

Course	Department	Instructor (most recent)	Semester (most recent)	Graduate/ Undergraduate	Course Description	Notes
Economics and Policy of Production, Technology and Risk in Agricultural and Natural Resources, (A,RESEC 241)	Agricultural and Resource Economics	Staff	Fall 2013	Graduate	This course covers alternative models of production, resource and environmental risk management; family production function; adoption and diffusion; innovation and intellectual property rights; agricultural and environmental policies and their impact on production and the environment; water resources; pest control; biotechnology; and optimal control over space and time.	201 and 202, or Economics 201A-201B, or consent of instructor.
Empirical International Trade and Investment, (A,RESEC 232)	Agricultural and Resource Economics	Staff	Before Spring 2013	Graduate	Empirical aspects on international trade, foreign investment, and the environment. Issues related to testing various trade models. Topics include: testing trade models (HO, Ricardo, Specific Sector); gravity models; linkages between openness and growth; trade orientation and firm performance; pattern of trade; trade and the environment; labor markets and trade. New topics in international trade with empirical applications, such as trade models with heterogeneous firms, outsourcing and foreign investment.	
Issues and Concepts in Agricultural Economics, (A,RESEC 202)	Agricultural and Resource Economics	Staff	Spring 2014	Graduate	History, institutions, and policies affecting agriculture markets and environmental quality. Producer behavior over time and under uncertainty. Asset fixity and agricultural supply models.	
Production, Industrial Organization, and Regulation in Agriculture (A,RESEC 201)	Agricultural and Resource Economics	Staff	Fall 2013	Graduate	Basic concepts of micro and welfare economics: partial and general equilibrium. Industrial organization: monopolistic competition, vertical integration, price discrimination, and economics of information with applications to food retailing, cooperatives, fishing, and energy.	Economics 201A or equivalent or consent of instructor.
The Anthropology of Food, (ANTHRO 140)	Anthropology	Staff	Before Fall 2013	Undergraduate	This course examines the place of food in society and includes discussions of identity, taste, taboos, ritual, traditions, nationalism, health, alcohol use, civilizing society, globalism, and the global politics of food.	
Holocene Paleocology: How Humans Changed the Earth, (ANTHRO C129D)	Anthropology	Kirch	Spring 2014	Undergraduate	Since the end of the Pleistocene and especially with the development of agriculturally based societies humans have had cumulative and often irreversible impacts on natural landscapes and biotic resources worldwide. Thus "global change" and the biodiversity crisis are not exclusively developments of the industrial and post-industrial world. This course uses a multi-disciplinary approach, drawing upon methods and data from archaeology, palynology, geomorphology, paleontology, and historical ecology to unravel the broad trends of human ecodynamics over the past 10,000 years. Also listed as Anthropology C129D.	Either Anthropology 2 or Biology 1A.
Biotechnology, (BIO ENG 22)	Bioengineering	L. Lee, Dueck	Before Fall 2013	Undergraduate	This course is intended to introduce students to a variety of fields that fall under the biotechnology umbrella. In general, these fields include medical, microbial, agricultural, animal, and forensic biotechnology. Students in this course will learn the types of biotechnology projects currently being worked on, as well as the techniques and assays used within these projects.	22L (must be taken concurrently).
Healthy Cities, (CRP 256)	City and Regional Planning	Jason Corburn	Fall 2012	Graduate	Exploration of common origins of urban planning and public health, from why and how the fields separated and strategies to reconnect them, to addressing urban health inequities in the 21st century. Inquiry to influences of urban population health, analysis of determinants, and roles that city planning and public health agencies - at local and international level - have in research, and action aimed at improving urban health. Measures, analysis, and design of policy strategies are explored.	
Technologies for Sustainable Societies, (CIV ENG 292A)	Civil and Environmental Engineering	Horvath, Nazaroff	Fall 2013	Graduate	Exploration of selected important technologies that serve major societal needs, such as shelter, water, food, energy, and transportation, and waste management. How specific technologies or technological systems do or do not contribute to a move toward sustainability. Specific topics vary from year to year according to student and faculty interests.	Graduate standing or consent of instructor., Must be taken on a satisfactory/unsatisfactory basis.
Economics of Poverty and Technology, (ENVECON 154)	Environmental Economics and Policy	Sara Boettiger	Spring 2014	Undergraduate	Introduction to the economic framework underlying the use of technology to address rural poverty in developing countries. Analyzes the path of technology development from innovation and design to the adoption and use of technology in rural economies. Focuses on technologies related to agricultural production, processing, market access, value chains, and climate change.	
Economics of Race, Agriculture, and the Environment, (ENVECON 140AC)	Environmental Economics and Policy	Jeffrey M. Romm	Before Fall 2013	Undergraduate	This course examines whether and how economic processes explain shifting formations of race and differential experiences among racial groups in U.S. agricultural and environmental systems. It approaches economic processes as organizing dynamics of racial differentiation and integration, and uses comparative experience among different racial and ethnic groups as sources of evidence against which economic theories of differentiation and integration can be tested.	1, or one lower division course in a social science, or consent of instructor.
Industrial Organization with Applications to Agriculture and Natural Resources, (ENVECON 142)	Environmental Economics and Policy	J. Miquel Villas Boas	Spring 2014	Undergraduate	Organization and performance of agricultural and resource markets. Conduct of firms within those markets, such as price competition, product differentiation, predatory pricing, vertical integration, dealer networks and advertising. The role of public policy in the markets. Case studies include oil cartel OPEC, agricultural cooperatives, vertical integration of food processors and franchising of fast-food chains. Discussion sections cover empirical applications of theory presented during lectures for current environmental and agricultural policies.	
Modeling and Management of Biological Resources, (ENVECON C115)	Environmental Economics and Policy	Wayne M. Getz	Fall 2013	Undergraduate	Models of population growth, chaos, life tables, and Leslie matrix theory. Harvesting and exploitation theory. Methods for analyzing population interactions, predation, competition. Fisheries, forest stands, and insect pest management. Genetic aspects of population management. Mathematical theory based on simple difference and ordinary differential equations. Use of simulation packages on microcomputers (previous experience with computers not required). Also listed as Environ Sci, Policy, and Management C104.	
Population, Environment and Development, (ENVECON 153)	Environmental Economics and Policy	Robin Marsh	Spring 2014	Undergraduate	This course takes an interdisciplinary approach to the complex interactions between population, environmental change, and economic development, including the leading theories for understanding these interactions. The origins and history of current debates are discussed as well as some of the major issues stemming from these debates, such as immigration, international trade, family planning policies and concerns over the global commons. Specific natural resources and services like fresh water, food supply, and forest cover are analyzed as case studies. Policy options for sustainable development are discussed.	

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Advanced Topics in Conservation Biology, (ESPM 277)	Environmental Science, Policy, and Management	Claire Kremen	Spring 2014	Graduate	A graduate level seminar covering advanced topics in conservation of biodiversity, focused on designing protected area networks. We will first lay the groundwork for the course by exploring the fundamental papers in ecology and conservation biology that led to systematic conservation planning. Then, we will study various issues at the current frontiers of the discipline, such as incorporating threats, costs, evolutionary processes, and ecosystem services into reserve network design. The class will encourage student engagement through discussions, peer instruction and peer review of essays.	
Agricultural Ecology, (ESPM 118)	Environmental Science, Policy, and Management	Miguel Altieri	Fall 2013	Undergraduate	Examines in a holistic framework fundamental biological, technical, socio-economic, and political processes that govern agroecosystem productivity and stability. Management techniques and farming systems' designs that sustain longterm production are emphasized. One Saturday field trip and one optional field trip.	
American Environmental and Cultural History, (ESPM 160AC)	Environmental Science, Policy, and Management	Caroline Merchant	Fall 2013	Undergraduate	History of the American environment and the ways in which different cultural groups have perceived, used, managed, and conserved it from colonial times to the present. Cultures include American Indians and European and African Americans. Natural resources development includes gathering-hunting-fishing; farming, mining, ranching, forestry, and urbanization. Changes in attitudes and behaviors toward nature and past and present conservation and environmental movements are also examined. Also listed as History 120AC.	
Bioethics and Society, (ESPM 162)	Environmental Science, Policy, and Management	Kendra Klein	Fall 2013	Undergraduate	Exploration of the ethical dilemmas arising from recent advances in the biological sciences: genetic engineering, sociobiology, health care delivery, behavior modification, patients' rights, social or private control of research.	
Ecosystem Ecology, (ESPM 111)	Environmental Science, Policy, and Management	Dennis D. Baldocchi, Whendee Silver	Spring 2014	Undergraduate	This course will develop principles of ecosystems ecology, emphasizing terrestrial ecosystems, and will consider how these principles apply to ecosystem recovery and to regional and global fluxes of carbon and nutrients.	Prerequisites: Bio 1B; Formerly C111, Integrative Biology C155
Environmental Health and Development, (ESPM C167)	Environmental Science, Policy, and Management	Rachel Morello-Frosch	Before Fall 2013	Undergraduate	The health effects of environmental alterations caused by development programs and other human activities in both developing and developed areas. Case studies will contextualize methodological information and incorporate a global perspective on environmentally mediated diseases in diverse populations. Topics include water management; population change; toxics; energy development; air pollution; climate change; chemical use, etc. Also listed as Public Health C160.	
Environmental Justice: Race, Class, Equity, and the Environment, (ESPM 163AC)	Environmental Science, Policy, and Management	Dara O'Rourke	Spring 2014	Undergraduate	Overview of the field of environmental justice, analyzing the implications of race, class, labor, and equity on environmental degradation and regulation. Environmental justice movements and struggles within poor and people of color communities in the U.S., including: African Americans, Latino Americans, and Native American Indians. Frameworks and methods for analyzing race, class, and labor. Cases of environmental injustice, community and government responses, and future strategies for achieving environmental and labor justice. Also listed as Sociology 137AC.	
Fish Ecology, (ESPM C115C)	Environmental Science, Policy, and Management	Stephanie M. Carlson	Fall 2013	Undergraduate	Introduction to fish ecology, with particular emphasis on the identification and ecology of California's inland fishes. This course will expose students to the diversity of fishes found in California, emphasizing the physical (e.g., temperature, flow), biotic (e.g., predation, competition), and human-related (e.g., dams, fisheries) factors that affect the distribution, diversity, and abundance of these fishes.	
Governance of Global Production (ESPM 260)	Environmental Science, Policy, and Management	Dara O-Rourke	Before Fall 2012	Graduate	This course explores critical policy and theoretical questions in the governance of global production. Current trends in the restructuring of industrial production; distributions of environmental, labor, and social impacts from this production; and new strategies for democratic governance are analyzed, including corporate self-regulation, monitoring, certification and labeling, fair trade programs, legal strategies, and international accords and agreements.	
Human Diet (ESPM C159)	Environmental Science, Policy, and Management	Katharine Milton	Spring 2013	Undergraduate	Since we eat every day, wouldn't it be useful to learn more about human dietary practices? A broad overview of the complex interrelationship between humans and their foods. Topics include the human dietary niche, biological variation related to diet, diet and disease, domestication of staple crops, food processing techniques and development of regional cuisines, modern diets and their problems, food taboos, human attitudes toward foods, and dietary politics. Also listed as Nutritional Sciences and Toxicology C159.	
Interdisciplinary Food Systems Seminar (ESPM 226)	Environmental Science, Policy, and Management	Alastair Iles, Claire Kremen	Spring 2014	Graduate	A graduate seminar exploring the ecological, social, and economic risks inherent in different forms of agriculture, from highly diversified, agroecological farming systems to industrialized agriculture. We will examine how different farm management techniques, government policies, supply chains, R&D, technology, and science may influence various risks and uncertainties, including climate change, agrobiodiversity, farmer livelihoods, food safety, public health, and nutrition.	
International Conservation and Development Policy, (ESPM 251)	Environmental Science, Policy, and Management	Claudia J. Carr	Before Spring 2012	Graduate	Changes in Third World rural economy, ecology, and environment and ways in which these are affected by development policies. Historical dimensions of Third World environmental problems. Changing patterns of rural production (especially food) and resource use; alternative theories of natural resource and socioeconomic development; linkages between socioeconomic and environment in agrarian change and development policy; technology and resource control; conservation and development problems.	
International Rural Development Policy, (ESPM 165)	Environmental Science, Policy, and Management	Claudia J. Carr	Spring 2014	Undergraduate	Comparative analysis of policy systems governing natural resource development in the rural Third World. Emphasis on organization and function of agricultural and mineral development, with particular consideration of rural hunger, resource availability, technology, and patterns of international aid.	

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Modeling and Management of Biological Resources, (ESPM C104)	Environmental Science, Policy, and Management	Wayne M. Getz	Fall 2013	Undergraduate	Models of population growth, chaos, life tables, and Leslie matrix theory. Harvesting and exploitation theory. Methods for analyzing population interactions, predation, competition. Fisheries, forest stands, and insect pest management. Genetic aspects of population management. Mathematical theory based on simple difference and ordinary differential equations. Use of simulation packages on microcomputers (previous experience with computers not required). Also listed as Environmental Economics and Policy C115.	Two years of calculus or consent of instructor
Molecular Approaches to Environmental Problem Solving (ESPM 192)	Environmental Science, Policy, and Management	Steven E. Lindow	Fall 2013	Undergraduate	Seminar in which students consider how modern biotechnological approaches, including recombinant DNA methods, can be used to recognize and solve problems in the area of conservation, habitat and endangered species preservation, agriculture and environmental pollution. Students will also develop and present case studies of environmental problems solving using modern molecular methods.	Prerequisites: Junior or senior standing in Molecular Environmental Biology major, or consent of instructor.
Pesticide Chemistry and Toxicology, (C148)	Environmental Science, Policy, and Management	John E. Casida	Spring 2014	Undergraduate	Chemical composition of pesticides and related compounds, their mode of action, resistance mechanisms, and methods of evaluating their safety and activity. Also listed as Nutritional Sciences and Toxicology C114.	Introductory courses in organic chemistry and biology, or consent of instructor.
Political Ecology (ESPM 253)	Environmental Science, Policy, and Management	Nancy Peluso	Before Spring 2013	Graduate	Critique and comparison of literature in political ecology--an approach to sociological analysis of environmental change focusing on environmental conflict. Initial sessions address the definition of political ecology, its origins, and the politics and discourses of natural resource management. Literature includes domestic and international research involving the combination of social and environmental history, local perspectives, and political economy to discuss accounts of social and environmental change.	
Race, Science, and Resource Policy, (ESPM 258)	Environmental Science, Policy, and Management	Jeffrey Romm	Fall 2012	Graduate	This course addresses explanation and strategy in natural resource policy with an emphasis on whether, why, and how (a) 'race' distributes access to and control of environmental resources, (b) 'science' creates and arrays perceptions, organization and control of these resources, and (c) public policy shapes racial disparities in natural resource opportunities. Topics are drawn primarily from issues in metropolitan, agricultural, and public resource systems.	
Seminar in Pastoralism, (ESPM 279)	Environmental Science, Policy, and Management	Lynn Huntsinger	Spring 2014	Graduate	A survey of pastoral animal management and production systems, as they influence and are influenced by the rangeland environment. Review of the evolution of animal management practices; contemporary management systems in California, the West, and worldwide; and production systems with both traditional and nontraditional goals. Examination of agroforestry and nomadic and transhumant grazing systems, sheep and cattle production, game ranching, and organic meat production will be included.	
Seminar in Range Ecosystem Planning and Policy, (ESPM 280)	Environmental Science, Policy, and Management	James Bartolome	Before Fall 2013	Graduate	A seminar course dealing with selected current topics in range ecosystem planning and policy.	
Sociology of Natural Resources, (ESPM 155)	Environmental Science, Policy, and Management	Kathryn De Master	Fall 2013	Undergraduate	Sociology and political ecology of agro-food systems; explores the nexus of agriculture, society, the environment; social and environmental impact analysis; alternative social movement initiatives-fair trade, food justice/food sovereignty, organic farming, urban agriculture.	
Sustenance and Sovereignty: The Sociology of Agriculture and Food Systems (ESPM 270)		Kathryn De Master	Fall 2013	Graduate	This graduate seminar explores the sociology of agriculture and food systems, addressing key theories and topics in the field. We begin with the antecedents of the sociology of agriculture, including foundational classical agrarian theories and some investigations into the distinct but related field of peasant studies. We then proceed to an overview of the field, from its emergence to present day, before delving into a series of topical foci and analyses.	
Soil Characteristics, (ESPM 120)	Environmental Science, Policy, and Management	Ronald Amundson	Fall 2013	Undergraduate	Introduction to physical, engineering, chemical, and biological properties of soil; methods of soil description, identification, geographic distribution and uses; the role of soil in supplying water and nutrients to plants; and soil organisms. Soil management for agriculture, forestry, and urban uses will also be discussed. Includes a Saturday field trip.	Chemistry 1A, 3A
Soil Microbial Ecology, (ESPM 131)	Environmental Science, Policy, and Management	Pallud	Spring 2014	Undergraduate	Description: Introduction to the organisms that live in the soil and their activities in the soil ecosystem. Lectures will cover the physical and chemical properties of soils and the soil as a habitat for microorganisms, the diversity and ecology of soil microorganisms, and their activity in the context of biogeochemical cycling, plant-microbe interactions, global environmental change and bioremediation. Goals: To gain fundamental knowledge of the occurrence and activities of soil microorganisms and their influence on soil productivity and environmental quality as well as potential applications of soil microbiology. This course is targeted at advanced undergraduate and beginning graduate students who require a comprehensive treatment of the field of soil microbiology. Topics will include: Soil as a habitat for microorganisms, Occurrence and distribution of soil organisms, Methods for studying soil microorganisms, Carbon cycling and soil organic matter, Biogeochemical cycling of nutrients and metals, Xenobiotic degradation and bioremediation.	Biology 1A-1B.
Urban Agriculture (ESPM 117)	Environmental Science, Policy, and Management	Miguel Altieri	Fall 2013	Undergraduate	An ecosystem approach to the study of urban gardens with an organic perspective. Topics include fundamentals of horticulture, soil properties and fertility, pest and disease management, and food preservation. Laboratories include methods in garden design, plant propagation, compost technique, soil preparation, irrigation systems, pest management, individual or group projects, demonstrations, and discussions.	
Food and the Environment, (GEOG 130)	Geography	Nathan Sayre, Michael Watts	Spring 2014	Undergraduate	How do human populations organize and alter natural resources and ecosystems to produce food? The role of agriculture in the world economy, national development, and environmental degradation in the Global North and the Global South. The origins of scarcity and abundance, population growth and migration, hunger, and poverty.	

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Global Ecology and Development, (GEOG 35)	Geography	Michael Watts	Before Fall 2013	Undergraduate	Problems of Third World poverty and development have come to be seen as inseparable from environmental health and sustainability. The course explores the global and interconnected character of environment and development in the less developed world. Drawing on case studies of the environmental problems of the newly industrializing states, food problems, and environmental security in Africa, and the global consequences of tropical deforestation in Amazonia and carbon dioxide emissions in China, this course explores how growth and stagnation are linked to problems of environmental sustainability.	
Global Environmental Politics, (GEOG 138)	Geography	Sandy Brown	Fall 2013	Undergraduate	Political factors affecting ecological conditions in the Third World. Topics include environmental degradation, migrations, agricultural production, role of international aid, divergence in standard of living, political power, participation and decision making, access to resources, global environmental policies and treaties, political strife and war.	
Prehistoric Agriculture, (GEOG 109)	Geography	Roger Byrne	Before Fall 2013	Undergraduate	Agricultural origins and dispersals in the light of recent biological and archaeological evidence.	
Holocene Paleoecology: How Humans Changed the Earth, (INTEG BI C155)	Integrative Biology	Kirch	Spring 2014	Kirch	Since the end of the Pleistocene and especially with the development of agriculturally based societies humans have had cumulative and often irreversible impacts on natural landscapes and biotic resources worldwide. Thus "global change" and the biodiversity crisis are not exclusively developments of the industrial and post-industrial world. This course uses a multi-disciplinary approach, drawing upon methods and data from archaeology, palynology, geomorphology, paleontology, and historical ecology to unravel the broad trends of human ecodynamics over the past 10,000 years. Also listed as Anthropology C129D.	Either Anthropology 2 or Biology 1A.
The Economics of Climate Change, (IAS C175)	International And Area Studies	Aufhammer, Fisher	Fall 2013	Undergraduate	The course will start with a brief introduction and evaluation of the scientific aspects behind climate change. Economic models will be developed to analyze the impacts of climate change and provide and critique existing and proposed policy tools. Specific topics studied are impacts on water resources and agriculture, economic evaluation of impacts, optimal control of greenhouse gases, benefit cost analysis, international treaty formation, discounting, uncertainty, irreversibility, and extreme events. Also listed as Environmental Economics and Policy C175.	
Edible Education: Telling Stories About Food and Agriculture, (JOURN C103)	Journalism	Michael Pollan	Before Fall 2013	Undergraduate	As the costs of our industrialized food system become impossible to ignore, a national debate over the future of food and farming has begun. Telling stories about where food comes from, how it is produced (and might be produced differently) plays a critical role in bringing attention to the issues and shifting politics. Each week a prominent figure in this debate explores what can be done to make the food system healthier more equitable, more sustainable, and the role of storytelling in the process. Also listed as Letters and Science C103.	
Edible Education: The Rise and Future of the Food Movement, (JOURN C101)	Journalism	Michael Pollan, Raj Patel	Spring 2014	Undergraduate	As a subject, food is multi-disciplinary, drawing on everything from economics and agronomy to sociology, anthropology, and the arts. Each week experts on organic agriculture, school lunch reform, food safety, animal welfare, hunger and food security, farm bill reform, farm-to-school efforts, urban agriculture, food sovereignty, local food economies, etc. will lecture on what their areas of expertise have to offer the food movement to help it define and achieve its goals. Also listed as Letters and Science C101.	
Science Reporting, (JOURN 226)	Journalism	Michael Pollan	Before Fall 2013	Graduate	Advanced study of methods of reporting developments in such fields as science, education, health, or the environment.	
Ecological Analysis, (LD ARCH 110)	Landscape Architecture and Environmental Planning	McBride	Fall 2013	Undergraduate	Analysis of environmental factors, ecosystem functions, and ecosystem dynamics, as related to decision-making for landscape planning and design.	
Environmental Science for Sustainable Development, (LD ARCH 112)	Landscape Architecture and Environmental Planning	Kondolf, Staff	Before Fall 2013	Undergraduate	Topics include the scientific basis of sustainability, explored through study of energy, water, food, natural resources, and the built environment; physical/ecological processes and systems, and human impacts from the global scale to local energy/resource use; and energy and water audits of the Berkeley campus, opportunities to increase sustainability of processes/practices. Discussion/lab section involves data collection/analysis (e.g., Strawberry Creek, atmospheric particulates) and integrative sustainability assessment projects.	
Environmental Science for Sustainable Development, (LD ARCH 12)	Landscape Architecture and Environmental Planning	Kondolf, Staff	Fall 2013	Undergraduate	The scientific basis of sustainability, explored through study of energy, water, food, natural resources, and built environment. Physical/ecological processes and systems, and human impacts from the global scale to local energy/resource use. Energy and water audits of University of California at Berkeley, opportunities to increase sustainability of processes/practices. Discussion/lab section involves data collection/analysis (e.g., Strawberry Creek, atmospheric particulates) and integrative sustainability assessment project.	
Sustainable Landscapes and Cities, (LD ARCH 130)	Landscape Architecture and Environmental Planning	Staff	Spring 2013	Undergraduate	This course introduces the foundations of sustainability most related to the restoration, design, and creation of landscapes and cities. The underlying principles of ecology, nature, and democracy are concretized in centered-ness, connectedness, fairness, sensible status seeking, sacredness, particular-ness, selective diversity, density and smallness, limited extent, adaptability, everyday future, naturalness, inhabiting science, reciprocal stewardship, and pacing	
The American Designed Landscape Since 1850, (LD ARCH C171)	Landscape Architecture and Environmental Planning	Mozingo	Fall 2013	Undergraduate	This course surveys the history of American landscape architecture since 1850 in four realms: 1) urban open spaces—that is squares, plazas, parks, and recreation systems; 2) urban and suburban design; 3) regional and environmental planning; 4) gardens. The course will review the cultural and social contexts which have shaped and informed landscape architecture in the United States since the advent of the public parks movement, as well as, the aesthetic precepts, environmental concerns, horticultural practices, and technological innovations of American landscapes. Students will complete a midterm, final, and a research assignment. Also listed as American Studies C171.	
Food Law and Policy, (Law 220F)	Law	Stephen Sugarman	Spring 2011	Graduate		
Products & Place	Law	Richard Mendelson		Graduate		

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Wine Law	Law	Richard Mendelson		Graduate		
Application of Food Science Laboratory, (NUSCTX 108B)	Nutritional Sciences and Toxicology	Kristen Rasmussen	Fall 2013	Undergraduate	Experimental evaluation of the chemical, physical, functional, and nutritional properties of foods, and the changes occurring during preparation that affect quality characteristics of food products.	108A or concurrent enrollment.
Food Systems Organization and Management, (NUSCTX 135)	Nutritional Sciences and Toxicology	Kristen Rasmussen	Spring 2014	Undergraduate	Principles of organization and management applied to institutional food service systems; production and delivery systems, management of resources, quality assurance, equipment, layout, marketing, personnel management, fiscal management. Laboratory experiences, projects and field work in institutional situations.	
Human Diet, (NUSCTX C159)	Nutritional Sciences and Toxicology	Katharine Milton	Spring 2013	Undergraduate	Since we eat every day, wouldn't it be useful to learn more about human dietary practices? A broad overview of the complex interrelationship between humans and their foods. Topics include the human dietary niche, biological variation related to diet, diet and disease, domestication of staple crops, food processing techniques and development of regional cuisines, modern diets and their problems, food taboos, human attitudes toward foods, and dietary politics. Also listed as Environ Sci, Policy, and Management C159.	
Human Food Practices, (NUSCTX 104)	Nutritional Sciences and Toxicology	Kristen Rasmussen	Spring 2014	Undergraduate	Historical, geo-ecological, biological, cultural, socio-economic, political and personal determinants of human diets. Community food and nutrition problems and programs. Food safety and consumer protection. Contributes to the pursuit of multidisciplinary degrees in nutrition policy and planning.	10 recommended.
Intro to Human Nutrition, (NUSCTX 10)	Nutritional Sciences and Toxicology	Gregory W. Aponte	Spring 2014	Undergraduate	This course provides an overview of digestion and metabolism of nutrients. Foods are discussed as a source of nutrients, and the evidence is reviewed as to the effects of nutrition on health. The emphasis of the course is on issues of current interest and on worldwide problems of food and nutrition. Students are required to record their own diet, calculate its composition, and evaluate its nutrient content in light of their particular needs.	
Introduction and Application of Food Science, (NUSCTX 108A)	Nutritional Sciences and Toxicology	Kristen Rasmussen	Fall 2013	Undergraduate	Evaluation of the chemical, physical, functional, and nutritional properties of foods. Emphasis on how these properties, and preparation, processing, and storage, influence quality characteristics of food products.	
Metabolic Bases of Human Health and Diseases, (NUSCTX 160)	Nutritional Sciences and Toxicology	Joseph M. Hellerstein, Andreas Stahl	Spring 2014	Undergraduate	The physiological bases of human nutrient homeostasis and common disorders resulting from over and under nutrition will be discussed with a specific focus on macronutrients. Topics related to nutrient deficiency and excess will include adaptation to starvation and the effects of caloric restriction on life-span, obesity and its complications, lipoprotein metabolism and cardiovascular disease, as well as a detailed discussion of the causes, disease mechanisms, and treatment of diabetes mellitus.	103, or Molecular and Cell Biology 102 or equivalent.
Nutrition in the Community, (NUSCTX 166)	Nutritional Sciences and Toxicology	Henderson, M N	Fall 2013	Undergraduate	This course addresses basic nutrition in the context of the community. It explores nutrition programs that serve various segments of the population and the relationships of these programs to nutrition policy at the local, national, and international levels. Community assessment is used as the basis for program planning, implementation, and evaluation. The specific needs of population groups (infants, children, women, and the elderly) are considered and questions of food security are investigated.	
Pesticide Chemistry and Toxicology, (NUSCTX C114)	Nutritional Sciences and Toxicology	John E. Casida	Spring 2014	Undergraduate	Chemical composition of pesticides and related compounds, their mode of action, resistance mechanisms, and methods of evaluating their safety and activity. Also listed as Environ Sci, Policy, and Management C148.	
Toxicology, (NUSCTX 110)	Nutritional Sciences and Toxicology	Leonard F Bjeldanes, Jen-Chyan Wally Wang	Fall 2013	Undergraduate	A comprehensive survey of the principles of modern toxicology and their applications in evaluating the safety of foods, additives and environmental contaminants. Mechanisms of metabolic activation, detoxification, gene regulation, and selective toxicity are emphasized.	
Freshman Seminar, (PLANTBI 24)	Plant and Microbial Biology	Staff	Spring 2013	Undergraduate	Reading and discussion with Plant and Microbial Biology faculty on current research and topics in plant and microbial biology. Topics which may be discussed include Microbial biology, plant genetics, plant development, plant pathology, agricultural biotechnology, and genetic engineering. Ideal for students who are considering a major in the Department of Plant and Microbial Biology. Enrollment is limited to 20 freshman.	Must be taken on a passed/not passed basis.
Genetic Revolution, (PLANTBI 13)	Plant and Microbial Biology	Freeling	Spring 2014	Undergraduate	Genetic discoveries have changed our lives. All are controversial. Especially changed are human physical and mental health, agriculture, social systems, and worldviews. Having many DNA-sequenced genomes, including human, accelerates discovery. This course will study the science, history, and philosophical implications behind past discoveries and will contemplate future genetic revolutions.	
Introduction to the Plant Sciences at Berkeley, (PLANTBI 20)	Plant and Microbial Biology	Feldman	Fall 2013	Undergraduate	This course will include discussions on the academic path (courses) needed for the Genetics and Plant Biology major; an introduction to resources and facilities for studies of the plant sciences at Berkeley, such as the University Herbarium and the Botanical Garden; an exploration of plant science related careers, including presentations from guest speakers who work in organic farming, government, and Cooperative Extension; talks by faculty about their current research, and information about how to do research in a lab.	Must be taken on a passed/not passed basis.
Modern Applications of Plant Biotechnology, (PLANTBI 170)	Plant and Microbial Biology	Baker, Somerville	Before Spring 2013	Undergraduate	This course is designed to introduce students to the principles and applications of modern plant biotechnology. Basic concepts of modern agriculture will be reviewed in light of emerging biotechnology applications. Emphasis will be placed on understanding the tools and strategies involved in optimizing plant productivity.	Biology 1A-1B.
Plants, Agriculture, and Society (PLANTBI 10)	Plant and Microbial Biology	Staskawicz, David Zilberman	Fall 2013	Undergraduate	Changing patterns of agriculture in relation to population growth, the biology and social impact of plant disease, genetic engineering of plants: a thousand years of crop improvement and modern biotechnology, interactions between plants and the environment, and effects of human industrial and agricultural activity on plant ecosystems. Knowledge of the physical sciences is neither required nor assumed.	

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The (Secret) Life of Plants, (PLANTBI 40)	Plant and Microbial Biology	Zambryski	Spring 2014	Undergraduate	Covers contemporary topics in plant biology. Examines how plants grow, reproduce, and respond to the environment (e.g., to light) in ways distinct from animals. Presents basic principles of genetics, cell, and molecular biology. Basics of genetic engineering and biotechnology reveal how they are used to modify plants, and these socially relevant issues are assessed. Includes visit to modern plant biology research laboratory, and aspects of plant disease and diversity. Knowledge of the physical sciences neither required nor assumed.	
Environmental Health and Development, (PB HLTH C160)	Public Health	Rachel Morello-Frosch	Spring 2014	Undergraduate	The health effects of environmental alterations caused by development programs and other human activities in both developing and developed areas. Case studies will contextualize methodological information and incorporate a global perspective on environmentally mediated diseases in diverse populations. Topics include water management; population change; toxics; energy development; air pollution; climate change; chemical use, etc. Also listed as Environ Sci, Policy, and Management C167.	
Food and Nutrition Policies and Programs, (PB HLTH 206B)	Public Health	Barbara Laraia	Spring 2012	Graduate	This course examines the historical origins of food and nutrition improvement programs in the United States, including the political and administrative conditions that led to the development of these programs. It also examines the goals, design, operations, and effectiveness of some of these programs: Food Stamp Program, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), the National School Lunch Program, the School Breakfast Program, Head Start, the Child Care Food Program, and the Elderly Nutrition Program.	
Food and Nutrition Programs and Policies in Developing Countries, (PB HLTH 206D)	Public Health	Lia Fernald	Spring 2013	Graduate	This course will use a case-based approach to examine the ways in which governments in developing countries design and implement policies and programs that affect food production and access to safe, affordable, and nutritionally adequate diets. In the course we will analyze, assess and evaluate ways to take action to ameliorate the major nutritional problems facing vulnerable populations in developing countries.	
Foodborne Disease, (PB HLTH 266A)	Public Health	Lu	Fall 2013	Graduate	This course will cover public health, microbiological, social, and economical issues related to foodborne diseases. Three areas will be explored: 1) categories, clinical manifestations, and disease processes of foodborne illnesses; 2) etiological agents causing foodborne illnesses; 3) investigation and prevention of foodborne illness. The course will discuss different types of foodborne diseases, clinical manifestations, and the interactions between etiological agents (pathogens and non-pathogens) and human hosts. We will cover pathogens that are the most frequently associated with foodborne illness including bacterial and viral pathogens such as Salmonella, E coli, hepatitis viruses and Norwalk-like gastroenteritis viruses. We will also study non-pathogen agents such as heavy metal, pesticide, and toxic chemicals. Furthermore, the course will discuss how to identify the etiological agents in outbreaks and possible measures that can be taken to minimize the risk to the public including vaccines and education. Finally, we will explore the social and economic issues involved in the food production, distribution, and consumption that contribute to foodborne diseases.	
Global Health Policy, (PB HLTH 220E)	Public Health	Keller	Before Fall 2013	Graduate	This course will provide an intensive introduction to current topics in international health policy. Students in the course will become familiar with the major actors, institutions, and regimes that shape international health policy. The course will also introduce students to theories of governance as they apply to international settings and evaluate the relative roles of state actors, NGOs, and international regimes in producing key health policy outcomes. The course will cover several current issues in international health and will require students to critically assess the state of policy with respect to these issues. Using Bardach's method for policy analysis, students will analyze current policies and propose policy alternatives with an assessment of the tradeoffs implied in choosing a given policy option over its competitors.	
Global Health: Multidisciplinary Examination, (PB HLTH 112)	Public Health	Suneeta Krishnan, Arthur L. Reingold	Spring 2014	Undergraduate	This course examines health at the individual and community/global level by examining the interplay of many factors, including the legal, social, political, and physical environments; economic forces; access to food, safe water, sanitation, and affordable preventive/medical care; nutrition; cultural beliefs and human behaviors; and religion; among others. Students will be expected to read, understand, and use advanced materials from diverse disciplines. Class accompanied by case-based discussions.	
Health Care Technology Policy (PB HLTH 222A)	Public Health	Robinson	Before Fall 2013	Graduate	The course examines the public policy institutions and processes influencing innovation, regulation, and payment for biotechnology, pharmaceuticals, and medical devices. Topics include technology transfer and patent law, the Food and Drug Administration (FDA) review for safety and efficacy, insurance coverage policy at the Center for Medicare and Medicaid Services (CMS), coverage, payment, and benefit by private insurers for new technology, and cost-effectiveness analysis. Special topics vary from year to year. Examples and case studies are drawn from all three of the technology sectors.	
Introduction to Community Health and Human Development, (PB HLTH 150E)	Public Health	Satariano	Spring 2014	Undergraduate	This course will consist of a survey of the major social, cultural, and bio-behavioral patterns of health and well-being among individuals, families, neighborhoods, and communities. The course also will address the design, implementation, and evaluation of leading social and behavioral interventions and social policies designed to improve community and population health. This course will satisfy one of the core requirements for the undergraduate major in public health.	
Measuring Dietary Intake and Nutritional Status (PH 206A)	Public Health	Laraia	Fall 2013	Graduate	Concepts, methods, and limitations in the determination of nutritional status; application of methodologies for determining and interpreting data; technical, social, and political implications of nutritional assessments and related community needs.	

Course	Department	Instructor (most recent)	Semester (most recent)	Graduate/ Undergraduate	Course Description	Notes
Nutritional Epidemiology, (PH 206C)	Public Health	Block	Fall 2013	Graduate	This course develops the ability to read published nutritional epidemiology research critically. Basic research methods in nutritional epidemiology will be reviewed, and issues in design, analysis, and interpretation unique to nutritional epidemiology will be addressed. This will be accomplished by readings and study questions, lecture/discussions, and problem sets.	
Health Issues Seminars: Designing Innovative Solutions to Public Health, (PB HLTH 290 002 SEM)	Public Health	Jaspal	Spring 2014	Graduate	Working in teams, students will innovate for public health impact, creating targeted solutions in collaborative projects with a range of real, organizational clients. Students will learn and apply systematic strategies for innovation, borrowing from fields such as design thinking, ethnography, systems thinking, creativity. In Spring 2014 only, the focus will be on reshaping the global and domestic food environment and food systems.	
Environment and Technology from the Policy and Business Perspective, (PUB POL 282)	Public Policy	Taylor	Before Fall 2013	Graduate	Most environmental issues involve technology, either in the role of "villain" or "hero." This course uses the lens of specific technologies to survey environmental policy and management, with an emphasis on the complexities of policy-making with diverse interest groups. The class includes case studies, guest practitioners, and a group project in which students employ a range of analytic tools and frameworks in order to develop creative, effective, and actionable environmental solutions.	
International Economic Development Policy, (PUB POL C253)	Public Policy	Staff	Fall 2013	Graduate	This course emphasizes the development and application of policy solutions to developing-world problems related to poverty, macroeconomic policy, and environmental sustainability. Methods of statistical, economic, and policy analysis are applied to a series of case studies. The course is designed to develop practical professional skills for application in the international arena. Also listed as Agricultural and Resource Economics C253.	Minimum one semester of graduate-level microeconomics and statistics or consent of instructor.
Special Topics in Public Policy: Food Systems Policy (PUB POL 290)	Public Policy	Saru Jayaraman	Spring 2014	Graduate		
ICT for Social Enterprise (INFO 287)	School of Information	Parikh	Before Fall 2013	Graduate	This class is focused on the creation of sustainable enterprises based on ICT (Information and Communications Technologies) innovations supporting international development. We take a broad view of entrepreneurship—including starting new businesses, non-profit initiatives, and/or public sector projects. We will take a highly iterative, design-oriented, feedback-driven approach to developing and refining business plans for social enterprises.	
Information and Communications Technology For Development, (INFO C283)	School of Information	Isha Ray, Saxenian	Before Fall 2013	Graduate	This seminar reviews current literature and debates regarding Information and Communication Technologies and Development (ICTD). This is an interdisciplinary and practice-oriented field that draws on insights from economics, sociology, engineering, computer science, management, public health, etc. Also listed as Energy and Resources Group C283.	
Cultural Perspectives of Food, (SOCIO 169F)	Sociology	Bakehorn, J A	Spring 2014	Undergraduate	The course will provide a broad overview of food as culture. The course begins with foundational writings on the cultural implications of food as consumption and social distinction, and the culture of a global food world. The course also examines how food is imbued with gender, race, class, ethnic and sexual meanings and the constitution and creation of identity.	Sociology 1, 3, 3AC, or consent of instructor.
Entrepreneurship to Address Global Poverty, (UGBA 195S)	Undergraduate Business Administration	Staff	Spring 2013	Undergraduate	This course examines whether and how entrepreneurial ventures can meaningfully address global poverty vs. more traditional approaches such as foreign aid, private philanthropy or corporate social responsibility initiatives. Combining lectures, case studies, and interviews with social entrepreneurs, it explores poverty and entrepreneurship before focusing on their intersection in various bottom-of-pyramid markets, from health, housing, and education to energy, agriculture, and finance.	
Global Sociology: Social Perspectives of the Food Industry Master's Project Seminar (Following the Foodchain), (JOURN 294)	Sociology	Bakehorn, J A	Fall 2013	Undergraduate	Global sociology seeks to transcend national boundaries, studying the world as a unit unto itself, populated by organizations, networks, and movements. Global sociology cannot be constructed by sociologists from a single country, but it must be a collaborative effort from different parts of the planet. We will study globalization through a sociological lens by asking distinguished sociologists from around the world to discuss such contemporary issues as immigration, terrorism, disasters, etc.	1, 3, 3AC, or consent of instructor.
	Journalism	Michael Pollan	Spring 2014	Graduate	Advanced study of methods of reporting developments in such fields as science, education, health, or the environment.	For journalism students, 200 or equivalent; for others, consent of instructor.

## DECAL COURSES

Course	Department	Facilitator	Faculty Sponsor	Semester (Most Recent)	Course Description	Notes
Fruitful Minds	NST	Lauren McAvoy	Mikelle McCoin	Spring 2014	UC Berkeley students will serve as Ambassadors for Fruitful Minds, a nutrition education program aimed at local urban youth, ages 9 to 14, to address childhood obesity. Students will prepare for and teach a nutrition education class series to area youth at a site and time to be determined by the needs of the Fruitful Minds program. The course time commitment will include a one and a half hour weekly review and preparation session to be held on campus and a one hour fieldwork session at a local school or after school program. Fieldwork sites will most likely be located in Oakland and/or Berkeley. Topics to be covered include a review of the Fruitful Minds curriculum as well as teaching strategies, program evaluation tools, and youth engagement. Additional assignments will enhance student contributions to weekly preparation sessions and improve knowledge of current nutrition issues. Students should have a basic understanding or a strong interest in food and nutrition. Previous teaching experiences will be helpful, but are not necessary.	

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Cooking 101	Linguistics	Catherine Tralka	Keith Johnson	Spring 2014	The class will consist of one two hour class meeting per week. Each class meeting will focus on a particular dish and use the cooking of that dish as a launching point to explain relevant techniques and methods. The first half hour will be spent on a brief lecture introducing the days topic, a quick demonstration of the recipe techniques, a short nutritional summary, meal planning information, and the history of the chosen dish. The next hour and a half will be spent cooking the dish demonstrated in the lecture. There will be weekly readings, weekly homework assignments, bi-weekly field trips, and a final project.	
Exploring the UC Botanical Garden	PMB	Hannah Miller	Chelsea Specht	Spring 2014	The goal of this course is not to grill you on your understanding of course materials or the regurgitation of facts; rather, this course aims to combine all aspects of participation to lead you to a more fulfilling relationship with the UC Botanical Garden (UCBG) and all that it has to offer. At the end of this course, you will be able to confidently lead someone on a tour around the garden, learn of all the ways you can utilize the garden, be more familiar with California native plants, and be able to recognize the costs and benefits of having such a resource at Cal. All activities and projects are equally important to the overall experience, and we guarantee that you will enjoy doing them!	
The Wonders of Desserts	Chemistry	Nerissa Ignacio, Karen Yi	Marcin Majda	Spring 2014	Explore the "wonders" of desserts and the chemistry behind them. We will look into basic ingredients of baking, unique desserts from around the world, and the mechanisms and assortment of processes involved in creating the perfect dessert. Each lecture will consist on topics of the chemical, biological, and physical concepts of how the desserts were produced and manufactured. An assignment regarding the learned topic will be assigned that week for supplementary learning. There will be one midterm and one group final presentation. There will also be a guest speaker and a field trip during the instructional days. This decal is constructed for students to find or enhance their love for desserts by looking at them from a whole new perspective.	
Coffee Break	NST	Christine Benik	N/A	Spring 2014	We start by going over coffee cultures in cafes and how coffee is served differently all around the world. We continue by discussing the plant and its different forms in various regions and how it transforms to a delicious cup of joe. There will be a field trip to a local roaster to view the process of how the berry becomes a bean. All the different ways of brewing coffee will be discussed. Students will get to vote on the best coffees by having having a sampling taste test. The nutritional science of coffee will also be covered and the myths behind caffeine revealed. Coffee will also be discussed outside the cafes as we uncover the human rights surrounding coffee farms. There are many uses for coffee outside drinking it and we will share our tricks of the trade. Lastly we will look at coffee in a global context as we try to grasp its play in the world as a whole by looking at monopoly corporations in relation to Ma and Pa coffee shops.	
The Gluten Epidemic: An Introduction to Celiac Disease	MCB	Justin Inman, Kevin Youssefzadeh	Russell Vance	Spring 2014	We will be discussing the causes, mechanisms, and symptoms of the increasingly important Celiac Disease. Celiac is an autoimmune condition caused by extreme gluten sensitivity. If you or someone you know may be affected by gluten sensitivity or Celiac disease, this might be the class for you!	
SOGA Internship and Facilitator Decal	ESPM	Marie Koesnodihardjo	Kathryn De Masater	Spring 2014	The Student Organic Garden was established in 1971 by students, and continues to be fully operated and managed by undergraduates. Today the garden gives students a space for experiential learning and helps individuals find a place in the global food movement. The SOGA Interns & Facilitators DeCal will create a collaborative and supportive atmosphere for active student involvement in the garden. Class time will be devoted to working on projects (interns) or learning and improving the weekly lesson plans for the Organic Gardening and Food Justice DeCal (facilitators).	
Organic Gardening and Food Justice	ESPM		Kathryn De Masater	Spring 2014	This course is designed to both introduce new gardeners to the basic theories and methods of organic gardening, as well as provide an opportunity for more experienced gardeners to practice their skills and grow organic food. Above all, in our class we hope to inspire students to become intimately engaged with what they eat, through hands on experience in horticulture, compost, garden design, seasonal planning, and exposure to the local food justice movement.	
Student Environmental Activism	ESPM	Magnolia Barrett	Gordon Frankie	Spring 2014	This decal seeks to introduce students to environmental activism, to inspire involvement within the campus environmental community and the greater campus community, to build relationships, and to give students the tools and resources to create tangible change. This class will provide students who are already involved in the environmental community a chance to learn from one another, share resources, collaborate, and to inspire and empower each other to remain active in creating solutions to the environmental problems we learn about every day in our classes.	
Strawberry Creek Restoration DeCal	ESPM	Ariel Cherbowsky, Jennifer Podvin	Katharine Suding	Spring 2014	Opportunities to learn about Strawberry Creek histories, the historical ecology of the watershed, urban creek ecology, native and invasive species, leading creek caretaking efforts, evaluating creek health, urban water infrastructure, designing creek-related environmental education materials for the public, native plant collection and propagation, and maintaining the Strawberry Creek Native Plant Nursery and Native Plant Garden, as you participate in community-based urban ecological restoration!	

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Human and Ecosystem Health	ESPM	Kathryn Fiorella	Justin Brashares	Spring 2014	Links between human health and ecosystem health are widespread. Malaria becomes more common in deforested regions. Wildlife hunting exposes people to zoonotic diseases, provides nutritious foods, and may harm wildlife sustainability. People rely on ecosystem services to provide food, clean air, and clean water. The interlinks of environmental and human health are not new, but we increasingly approach them from interdisciplinary perspectives that allows us to better understand the complex ways human and environmental health interact.	
TeaCal	Geography	Dylan Paddock	Michael Watts	Spring 2014	At its most basic level, the course is about the tea leaf. Yet to better understand and better appreciate this ancient drink, the class will explore its mythical origins and more concrete history. We will learn of the different tea rituals and cultures of the early Chinese dynasties and trace their influences in Japan, India, and England. At the end of the course, we will look at the Tea Renaissance taking place today in California and consider the possibility of a tea culture taking full root in our fast-paced, consumer driven society.	