arctic nations to struggle for control of trade routes and energy supplies, while indigenous peoples lose their homes and livelihoods. We will look at the changes in the Arctic and consider these problems as examples of those faced in other regions of the world. We will also examine a number of solutions that may mitigate these crises and serve as models of local and global governance.

Beverly Crawford teaches Political Economy at UC Berkeley and is Co-Director of Berkeley's European Union Center of Excellence.

Psychology 24, Section 1
Psychology of Cross-cultural Communication (1 unit, P/NP)
Professor Kaiping Peng
Wednesday 12:00-1:00, 2523 Tolman Hall, CCN: 73893

The purpose of this seminar is to help you gain a better appreciation of the importance of cross-cultural communication, and to enhance your ability to deal with and understand how communication processes vary across cultures. In order to achieve these goals, we will review key concepts in cross-cultural communication, discuss some common problems in cross-cultural communication, and learn some strategies and skills that are necessary to deal with it. The goal is to help you to become effective communicators in an increasing globalized world. There is no exam for this course. However, you will be responsible for leading the discussion and writing an essay on the topic for which you are responsible. This essay could be either your summary of the classroom discussion for that week or your own review of the literature on the topic. Please take a look at the approximate schedule and topics to decide which topic you want to lead the discussion and write about. We need to have at least one student volunteer for each week. Grades will be based on the following: good attendance, overall interest and engagement in the class, and the essay.

Professor Kaiping Peng is a tenured faculty member in the Department of Psychology at the University of California, Berkeley. He received his Ph.D. in Social Psychology from the University of Michigan in Ann Arbor in 1997. Before coming to the US in 1989, he was a faculty member in the Psychology Department of the Peking University of China for five years. He has served as the assistant chair of the psychology department of Beijing University, head of the social/personality psychology area in Berkeley, a member of the APA leadership council and the co-president of the Fifth International Congress of Chinese Psychologists Worldwide. He was the founding chair of the Department of Psychology at Tsinghua University. He currently directs the Culture and Cognition Lab and the Berkeley Program of Psychological Studies in China at UC Berkeley. He has published eight books and ninety some articles on cultural and social psychology, as well as methodological issues of psychology. According to a recent study by Nia Phillipas of the University of Kansas, he was the world's most cited social psychologist at the associate professor level up until 2007.

Public Health 24, Section 1
Women, Weight and Food (1 unit, P/NP)
Professor Barbara Abrams
Monday 3:00-4:30, 309 Haviland Hall, CCN: 76979

The United States combines the most abundant food supply in the history of the world with a cultural obsession with thinness and perfection that can affect women's body image, sexuality, and sense of power. In this seminar, we will study these relationships from medical, public health, cultural, social, economic, psychological and political perspectives. Topics include food and nutrition, physical activity, psychological health, obesity and eating disorders, "dieting," food systems, 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 and lifestyles for women. **Enrollment is limited to twelve freshmen.**

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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 weight and women's health, particularly during and after pregnancy. She also has studied breastfeeding and the prevention of HIV transmission from mother to child in resource-poor countries.

Rhetoric 24, Section 1
Seeking Justice and Accountability in Cambodia (1 unit, LG)
Professor David Cohen
Wednesday 10:00-12:00, 7415 Dwinelle Hall, CCN: 77867

This seminar will meet the whole semester but have various weeks off to prepare for 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. The first trial of the Director of the Tuol Sleng Interrogation Center will be one of the focal points of the course. 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 does research on and supports the work of war crimes tribunals, human rights courts, and truth commissions in Cambodia, East Timor, Indonesia, Sierra Leone, and Rwanda. Every year Berkeley undergraduates participate in these projects through the Undergraduate Research Apprentice Program (URAP).

Slavic Languages and Literatures 24, Section 1
The Brothers Karamazov: Let's Read It Together (1 unit, P/NP)
Professor Hugh McLean

Friday 9:00-11:00, 6115 Dwinelle Hall, CCN: 79742

This seminar is a collective exploration of this great novel, seen both as a work of literary art and as a response to philosophical issues of its time. **Enrollment is limited to twelve students. No knowledge of Russian is required, nor are there any special qualifications. No term paper. Grade will be based on class attendance and participation.**

Hugh McLean is a Professor Emeritus of Slavic Languages and Literatures at UC Berkeley. He has taught a wide range of courses on Russian literature and was an active member of the faculty from 1967 to 1994. Since then he has been recalled to teach regular courses and more recently has taught Freshman-Sophomore and Freshman seminars. Professor McLean is the author of *In Quest of Tolstoy* (Boston, 2008).

**Social Welfare 24, Section 1
Children's Rights (1 unit, LG)
Professor Mary Ann Mason
Tuesday 11:00-12:00, 4 Havilland Hall, CCN: 80702**

This course explores the rights of children from fetus through adolescence in criminal court, family courts, schools and public venues. Recent Supreme Court cases include juvenile execution, drug testing in schools, freedom of speech and statutory rape.

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Mary Ann Mason is currently Professor and Co-Director, Center, Economics & Family Security at the University of California, Berkeley, School of Law. Mary Ann Mason's scholarship spans children and family law, policy and history. Recent works have focused on working families, in particular the issues faced by the surging numbers of professional women in law, medicine, science and the academic world. Her most recent book (co-authored with her daughter Eve Mason Ekman) is *Mothers on the Fast Track: How a New Generation Can Balance Family and Careers* (Oxford 2007).

**Spanish 24, Section 2
Talking Funny: Language Variation in Spanish and English Literary Texts (1 unit, LG)
Professor Milton Azevedo
Tuesday 11:00-12:00, 205 Wheeler Hall, CCN: 86178**

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 3

Riddles of the Self: Astrology, DNA, and the Faustian Desire for Knowledge (1 unit, LG)

Professor Emilie Bergmann

Thursday 1:00-2:00, 205 Wheeler Hall, CCN: 86180

Long before the belief that DNA provides a key to our identity and to the future, the learned and powerful held the belief that our lives are inscribed in a cosmic Book of Nature created by a divine intelligence. The concept of correlation between each human life and the configurations and movements of stars and planets has been replaced by arrangements of matter on a microscopic level; however, both concepts share the belief that the legibility of the macro- and microcosm conferred power. This is an exploration of the consequences of the belief that human knowledge can enable us to foretell and thus control the future. Our central text will be Pedro Calderón de la Barca's *Life is a Dream*, in which an astrologer-king condemns his son to oblivion based on his interpretations of portents at his birth. The constellation of texts that illumine Calderón's play will be his *Prodigious Magician*, Sophocles's *Oedipus Rex*, Tirso de Molina's *Damned for Despair*, Goethe's *Faust*, and Latino playwright Octavio Solís's *Dreamlandia*. **Calderón's and Tirso's plays will be available in English translation and discussed in English, but students are invited to read them in the original Spanish. This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

Professor Emilie L. Bergmann is Professor of Spanish and co-editor of *Approaches to Teaching Sor Juana Ines de la Cruz* (MLA 2007), as well as numerous articles on sixteenth- and seventeenth-century Spanish poetry and theater. Her teaching and research interests are focused on gender and visual culture in the

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historical watershed of early modern Spain and colonial Spanish America, and contemporary Spanish and Spanish American women's writing.

Spanish 24, Section 4

New Latin American Cinema (1 unit, P/NP)

Professor Natalia Brizuela

Tuesday 1:00-2:00, 235 Dwinelle Hall, CCN: 86478

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.**

Natalia Brizuela is Associate 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, she is currently working on 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
Documentary Playmaking: School Integration, Little Rock, 1957-58 (1 unit, P/NP)
Professor Dunbar Ogden
Monday 2:00-4:00, 8 Zellerbach Hall, CCN: 88045

This seminar will meet for eight weeks, beginning September 13, 2010 and ending November 1, 2010.

On the fateful morning of September 4, 1957, a small group of African-American students walked up to the doors of Central High, Little Rock, to enroll in school—and were turned away by the armed National Guard. Arkansas State Governor Faubus had called out the Guard to surround the building. "Blood will run in the streets," said Faubus, "if Negro pupils should attempt to enter Central High School." A racist mob seethed out front. Eventually the courageous group of children did enter. The first of them graduated in the spring of 1958. They came to be known as the Little Rock Nine; Central High as the first major integrated public high school in the South. Nowadays many people regard their mentor, Daisy Bates, on a level with Martin Luther King, Jr. Each student in our Freshman Seminar will select a person who participated in the integration of Central High, study historical documents linked with that individual, and develop an original monologue in the role of the person, perhaps as one of the Little Rock Nine or as the Governor or as the principal of Central High. We will encourage each student to experiment with a role different from his or her own gender and cultural background.

Professor Dunbar H. Ogden has just published a book entitled *My Father Said Yes*, about the integration crisis at Central High School, Little Rock. He has developed this civil rights book in conjunction with

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students in his Freshman Seminars since 2000. Professor Ogden is the author of books on actors, set design, and theatrical space.

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

Oh Say Can You See (1 unit, P/NP)

Professor Dennis Levi

Monday 4:00-6:00, 491 Minor Hall, CCN: 66405

This seminar will meet every other week throughout the semester, beginning September 13, 2010.

Visual illusions are tricks that the eye plays on the brain. Illusions can tell us a great deal about the heuristics (rules of thumb) and algorithms (structural rules) that might operate in the visual cortex. This seminar focuses on visual illusions and the eye and brain mechanisms that underlie them. The class will include demonstrations, a field trip to view "natural" illusions on the Berkeley campus, and another to view illusions at the Exploratorium. This seminar will meet approximately every other week throughout the semester, beginning the first week of the semester.

Dennis M. Levi is the Dean of the School of Optometry at the University of California, Berkeley. He received his initial training in Optometry in South Africa, and did advanced training in London and New York. He received the O.D. and Ph.D in Physiological Optics from the University of Houston, where he became a Professor of Optometry and Physiological Optics, and Associate Dean for Research and Graduate Studies in the College of Optometry. In 1996, he became the Cullen Distinguished Professor of Optometry, a lifetime University Chair. Dr. Levi achieved international prominence as a vision scientist for his research in amblyopia, a major cause of vision loss in children. He has been a recipient of the American Academy of Optometry's Garland Clay and Glenn Fry awards as well as an honorary doctorate of

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science from the State University of New York. He has served as Chair of the **National Institutes of Health Visual Sciences B Study Section** and a member of the institute's special review committee as well as on the editorial boards of a number of scientific journals.

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.

African American Studies 39E, Section 1
Investigating Life Journeys: Exploring the Search for Identity, Representation and Authenticity (4 units, LG)
Mr. John Quame Patton
MW 2:00-4:00, 106 Wheeler Hall, CCN: 00562

As students continue at the University of California, Berkeley, the experience presents a path. Along this path, students may encounter obstacles to overcome, social and historical phenomena, information that challenges their views and identities, and ways of thinking that may lead them to interrogate their purpose within the university and also within society. This seminar will introduce students to diverse epistemological models and practices for navigating the academy and how the cultural environment influences their identity as a budding scholar. To assist students along their own individual journeys throughout the course and time at the university, students will engage in close reading of texts, critical viewing of films and in-depth analysis of various course themes and ideas. When examined from an interdisciplinary approach, each book and film will present distinct cultural representations, identities and practices that simultaneously share common themes that students will be challenged to locate. How may salient themes and points made by the authors and filmmakers be interconnected? In addition, how may these themes connect to current issues occurring in local communities and the larger society? Lastly, how might students connect course material to their own individual life journeys? In addition, students will be exposed to several guest scholars, many of whom attended UC Berkeley. These guests will share their unique stories, describing their journey not only through the university onto their respective career paths but also personal epiphanies and realizations about "self" attained along the way. As a final assignment, each student will be required to write, produce or perform a piece that connects several major concepts from the books and films to his/her own personal journey. This seminar may be used to satisfy the Social and Behavioral Sciences breadth requirement in Letters and Science.

John Quame Patton is working on his doctorate in African Diaspora Studies at the University of California, Berkeley; earned his MA in Language, Literature and Social Studies from the University of Columbia, Teacher's College (1994); and earned his B.A. in African American Studies at the University of California, Berkeley (1992). He is currently working on two books. The first effort is a collaboration with Professor of Sociology Greg Zaire, chronicling the evolution of Hip Hop culture, titled "Not a Decade After, Not a Decade Before." The second effort is a book that will explore the effects of capitalism on Hip Hop music. Quame teaches an introductory seminar to the university that seeks to forge critical thought through the analysis of various themes central to Hip Hop. Quame's professional music career began in 1998 as Superstar Quamallah when he released his first mini album, Don't Call Me John, on ABB Records. Since that time he has worked with and alongside artists such as Defari, Dialated Peoples, Ras Kass, the Heiroglyphics Crew, and current fellow graduate student Taj the Infinite. Having lived in New York, North Carolina, Los Angeles and Oakland, Quame brings a wealth of experience, humor and oral stories to his classes.

African American Studies 39F, Section 1
Owning Your Seat At Cal: African American Student Identity (4 units, LG)
Ms. Cara Stanley
Tuesday and Thursday 2:00-4:00, 50 Barrows Hall, CCN: 00725

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Utilizing an interdisciplinary framework and drawing on the discipline of African American Studies, this course will interrogate how "Black" as a racial category was constructed and codified. We will specifically examine how the construction and concept of "Blackness" manifests and how it impacts the lived reality (i.e. education, employment and housing etc.) of people classified as Black in America. We will particularly focus on how this concept of "Blackness" influences African American student identity. Students will be introduced to key campus resources and individuals that can help enhance their academic and personal experiences at Cal. Guest lectures and graduate students in the African Diaspora Studies program will serve as mentors throughout the seminar. **This course is designed to introduce freshmen and sophomores to the structures and paradigms of a research University and the array of analytical models to which you will be exposed to during your academic tenure at the University of California, Berkeley.**

Cara Stanley brings over twenty-five years of experience teaching, training and delivering academic support services in higher education. She directs the development of innovative curriculum and learning models specifically designed for students attending a research one university. Employing peer based learning models that are grounded in the theoretical frameworks of constructivism, critical pedagogy, collaborative and cooperative learning; she strives to enhance and empower the learning experience of budding scholars. In addition to managing the primary academic support service on Cal's campus, Cara is a lecturer in the African American Studies department. Drawing from her interdisciplinary training in Ethnic Studies from the University of California at Berkeley and her Interdisciplinary Social Science graduate training from San Francisco State, Cara creates dynamic courses that support student transformation as learners, scholars and people. She currently teaches courses on African American Student Identity, Black Feminist Thought and Black Female Intellectuals.

Architecture 39C, Section 1
Design in Earthquake Country (3 units, LG)
Professor Mary Comerio
TuTh 9:30-11:00, 170 Wurster Hall, CCN: 03702

This seminar introduces seismic design principals to any student interested in how and why buildings fail in earthquakes. Students will learn what causes earthquakes and why some building types are at risk. The course will focus on housing, schools, commercial and industrial buildings in the U.S. and in developing countries to evaluate how different building types perform in earthquakes. The course will also explore techniques for strengthening existing buildings and different approaches to rebuilding after major disasters. This course will help a student to understand the basic structural components of existing buildings and performance-based design principles for new buildings. Case studies from recent earthquakes in China, Chile, Haiti, Mexico, and other countries will focus attention on the global construction issues and opportunities for improvement. This seminar may be used to satisfy the Social and Behavioral Sciences breadth requirement in Letters and Science.

Mary Comerio is an internationally recognized expert on disaster recovery. She joined the faculty of the

Department of Architecture at UC Berkeley in 1978 and served as chair from 2006-09. As an architect, she has designed numerous public and private facilities including market-rate and affordable housing. In the last two decades, her research has focused on the costs and benefits of seismic rehabilitation for existing buildings (particularly housing), post-disaster recovery and reconstruction, and loss modeling. For additional information about Professor Comerio, visit her faculty web page via the Architecture Faculty web page at <http://arch.ced.berkeley.edu/people/faculty>.

Comparative Literature 41A, Section 1

What's in an Epic? (4 units, LG)

Ms. Natalie Cleaver

Tuesday and Thursday 11:00-12:30, 24 Wheeler Hall, CCN: 17283

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We tend to think of epic as long and serious, full of noble characters at war with vengeful gods and impossible monsters. It takes place in a "masculine" world, glorifying great men engaged in lofty battles. The subject matter is weighty, following the fate of a single hero who ensures the triumph of a chosen people by destroying all obstacles, human, divine, or monstrous, that stand in the way of that nationalistic destiny. In this course we will question this conventional view of epic. What makes an epic an epic? Can this genre be defined coherently? What do we do with epics that do not fit all or even part of this description? After a brief historical overview of the epic tradition of western Europe, we will read four major epics from four different national traditions in their entirety: Lucan's *Pharsalia*, Ariosto's *Orlando Furioso*, Rabelais's *Gargantua*, and Milton's *Paradise Lost*. While these are major texts of the epic tradition, in many ways they violate the rules of the genre. What do we make of Lucan's mutilated bodies as a metaphor for a state ripped apart by its own desire for empire? Where do we place Rabelais's obscene, extravagant giants and parodies of noble genealogies? What of Ariosto's women warriors and Satan as the epic hero of *Paradise Lost*? Do we still consider them epics? How do these disparities affect our ability to define genre? This seminar may be used to satisfy the Arts and Literature breadth requirement in Letters and Science.

Natalie Cleaver is a Ph.D. candidate in her sixth year in the department. Her work focuses on medieval and early modern Italy, France, and England, with an emphasis on theology and political philosophy. Her primary concerns include problems of historical change and continuity, questions of formal and philosophical secularization, and the construction of pre-national identity. She is currently writing her dissertation: "Judgment Call: Literature and Belief in Pre-Reformation Italy."

Computer Science 39P, Section 1

Photographing History in the Making (2 units, P/NP)

Professor Brian Barsky

Friday 12:00-2:00, 405 Soda Hall, CCN: 26256

On the first day of instruction, please meet Professor Barsky at 12:10 pm at the door outside the Oak Room at the Foothill Dining Commons. At 1:10 pm, class will meet in 405 Soda Hall. Additional Food for Thought dining arrangements will be discussed in class.

Responding to this transformational period in the history of the university, this experimental seminar will

explore photographic technique and be conducted in the context of the current climate of change and conflict sweeping the university. The seminar aims to hone photographic skills for both film and digital photography. Special emphasis is on the roles of documentary photography, photojournalism, and activist photography as both documenters of and vehicles for change. This seminar is intended for students who are experienced in photography. To complete the course assignments, students must have a camera that has manual control of exposure and focus and either interchangeable lenses of different focal lengths or a zoom lens. Although access to both a film camera and a digital camera is preferred, this is by no means necessary. We will discuss aesthetic, semantic, and technical aspects of photography. Sample topics include quality of light, exposure control, depth of field, composition and patterns, perspective, color science, the human visual system, spatial and color perception, and digital versus chemical processing. This seminar is not about the subject of computer science even though it is offered through the Computer Science Division. Print film assignments are encouraged, but not required; however, darkroom facilities are outside the control of the class. Students are expected to take photographs on a weekly basis. Student photographs will be critiqued in class. Students should be interested in learning about changes that are occurring at the university and in discussing these topics (for example, fiscal issues, priorities, privatization, students rights), as well about how documentary photographs convey and affect political change. Political discussion will be an integral part of the seminar. **The seminar is open to freshmen only. Class participation is essential. 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. "Guidelines Concerning Scheduling Conflicts with Academic Requirements" by the Committee on Educational Policy state "If unforeseen conflicts arise during the course of the**

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semester students must promptly notify the instructor and arrange to discuss the situation as soon as these conflicts (or the possibility of these conflicts) are known" and "faculty may decline to enroll students in a class who cannot be present at all scheduled activities." This seminar is part of the Food for Thought Seminar Series.

A relevant photograph by Professor Barsky can be viewed at the link below:

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 include computational photography, contact lens design, computer methods for optometry and ophthalmology, image synthesis, computer aided geometric design and modeling, CAD/CAM/CIM, interactive and realistic three-dimensional computer graphics, visualization in scientific computing, computer aided cornea modeling and visualization, medical imaging, and virtual environments for surgical simulation.

**Earth and Planetary Science 39A, Section 1
Geological Influences in California Society Today (2 units, LG)
Professor Mark Richards and Dr. Colin Amos
MW 4:00-5:00, 265 McCone Hall, CCN: 19009**

Students must attend the first class where field trip dates and arrangements will be discussed.

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. Attendance at initial six class meetings and 4-day field trip is mandatory. **Enrollment is limited to ~30 freshmen. This course is restricted to freshmen only unless the instructor's consent is obtained. If you have any questions regarding this seminar, please contact Catherine Pauling at 642-4068 or cpauling@berkeley.edu.**

Mark Richards is a Professor in the Department of Earth and Planetary Science, and currently Dean of Physical Sciences. His research is focused on understanding the dynamics of planetary interiors, especially Earth, Venus, Mars, and the Moon. His research group carries out large-scale computational simulations, performs laboratory fluid dynamics experiments, and synthesizes a wide variety of information on interior dynamics, including the gravity field, seismology, geochemistry, planetary imaging, and field investigations. Professor Richards also enjoys exploring Earth's surface by climbing, skiing, and white-water rafting whenever possible. For more information regarding Professor Richards, please visit his faculty web page at http://eps.berkeley.edu/development/view_person.php?uid=7517.

Colin Amos is a field geologist specializing in active tectonics and geomorphology. As tools, he incorporates geologic, geomorphic, and structural field studies with GIS, paleoseismology, InSAR, Quaternary geochronology, and geophysics to characterize active crustal deformation and interactions with Earth surface processes. He is currently a NSF Earth Sciences Postdoctoral Fellow at UC Berkeley. For more information regarding Dr. Amos, visit <http://seismo.berkeley.edu/~cbamos/Home.html>.

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Engineering 39F, Section 1

Community Assessment of Renewable Energy and Sustainability (CARES) (1.5 units, P/NP)

Professor Alice Agogino, Mr. Ryan Shelby and Mr. Daniel Wilson

**Monday 4:00-5:00, 254 Sutardja Dai Hall (CITRIS building, North side of campus),
CCN: 27722**

This seminar is on CARES (Community Assessment of Renewable Energy and Sustainability) with application to the Pinoleville Pomo Nation. CARES research has shown that living sustainably, having access to accurate environmental data, and having implementable solutions are of major concerns to consumers. Furthermore, the research indicates that people would be more eager to adopt a sustainable lifestyle if they are able to collaborate, share and work together with others. CARES seeks to help reduce climate change by being the first to close the loop of assessment, advisement and implementation of a more sustainable lifestyle. This seminar will cover approaches to community assessment of renewable energy, with a focus on conservation, geothermal, microhydro-electric, solar photovoltaic, solar hot water heating, and wind energy. We will also explore issues associate with creating a "green corridor" with electric vehicles in the San Francisco Bay Area with connections to Northern California tribes. Related

website: <http://best.berkeley.edu/> and <http://www.planetcares.org/>. **Enrollment is limited to ten students.**

Alice Agogino is the Roscoe and Elizabeth Hughes Professor of Mechanical Engineering at UC Berkeley and has served in a number of administrative positions, including Associate Dean of Engineering and Faculty Assistant to the Executive Vice Chancellor and Provost in Educational Development and Technology. Her research interests include gender & technology, green design, sensor fusion, computer-aided design, design databases, educational technologies, digital libraries, on-line communities, and MEMS design. She also runs a digital library of science, technology, engineering and mathematics courseware at www.smete.org.

Ryan Shelby is a fifth year Alfred P. Sloan Ph.D. Student Fellow in the Department of Mechanical Engineering at the University of California, Berkeley. His research focuses on the macro- and micro-decisions that members of residential, industrial, academic, and federal communities make concerning sustainability and renewable energy technologies. Mr. Shelby is also the co-founder and project manager for the Community Assessment of Renewable Energy and Sustainability (CARES).

Danny Wilson is a first year MS/PhD student at UC Berkeley. He has enjoyed an eclectic career since graduating with his BS in mechanical engineering from Colorado State; he has spent time as a high school tech teacher, aerospace hydraulics engineer for Boeing and Airbus, and world-traveling backpacker having visited some thirty-five countries. Danny is actively involved in CARES and Fuel from the Fields (a multinational project to bring clean-burning charcoal made from agricultural waste to Haiti), and hopes to focus his MS/PhD research on design for sustainability and co-design of engineering solutions for the developing world.

History 39I, Section 1

Technology and Philosophy in China and the West: Explorations in Comparative Cultural History (4 units, LG)

Professor David G. Johnson

Tuesday 2:00-4:00, 2303 Dwinelle Hall, CCN: 40122

Why did technological development follow such very different paths in China and the West? There were many reasons, but I believe that the most fundamental one has to do not with economic, social, political, legal, or environmental factors, but with the radically different intellectual-emotional presuppositions that educated Chinese and Europeans used to frame the natural world and man's place in it. The goal of this course is first to chart the very different trajectories of technological development, and second to understand the presuppositions that help account for the differences. Toward this end we will compare specific examples of Chinese and Western achievements in three areas: naval architecture and navigation,

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which make it possible for nations first to explore and then to impose their will on distant places; power technology, whose supreme expression before the twentieth century was the steam engine; and precision measurement, symbolized above all by the clock. It will be seen that Chinese attitudes about both power and precision were very different from those of Europeans. We will read some important attempts to account for the differences in the history of science and technology in China and Europe and, finding them inadequate, will turn to Greek and early Chinese philosophy in an attempt to identify the most fundamental causes. Throughout we will weigh, implicitly or explicitly, the human costs and benefits of pre-modern China's ritual-centered civilization and of our own science-centered one. This seminar may

be used to satisfy the Historical Studies breadth requirement in Letters and Science.

David Johnson is Professor of Chinese History and has been at UC Berkeley since 1984. Before that he taught in the Department of East Asian Languages and Cultures at Columbia University for nearly ten years, where he frequently taught Columbia College's core curriculum course on Chinese and Japanese great books. He has published on medieval Chinese history and literature, traditional Chinese popular culture, and early Chinese historical writing, among other subjects. He has twice co-directed NEH Summer Seminars for College Teachers on "Law, State, and Individual in Ancient Greece, Rome, and China," most recently in July 2003.

Jewish Studies 39B, Section 1

History of the State of Israel: A Disintegrative View (2 units, P/NP)

Amos Bitzan

Wednesday 10:00-12:00, 214 Haviland Hall, CCN: 47805

This Freshman and Sophomore Seminar examines the history of the state of Israel, beginning with the Zionist movement in the late nineteenth century and concluding in the present. In our seminars, we will build a comprehensive picture of Israel's politics, cultures, and societies, with an eye to the many conflicts inside and outside its (still undefined) borders that have determined the country's existence. It draws on a variety of sources, ranging from political legislation to excerpts from novels. You will emerge from this course with a mastery of this complicated history, which will allow you to evaluate critically the "official" narrative of Israel as well as the new narratives of those seeking to overturn it.

Amos Bitzan is an advanced Graduate Student of Jewish History in the Department of History at UC Berkeley.

Legal Studies 39D, Section 1

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

Mr. Alan Pomerantz

Monday 10:00-12:00, 4 Evans Hall, CCN: 51503

The debate about morals has moved steadily into the realm of the Supreme Court, but people differ on what exactly the role of the Court should be. Some have strongly argued that the Court's interpretation and application of the Constitution have adversely affected our fundamental rights and usurped powers from other branches of government. This position claims the Court has created an "Imperial Judiciary." Others argue as strongly that the Court has acted properly to protect fundamental freedoms and individual rights in the face of unprecedented political and governmental efforts to limit them. This position claims the Court has, in fact, fulfilled the role envisioned for the Court by the Constitution. This seminar will follow the Socratic method in examining moral and political issues that have a constitutional basis and the Court's participation in the debate on topics such as gay rights (including gay marriage), abortion, euthanasia, capital punishment, college speech codes, "hate" speech, and racial and ethnic profiling. We will read Supreme Court cases, as well as political and legal commentary from across the political spectrum, and consider not only the opinions of the Justices, but also why they hold those opinions. Students will be asked to develop and apply critical thinking skills and are expected to develop and support their own views and opinions regarding the relevant topics. This seminar may be used to

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satisfy the Philosophy and Values or Social and Behavioral Sciences breadth requirement in Letters and Science.

Alan J. Pomerantz, Esq., is a practicing lawyer and Senior Counsel of Orrick, Herrington & Sutcliffe, a major international law firm. A graduate of the NYU School of Law, he also studied in Chile and received an advanced legal degree from the University of Amsterdam (Netherlands). He has lectured and taught widely, including at the NYU School of Law, NYU College of Arts and Science, the University of Amsterdam, Columbia Graduate School, and the University of Concepcion (Chile). He has published numerous articles and contributed to several treatises on legal topics. Mr. Pomerantz is recognized by several peer publications as one of the world's leading lawyers. Mr. Pomerantz has participated in important and controversial matters affecting individual rights, including death penalty appeals, right of public artistic expression, right of privacy for acts of consenting adults, and numerous free speech cases.

Music 39M, Section 1

Classical Vocal Works of African-American Composers (3 units, LG)

Lecturer Candace Johnson

Tuesday and Thursday 9:30-11:00, 124 Morrison Hall, CCN: 60422

This seminar offers a general survey of vocal literature written by Black composers of classical music, with primary emphasis on the art song tradition. Students will gain an understanding of the unique musical, sociological, and literary contexts that led to the development of this hybrid body of music. Works will be considered in the broader context of American classical vocal literature. Class lectures will be supplemented with recordings, demonstrations, and discussion. Reading and listening assignments will be given regularly, with short papers and class presentations assigned periodically. There are no pre-requisites, and no prior music experience is required. **Enrollment is limited to twenty-two students.** This seminar may be used to satisfy the Arts and Literature breadth requirement in Letters and Science.

Soprano Candace Johnson received her Doctorate of Musical Arts in voice performance from the University of Michigan, where she studied with renowned Shirley Verrett. She recently completed a Chancellor's Postdoctoral fellowship at the University of California, Berkeley in the Department of Music (2005-2008). She continues to focus her research and performance on the analysis and dissemination of classical solo songs by African-American composers. Candace has played the lead soprano roles of Puccini's Suor Angelica, Menotti's The Medium, and Mozart's Bastien and Bastienne, and the comic role of Cherubino in Mozart's Nozze di Figaro. Candace has concretized in various cities throughout the country. She is known most for her crystalline high notes and her captivating interpretation and stage presence. She is featured on the CD recording of The New Anthology of African-American Art Songs, and she is currently working with producer Walter Hawkins, Jr. to record her debut "gospel-opera" album. With more than more than 20 years of teaching experience, Candace shares her music as faculty member of U.C. Berkeley's Young Musician's Program, Los Medanos Community College, the Freedom Performing Arts Center, and Revival Center Ministry's Training Institute, where she designed the worship curriculum for vocal and creative arts.

Native American Studies 90, Section 1

Myth, Memory, and History: Understanding Native America (4 units, LG)

Visiting Lecturer Diane Pearson

MWF 11:00-12:00, 104 Barrows Hall, CCN: 61121

This course provides an overview of the history of the indigenous peoples of the Western Hemisphere, and proceeds from the premise that knowledge of Native America is essential to the study of the Western Hemisphere. It will survey a number of societies, cultures, lifestyles, and contemporary and historical issues. This seminar may be used to satisfy the Social and Behavioral Sciences or Historical Studies breadth requirement in Letters and Science.

Dr. Pearson holds a Ph.D. in American Indian Studies and specializes in American Indian law and policy, societies and culture, and education.

Political Science 41, Section 1
Crises of Asian Nationalism (4 units, P/NP)
Professor Lowell Dittmer
Monday 5:00-8:00, Classroom L20 in Unit 1, CCN: 71486

Food for Thought dining arrangements will be discussed in class.

This seminar is designed to acquaint beginning students with some of Asia's chronic problem areas. We begin with a broad overview that considers some of the political and cultural characteristics of this vast and diverse continent in general. We then attempt to focus on one basic problem, illustrated by three cases. That basic problem is that despite the impressive economic performance of Asia as a whole, there are several chronic political flash points over territorial, ideological, or ethno-national issues that inhibit normal relations in the region and threaten at times to erupt into violence. Three of the most persistent and apparently insoluble cases are those of China/Taiwan, North/South Korea, and India/Pakistan. All three of these situations remain consistent regional sources of tension that threaten to trigger a crisis implicating many other countries, perhaps including the US—and all three cases now could conceivably involve nuclear weaponry. **Enrollment is limited to freshmen. This seminar is part of the Food for Thought Seminar Series.** This seminar may be used to satisfy the Social and Behavioral Sciences breadth requirement in Letters and Science.

Professor Dittmer received his Ph.D. from The University of Chicago in 1971. His scholarly expertise is the study of contemporary China. He teaches courses on contemporary China, Northeast Asia, and the Pacific Rim. His current research interests include a study of the impact of reform on Chinese Communist authority, a survey of patterns of informal politics in East Asia, and a project on the China-Taiwan-US triangle in the context of East Asian regional politics. Professor Dittmer's recently published books and monographs include *Sino-Soviet Normalization and Its International Implications* (University of Washington Press, 1992), *China's Quest for National Identity* (with Samuel Kim, Cornell University Press, 1993), *China Under Modernization* (Westview Press, 1994), and *South Asia's Nuclear Crisis* (M.E. Sharpe, 2005).

Psychology 39E, Section 1
The Psychology of Art (2 units, P/NP)
Professor Art Shimamura
Thursday 2:00-4:00, 3105 Tolman Hall, CCN: 73898

What happens when we experience a work of art? What does it mean to have an aesthetic reaction? Can we derive general properties of such experiences or is there no accounting for taste? Philosophers, psychologists, and recently neuroscientists have sought answers to these questions. This course examines the ways we experience the visual arts. In particular, we will discuss how aspects of psychology—such as perceiving, knowing, and feeling—help us understand works of art and their aesthetic appeal. **No background experience in psychology, biology, or art is required.** This seminar may be used to satisfy the Arts and Literature breadth requirement in Letters and Science.

Arthur P. Shimamura is Professor of Psychology and faculty member of the Helen Wills Neuroscience Institute. He uses brain imaging techniques and analyses of brain-injured patients to explore the biological underpinnings of human memory and cognition. He is also interested in explorations of how we

experience art. He is recipient of the Distinguished Teaching Award from the UC Berkeley Division of Social Sciences, has been Scientific Advisor of the San Francisco Exploratorium Science Museum, and was awarded a Guggenheim fellowship to examine art, mind, and brain.

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Psychology 39K, Section 1

An Introduction to Observation in Psychological Research: Studying Videotaped Behavior (2 units, P/NP)

Professor Mary Main

Wednesday 9:00-11:00, 3105 Tolman Hall, CCN: 73899

With the advent of videotape and DVD, behavioral research in psychology has become increasingly incisive. Early methodologies relied on "live" observations that were recorded in the form of narrative records or behavioral counts; a few relied on film, but this was expensive and cumbersome and undertaken only infrequently.

Videotape analysis allows for the repeated study of an individual's facial expression, body movements, and intonation. A great deal has been learned by this mechanism, and Main's laboratory has developed some of the central observational methodologies in attachment research (roughly, parent-infant relationships studied in the ethological-evolutionary tradition). Surprisingly, some fleeting behaviors, facial expressions, and vocalics in infants and parents lasting just ten or fewer seconds have been found predictive of critical aspects of later development.

While not focused on attachment per se, this course will introduce students to the way in which repeated study of videotaped behavior can be used in research and in increasing the understanding of individuals. We will use some clips from YouTube in these studies, as well as some selected videotapes of parents and infants from our own and other laboratories.

Course requirements: The course will be graded as pass/not-pass. Attendance at each meeting is required, as is active participation. During class, students will sometimes attempt written records of the videotaped behaviors presented, and then interpret them. These exercises will be discussed in class, and reviewed by the instructor. These are not "tests": the focus will be on creative interpretations derived from careful observations.

Enrollment is limited to twelve freshmen and sophomores. This seminar may be used to satisfy the Social and Behavioral Sciences breadth requirement in Letters and Science.

Professor Main's academic interests are widespread, including principally the field of parent-child attachment, but ranging to ethology, evolutionary theory, and the study of conversational processes or discourse. At Berkeley, she and her colleague Dr. Erik Hesse, together with their students, have discovered that infant displays of disorganized conflict behaviors in the presence of the parent are related to frightening and dissociative forms of parental behavior, and may increase vulnerability to psychopathology in later life. They have also discovered that the way parents talk about their experiences with their own parents in childhood are predictive of the way they will treat their own children (even when they are interviewed about these experiences prior to the child's birth). Interested students can find these and other aspects of her work described on the internet.

**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 Avenue - Room L45, CCN: 83203

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 breadth requirement in Letters and Science.

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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.

Astronomy 84, Section 1

Space, Time, and the Cosmos (1 unit, P/NP)

Professor Alex Filippenko

Monday 11:00-12:00, 544 Campbell Hall, CCN: 06412

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 open to sophomores who have not taken Astronomy 24: Space, Time and the Cosmos.**

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 Space Telescope, 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 620 articles on his research, Filippenko has received numerous awards and is one of the world's most highly cited astronomers; he is also an elected member of the National Academy of Sciences. 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, skier, and hiker, he enjoys world travel and is addicted to observing total solar eclipses.

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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.

Earth and Planetary Science 84, Section 1

Climate Change and Water in California: Past, Present, and Future (2 units, LG)

Professor Lynn Ingram

Wednesday 11:00-1:00, 365 McCone Hall, CCN: 19033

Water is critical for sustaining California's wildlife, natural resources, industries, and its large and growing population. California is the fifth largest economy in the world, with a twenty-eight-billion-dollar-a-year agricultural industry, yet it has an unreliable water source. California's economy was based on climate conditions during the 20th century, but according to studies of past climate change, the past 100 years were relatively wet and benign compared with the past several thousand years. In this seminar, we will examine the long-term history of climate in California, including examples of past megadroughts and catastrophic floods. Most of these past extreme events were of much longer duration and severity than any we've experienced over the past century. What are the implications for water resources and ecosystems in California in a future world of global warming? **The seminar is intended for students interested in exploring multiple lines of evidence for climate change and water availability in California's past (so for students with an interest in geology, geography, or environmental science).** This seminar may be used to satisfy the Physical Sciences

breadth requirement in Letters and Science.

B. Lynn Ingram is a Professor in the Departments of Earth and Planetary Science and Geography. Her research is focused on past climate change. She uses environmental-sensitive isotopes in sediment cores from oceans, estuaries, and lakes to unravel changes in past climates and environments, including temperature, salinity, ocean circulation, and coastal upwelling. Her field areas include San Francisco Bay, Santa Barbara Basin, and coral reefs in the Pacific Ocean.

English 84, Section 1
Utopian and Dystopian Films (2 units, P/NP)
Professor George Starr
Tuesday 6:00-9:00, 300 Wheeler Hall, CCN: 28151

We will mainly be viewing and discussing Utopian and anti-Utopian movies. Depending on the intended majors of those enrolled, we may use other kinds of visual material as well, from architecture, city planning, world's fairs, etc. We will not be dealing with literary Utopias or Dystopias, but some theoretical and sociological background reading will be recommended. This seminar may be used to satisfy the Arts and Literature breadth requirement in Letters and Science.

Most of G. A. Starr's research and teaching has been on eighteenth-century English literature, but in recent years he has also offered courses on nineteenth- and twentieth-century California writers, and on Utopian texts and social movements.

English 84, Section 2
High Culture, Low Culture: Postmodernism and the Films of the Coen Brothers (2 units, P/NP)
Professor Julia Bader
Wednesday 2:00-5:00, 300 Wheeler Hall, CCN: 28154

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We will concentrate on the high and low cultural elements in the noir comedies of the Coen brothers, discussing their use of Hollywood genres, parodies of classic conventions, and representation of arbitrariness. We will also read some fiction and attend events at the Pacific Film Archive and Cal Performances. This seminar may be used to satisfy the Arts and Literature breadth 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 3
The Monster in the Mirror: Frankenstein and Dracula (1 unit, P/NP)
Professor Ron Loewinsohn
Wednesday 2:00-3:00, 204 Wheeler Hall, CCN: 28157

We will read B. Stoker's *Dracula* and M. Shelley's *Frankenstein*, together with some film versions of these

two archetypal horror tales, appreciating them as mirror opposites of each other, and investigating what they have to tell us about human agency, responsibility and denial.

Professor Ron Loewinsohn received his B.A. from UC Berkeley in 1967 and his Ph.D. from Harvard in 1971. He is a Professor Emeritus of English at UC Berkeley and began teaching on campus in 1970. Professor Loewinsohn has authored over seven collections of poetry and two novels. He is the editor of a collection of essays by W.C. Williams, as well as other essays and reviews.

English 84, Section 4

Socrates as a Cultural Icon (2 units, P/NP)

Professor John Coolidge

Friday 12:00-2:00, 205 Wheeler Hall, CCN: 28159

Socrates has often been compared to Jesus, an enigmatic yet somehow unmistakable figure who left nothing in writing yet decisively influenced the mind of his own and later ages. In the first weeks of the course we will read and discuss Aristophanes' comic send-up of Socrates in *Clouds* and the Platonic dialogues purporting to tell the story of Socrates' trial and death (*Euthyphro*, *Apology of Socrates*, *Crito*, and selections from *Phaedo*), attempting to (a) trace the original construction of the Socratic icon, and (b) briefly note its relevance to present-day "issues" such as generational conflict, science vs. religion, free speech, academic freedom, self and society, etc. After that class sessions will consist of team presentations, prepared in consultation with the instructor, on contemporary controversies involving some of these issues. The object is to provoke lively debate. **The course is intended to appeal especially to students who are desirous of getting in on the intellectual conversation of our time and curious about its cultural antecedents.** This seminar may be used to satisfy the Arts and Literature breadth requirement in Letters and Science.

John Coolidge, emeritus professor of English and amateur classicist, has taught courses in the Renaissance and seventeenth century, Milton, Jane Austen, the English Bible as Literature, etc. His publications include articles on Shakespeare, Milton, Marvell, and Fielding, and a book on Puritanism and the Bible.

History 84, Section 1

Image and Concept: Movies as Historical Documents for an Understanding of the Era of the Great Depression in The United States, 1931-1941 (2 units, P/NP)

Professor Samuel Haber

Wednesday 2:00-5:00, 125 Dwinelle Hall, CCN: 39264

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This seminar will meet the entire semester. For eight of those weeks we will meet from 2:00-5:00 p.m. to view and discuss eight movies. During the alternate weeks the seminar will meet for approximately an hour and a half to further examine the issues raised by the movies and those presented by the course reader. The movie schedule will be available at the first class meeting.

We will be studying the history of this country, focusing on a brief period, one decade. Yet during those years the nation entered into and responded to the deepest economic downturn in our history. That experience transformed our country. It clearly provided precedents that are being called upon today, in

our present time of economic difficulties.

Movies provide invaluable evidence of what it was like to be alive in "the era of the Great Depression." Movies have significant advantages and shortcomings as historical documents. We will examine both. What are the benefits and drawbacks of images and concepts as ways of knowing? Can movies adequately deal with a complex historical event? In what sense can movies tell the truth? In what way do movies help define the values of their audiences, and in what way are the movies themselves shaped by existing values of their audiences? These are some of the questions that we will try to answer.

In addition to viewing the movies, each student must purchase and study closely a reader providing information and background for the course. At the end of the semester, each student must submit a ten-page typewritten critical summary paper tying the course together in his/her own way. No additional reading is required for this paper, only additional thinking. **This seminar is open to freshmen and sophomores. Enrollment is limited to fifteen students. At the first and second meeting of class, a few students may be admitted, with the permission of the instructor, to replace those enrollees who have decided to go elsewhere.** This seminar may be used to satisfy the Historical Studies or Social and Behavioral Sciences breadth requirement in Letters and Science.

Samuel Haber is an Emeritus Professor in the History Department who is writing a book on American History of the era 1920-1945.

Integrative Biology 84, Section 1
What's Love Got to Do with It? A Survey of Animal Mating Systems (1 unit, P/NP)
Professor Eileen Lacey
Tuesday 2:00-4:00, 5053 Valley Life Sciences Building, CCN: 43023

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

Birds do it ... bees do it ... all members of sexually reproducing species find partners in order to produce offspring. The specific strategies that males and females use to acquire mates, however, vary dramatically and include some of the most unusual behaviors that animals exhibit. Using directed readings, student presentations, and in-class discussion, this seminar explores diversity among animal mating systems, including the reproductive strategies employed by humans. Building upon general principles derived from natural and sexual selection theory, we consider differences in fundamental aspects of reproductive behavior such as the number of partners per individual, the nature and strength of social relationships among partners, and which partner(s) provide care to young. **Enrollment in this seminar is limited to sixteen sophomores. Students can be from any intended major or area of interest on campus. Waitlisted students should attend the first section in case openings become available.**

Eileen Lacey is a behavioral ecologist who studies the ecological and evolutionary bases for sociality in vertebrates, with an emphasis on mammals. Currently, Dr. Lacey's work focuses on the reasons for group living and cooperation in several species of South American rodents. Her analyses combine field studies of the behavior and ecology of these animals with molecular genetic analyses of patterns of parentage and

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ecology, and mammalogy.

Media Studies 84, Section 1

The Rebirth of Libraries (1 unit, LG)

Professor Thomas Leonard and Ms. Elizabeth Dupuis

Tuesday 3:30-5:00, 303 Doe Library, CCN: 56739

Today new investments in libraries mark the campus landscape. More than \$100 million was spent in recent years to restore the Bancroft Library and to build the Starr East Asian Library and the Hargrove Music Library. Plans are taking shape now to spend another large sum to renovate the Moffitt Undergraduate Library. Societies have been building libraries since ancient times, but it is remarkable that this work continues in a digital age. Do we need more space when so much information can be delivered to a digital display? All of the ancient libraries, both buildings and collections, crumbled. Should we put more faith in modern libraries?

We will tackle these questions through background reading on how libraries evolved around the world and by questioning the professionals on the Berkeley campus who have been responsible for new library projects. Moffitt, as it is now and as it may become, will be studied as field work. Architects and librarians will be our guests, and they will be very interested in learning how you actually conduct your studies at Berkeley. Since you, as undergraduates, are the target of the Moffitt planning, we will put you in a position to critique the professionals' plans.

While this seminar is about the built environment of your own school, it opens up wider questions about our society. How do we provide access to knowledge? How does learning take place outside the classroom? Is our public sphere now to be defined by what private donors wish to support?

Enrollment is limited to fifteen students.

Professor Thomas Leonard has published three books on the development of American media and leads one of the largest research libraries in the United States. He has taught in the Graduate School of Journalism since 1976 and is a past director of the Mass Communications Group Major.

Associate University Librarian Elizabeth Dupuis has led the Doe/Moffitt Libraries for five years and has had a wide-ranging career nationally advancing educational initiatives.

Natural Resources 84, Section 1

Global Environment Theme House Sophomore Seminar (1 unit, P/NP)

Professors Matthew Potts and Peter Berck

Thursday 5:00-6:00, 4301 Foothill 4 - Classroom A, 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.**

Matthew D. Potts is an Assistant Professor of Forest Ecosystem Management in the Department of Environmental Science, Policy and Management. He has an interdisciplinary background with training in mathematics, ecology and economics with a BS from the University of Michigan and a PhD from Harvard University. In addition, he has extensive international experience conducting field research in tropical forest throughout the world. His varied research interests include spatial aspects of resource management and epidemiology as well as how human actions, values, and ethics affect biodiversity conservation.

Peter Berck is a Professor of Agricultural and Resource Economics and Policy. He was an undergraduate at Cal, received a Ph.D. in Economics from MIT in 1976, and has been teaching at Cal ever since. His research has been on the economics of forestry, fisheries and water, on food security in developing nations, and on the costs of environmental regulation.

Vision Science 84, Section 1
Comparative Eye Design (1 unit, P/NP)
Professor Christine Wildsoet
Thursday 4:00-6:00, 394 Minor Hall, CCN: 66406

This seminar will meet every other week.

The eyes have it in terms of diversity of design. There are lessons to be learned from comparing eye designs across the animal kingdom. This seminar will review and compare the structure of various components of the eye and its motor and neural accessories, by way of understanding the diversity of eye designs, as well as their strengths and limitations from a functional perspective. Examples where such analyses have spawned new bioengineering lines of research will be given. Some hands-on activities are planned. **This seminar is designed for students interested in eyes and/or vision and curious about biological design and evolution, with possible career goals of vision research or eye-related health professions.**

Professor Wildsoet is on the faculty in the School of Optometry, where she is involved in both clinical and pharmacology teaching. She is also a member of the Vision Science group. Her research is multidisciplinary as is her research group, which includes basic scientists, clinicians and bioengineers. The focus of research in the her lab is myopia (nearsightedness), specifically the mechanisms underlying the development of myopia and its clinical management. The overriding goal of this research is the development of treatments for myopia. Under optimal conditions, young eyes adjust their eye growth to correct neonatal focusing errors. Understanding how this growth regulatory process is derailed in myopia can provide the keys to new treatments. Over the course of her research career, Professor Wildsoet has had the opportunity to work with a range of animals and birds to address other questions related to eye design.

Vision Science 84, Section 2
Current Topics in US Healthcare (1 unit, P/NP)
Professor Kenneth Polse
Thursday 10:00-12:00, 394 Minor Hall, CCN: 66408

This seminar will meet for seven two-hour sessions on the following dates: August 26, September 2, September 9, September 16, October 21, October 28 and November 4.

This seminar examines some of the major topics/controversies in US healthcare delivery. The aim of this

seminar is to heighten our awareness of the issues in today's health care. Typically, the class will review a news story, media presentation, or editorial that will serve as the beginning for class discussion/debate. Some of the topics will include single payer vs. 3rd party medical coverage; factors driving the cost of medical care, strategies to control medical costs; the role of insurance companies, pharmacological and

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device manufactures, hospitals, physician groups and government in developing health care policy; healthy living; how to evaluate products/procedures; preventative measures; end of life issues; nursing elder care; and defensive medicine. **This seminar would be of interest to most students and in particular those who are considering a career in the health care field (professional service, public health, planning, administration). This seminar is part of the On the Same Page initiative: <http://onthesamepage.berkeley.edu>.**

From 1972-2003 Professor Polse served as faculty member, Clinic Director, and Associate Dean in the School of Optometry, University of California, Berkeley (UCB). Recently retired, Dr. Polse is currently Professor of Graduate Studies at UCB. His research developed from years of clinical experience, convincing him that it is the clinician's astute observations that often drive the research agenda. He also believes that discovery and clinical implementation require close collaborative efforts between basic and clinical scientists, a principle that has guided his research career. Some of Professor Polse's professional services and honors include President, International Society for Contact Lens Research; memberships on the AOA Council on Research and the National Advisory Eye Council (NIH); a Senior Fulbright Fellowship; AAO Garland Clay Award; AAO Max Shapero Lecture; BCLA Principal Keynote Speaker; UCB Sarver Endowed Chair; and Montague Ruben Medal. Since 1974, Professor Polse has had many students, residents, and post-doctoral fellows participate in his laboratory. He has received continuous research support from NIH and Industry for thirty years, resulting in many successful studies (including two NIH-sponsored randomized clinical trials) and over 140 papers published in peer-reviewed journals.

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