

Professor(s)	Department	Course #	Crosslistings	Course Title	Official Course Description From Course Catalog	Justification
Undergraduate Courses						
Sustainability Courses						
Bray, Francesca	Anthropology	111		The Anthropology of Food	Critical survey of different anthropological approaches of food production and consumption: biological implications of diet; relations between agricultural forms and political systems; the meanings of feasting; cooking, class; and gender; food and national identity.	This course examines the complex interaction between human biology, local environment, existing culture, global economy, and politics in the context of the selection of food we eat. The course looks at food as a resource and examines the implications of the production and scarcity of food in the world.
Gurven, Michael	Anthropology	145		Anthropological Demography and Life History	Introduces students to anthropological applications of demography and life history theory. Focuses on ecological approaches to population dynamics, birth and death processes, and policy implications in light of population "problems" among traditional and modern societies.	This course examines demography and the history of human population dynamics through the lens of historical and current issues that affect human population, such as teen pregnancy, social justice issues, and disease. The course focuses on ecological approaches to the study of population dynamics to understand the cultural, environmental, economic, and political implications associated with the changing patterns of fertility, mortality, and consumption.
Stonich, Susan	Anthropology	130B		Third World Environments: Conservation and Sustainable Development	This course examines the human and environmental dimensions of global change and addresses practical conservation and sustainable development issues from the perspective of the Developing World. The course also assesses the sustainability of global tourism and its conflict with environmental conservation, and it discusses economic implications of global tourism and the emergence of ecotourism.	This course examines the human and environmental dimensions of global change and address practical conservation and sustainable development issues from the perspective of the Developing World. The course also assesses the sustainability of global tourism and its conflict with environmental conservation. The course also discusses economic implications of global tourism and the emergence of ecotourism.
Tyler, Claudia	Biology College of Creative Studies	10		Biology Colloquium	Students receiving credit will present talks in their field on material arranged in consultation with the instructor. Credit assigned by the instructor will reflect the extent and quality of participation.	The purpose of this course will be to bring CCS students together to design and implement projects to make the CCS building more environmentally sustainable and to raise awareness of the environmental issues for other CS students. Class time will be used for both discussion and action.

McFarland, Eric	Chemical Engineering	141		The Science and Engineering of Energy Conversion	Framework for understanding the energy supply issues facing society with a focus on the science, engineering, and economic principles of the major alternatives. Emphasis will be on the physical and chemical fundamentals of energy conversion technologies.	This course provides a rational framework for understanding the magnitude of the present challenges, beginning with the evolution of our current reliance on fossil hydrocarbons, a survey of potential energy resources, and a detailed study of the science and engineering principles of energy interconversion.
De Vries, Mattanjah S.	Chemistry and Bio Chemistry	123		Fundamentals of Environmental Chemistry	Study of Earth's biogeochemical cycles with respect to carbon, nitrogen, and sulfur. Introduction to the science of climate change, including effects of global warming on terrestrial and aquatic ecosystems. Environmental impacts of fossil fuel and biofuel technologies. Chemistry of the atmosphere, hydrosphere, and lithosphere, with emphasis on ozone depletion, photochemical smog, acid rain, global ocean acidification, soil and groundwater contamination, and environmental costs of industrialized agriculture.	Focuses of this course include the science of climate change, effects of global warming on terrestrial and aquatic ecosystems, and environmental impacts of fossil fuel and biofuel technologies.
Lea, David	Earth Science	130		Global Warming – Science and Society	Introduction to the scientific and societal issues surrounding global climate change. Includes introduction to physical climatology, greenhouse effect, climate history, anthropogenic changes, and future predictions. Student discussion and debate on the potential societal scenarios available to mitigate future climate change.	This course examines the social, economic, environmental, and political impacts and implications of global warming and the future of energy and fossil fuels.
Loaiciga, Hugo	Earth Science	173	Geography 116	Groundwater Hydrology	Analysis of groundwater flow in complex geologic environments, aquifer properties, wells and groundwater contamination, surface water-groundwater interactions. Laboratory: basic groundwater experiments, Darcy's law, flow nets, solute dispersion, field measurements of bedrock groundwater, analysis of pumping-test data.	This course covers important topics in groundwater hydrology and hydrogeology. The course prepares students to analyze groundwater flow processes and applies key concepts in problem-solving, laboratory, and field practice.
Kuris, Armand	Ecology, Evolution, and Marine Biology	40		Ecology of disease	Uses topical examples of emerging and resurgent diseases to illustrate key principles in ecology and epidemiology. Examines how changing disease ecology influences disease prevalence and how such changing patterns of disease have influenced human history.	This class examines how changing disease ecology influences disease prevalence and how such changing patterns of disease have influenced human history.

Latto, John	Ecology, Evolution, and Marine Biology	111		Parasitology	An ecological approach to parasitism. Survey of parasites of humans and other animals. Discussion of evolutionary, genetic, immunological, sociological, political, and economic aspects. Laboratory stresses anatomy and life cycles of living material	This class addresses the sociological, political, and economic consequences of parasitism, using an ecological approach.
D'Antonio, Carla	Ecology, Evolution, and Marine Biology	119	Environmental Studies 119	Ecology and Management of California Wildlands	Explore ecological processes in California habitats and the challenges of their management through field trips, discussions with land managers, lectures and readings. Focus on regional habitats including specialized habitats such as coastal salt marsh and vernal pools, and more widespread such as oak savanna and chaparral.	This class looks at the challenges and constraints of managing wildlife ecosystems for conservation values. The class field trips include discussions with managers and visiting scientists who explore how ecological knowledge is used to manage wildland habitat or threatened species.
Holbrook, Sally	Ecology, Evolution, and Marine Biology	120		Introduction to Ecology	Major concepts in population and evolutionary ecology. Theoretical, experimental, and field studies pertaining to population growth and regulation, competition, predation, diversity, adaptation and life history strategies.	Integral to this class is the idea of regulation as it pertains to population growth. This introduces a human element and implies a balance of various economic and social aspects.
Mazer, Susa	Ecology, Evolution, and Marine Biology	127		Plant Biodiversity	Introduction to plant biology; the importance of plants to humans; taxonomic and ecological diversity; and evolutionary processes. Will serve as a foundation for all upper-division plant biology courses. Emphasis on life history variation; pollination; reproduction and mating strategies.	This class contains units on plants as they pertain to the human food supply and medical applications. It also looks at the evolutionary adaptations to such major shifts as climate change.
D'Antonio, Carla	Ecology, Evolution, and Marine Biology	128	Environmental Studies 128/Ecology, Evolution, and Marine Biology 228	Foundations of Ecosystem Restoration	Integrates ecological principles with practical issues involved in ecosystem restoration. Beginning with the challenge of selecting goals and establishing a target trajectory, students evaluate how ecological knowledge can guide restoration and whether sustainable states or trajectories can be achieved.	This course examines various models and approaches to ecosystem restoration. It examines the application of restoration processes, as well as the adaptive management strategies used.
Cooper, Scott Schmitt, Russell Even, Thomas	Ecology, Evolution, and Marine Biology	142A		Aquatic Communities	A survey of the patterns of distribution, diversity, an abundance of species in marine and freshwater communities, with an emphasis on the dynamic interactions which shape these patterns. Applied aspects: fisheries, mariculture.	This class looks at the distribution and abundance of marine species in aquatic communities, with an emphasis on fisheries, mariculture, and mankind's influence on marine ecosystems.
Various	Ecology, Evolution, and Marine Biology	164/264	Ecology, Evolution, and Marine Biology 264	Marine Pharmacology	A comprehensive examination of unique natural product probes and toxins that define physiological pathways and serve as a basis for modern pharmacology.	A comprehensive examination of unique natural product probes and toxins that define physiological pathways and serve as a basis for modern pharmacology.

Cooper, Scott Cardinale, Brad	Ecology, Evolution, and Marine Biology	167		Applied Freshwater Ecology	Providing sufficient quantities of high quality freshwater will be the single biggest challenge facing humanity in the next century. The course explores the scientific basis for evaluating and addressing the impacts of environmental change of freshwater ecosystems.	Because clean freshwater is a requirement for all human activities and because freshwater habitats are biodiversity hotspots that are severely threatened by human expansion, this course provides a timely introduction to pressing national and global problems. Such problems include climate change, ozone depletion, acid deposition, land use changes, and eutrophication.
Schimmel, Joshua	Ecology, Evolution, and Marine Biology	171		Ecosystem Processes	An examination of the key processes that regulate ecosystem productivity and function in terrestrial ecosystems. Specific foci include: plant- soil linkages including decomposition and nutrient supply, and the role of above- and below-ground community composition on element cycles.	This class looks at the key processes that regulate ecosystem productivity and functions in terrestrial ecosystems. The nature of regulating ecosystems may include elements of human interaction.
Thorsch, Jennifer	Ecology, Evolution, and Marine Biology	189	Environmental Studies 191	Biodiversity and ecological Restoration Education Practicum	Blending the science of biodiversity and ecological restoration with teaching and curriculum development for grades K-12. Topics include: science education, phenology, local biodiversity, plant and animal identification, and the watershed concept from coastal water to the near shore marine environment.	This class offers students the opportunity to design a curriculum which focuses on the environment or sustainability.
D'Antonio, Carla	Ecology, Evolution, and Marine Biology	228	Environmental Studies 128, Economics 128	Ecological Constraints to Ecosystem Restoration	Integrates ecological principles with practical issues involved in ecosystem restoration. Beginning with the challenge of selecting goals and establishing a target trajectory, students evaluate how ecological knowledge can guide restoration and whether sustainable states or trajectories can be achieved.	This course examines various models and approaches to ecosystem restoration. It looks at the application of restorations, as well as the adaptive management strategies used.
Vallejo, Paulina Oliva	Economics	115	Environmental Studies 175	Environmental Economics	Provides a rigorous treatment of environment economics. Topics include welfare analysis, ethical dimensions of economic criteria for protecting the environment, measuring the demand for environmental goods, property rights, economic incentives, including marketable permits and emission fees, and regulating risk.	This class covers most aspects of the economy's interaction with the environment. The course is short on policy and long on theoretical developments in the area of environmental economics.

Deacon, Robert T.	Economics	122	Environmental Studies 179	Natural Resource Economics	Microeconomic theory and capital theory applied to problems of conservation and management of natural resources. Analysis of public policy with special emphasis on nonrenewable energy resources, management of forests, deforestation and species extinction, and use of fish and game resources.	This class integrates economic and biological concepts in modeling. It examines how ownership institutions affect resource use and sustainability, as well as how economic concepts and analytical tools must be adapted to address natural resource topics.
Feldwinn, Darby	Education	136	Environmental Studies 136	Green Works- Exploring Technology and the Search for Sustainability	A multi-disciplinary class examining the interplay of technology, society, science, and history. Investigate green technologies in an interactive class format designed to encourage discussion and debate. Innovative science and social science labs provide hands-on learning.	This course explores green technologies, including energy, lighting, solar, green buildings, and vehicles/batteries. It covers not only the scientific side of these technologies, but also explores the connections with history, culture, and politics.
Gilmore, Timothy	English	122LE		Cultural Representations: Literature and the Environment	Environmental survey of Western literature that explores the often-ignored literary history of the natural world.	This course explores how nature and the natural world are imagined through literary texts. The course seeks to understand contemporary attitudes toward the environment through literary history.
Alagona, Peter Wack, Paul	Environmental Studies	1		Introduction to Environmental Studies	"Environmental Studies" requires insights from many disciplines, including the social as well as biophysical science and the humanities. This introduction offers an overview of the field, examining both our planet and the ways in which we humans depend on it.	This course explores some of the big questions in the field of environmental studies and provides a holistic, integrative, and interdisciplinary perspective on a range of complex environmental problems and solutions. This course is divided into three sections: environmental processes, environmental policies and politics, and major environmental problems.
Keller, Ed	Environmental Studies	2		Introduction to Environmental Science	Provides integration of fundamental science with environmental topics. Includes impacts of human population increase; principles of systems and change, biogeochemical cycles, ecosystems and global climate; energy and laws of thermodynamics; water supply and pollution; toxicology and risk analysis; air pollution and stratospheric ozone depletion.	This course studies the Earth as an interconnected living system. Students develop a modest acquaintance with the complex interactions of human use of the environment that society is struggling with. The course focuses on how to think critically about human population growth, sustainability, biogeochemical cycles, ecosystem processes, ecosystem management, global warming, and other issues.

Graves, Gregory	Environmental Studies	3		Introduction to the Social and Cultural Environment	An introduction to the relationship of societies and the environment from prehistorical times to the present. The course is global in perspective, and includes history, literature, philosophy, economics, science, and culture as evidence for examining the human social environment.	This course assesses the relationship of human societies and cultures with the environment, from their beginnings to the present day. Particular emphasis is placed on contrasting various cultures with regard to their practices of environmental manipulation.
Kunkel, Bryanna	Environmental Studies	15		Chemistry of the Environment	Application of chemical principles such as kinetics, equilibria, radioactive decay, and system modeling to environmental problems. Problems discussed include global cycles, carbonate chemistry, and global change. Interactions and consequences of human actions on the chemistry of the environment will be emphasized. Knowledge of algebra is assumed.	This course discusses the chemical processes behind many environmental issues, such as global climate change, energy from combustion, acid rain, and radioactivity.
Berry, Lisa Gee, Quentin O'Hara, Casey	Environmental Studies	25		Quantitative Thinking in Environmental Studies	Improve students' ability to deal with quantitative aspects of environmental topics by developing skills in algebra, computer use (Excel), graphing, and processing and conceptualizing environmental data by using numerical modeling. Collaborative learning is emphasized.	This course develops quantitative analytical approaches to examining environmental issues, such as agriculture, climate change, and ecology.
Manalis, Melvyn	Environmental Studies	105		Solar and Renewable Energy	How solar and renewable energy fits with environmental-energy options in both developed and developing nations. Technologies are studied in terms of their effects on the physical, social, and biological environment. Demonstrations, field trips, and guest lecturers.	This course examines direct and indirect solar technologies in terms of their effects on the physical, social, and economic environments. The course also discusses environmental-energy relationships, energy crises, and solar energy utilization. Other topics covered include passive and active solar heating and cooling, energy from photosynthesis, photovoltaics, wind and wave energy, ocean thermal energy conversion, and other solar electric systems.
Pulver, Simone	Environmental Studies	106		Critical Thinking About Human-Environment Problems and Solutions	Focus on two interrelated aspects of human-environment interactions where shortfalls in critical thinking are important - our thinking about human-related "problems and causes" and potential "solutions." Gain feel for seductiveness of common misconceptions and learn why to move beyond them.	This course critically evaluates how humans interact with the environment, based on information, technology, incentives, and values. The course also investigates human behavior and techniques for interacting with the environment, as well as how the above strategies are involved in formal and disruptive politics to affect individual choices.

Kundu, Manasendu	Environmental Studies	112		World Population, Policies, and the Environment	History of global population growth, with emphasis on developing nations. Its socio-economic effects on a society and factors behind migration. Different views of Malthus, Marx, Boserup, and others and governmental policies to check rapid population growth will also be discussed.	This course examines the history of global population growth and current factors involved in population growth around the world. The course investigates how the world's population growth affects socio-economic situations and the bio-physical environment.
Manalis, Melvyn	Environmental Studies	115		Energy and the Environment	Focus on learning how to use energy efficiently in accordance with the laws of thermodynamics and in harmony with the environment. Topics include the nature of energy and the fundamentals for a sustainable environmental energy policy.	This course examines the basic issues surrounding the environment, the global economy, and major social problems as they relate to energy and energy efficiency.
Wilkinson, Robert	Environmental Studies	116		Building Sustainable Communities	Examines sustainability, communities, and urban systems in a global context. Covers impacts cities have on the environmental systems that support them, and explores ways to improve urban systems through technology, policy, and design.	This course examines sustainability through the context of urban systems. The course examines the environmental systems, economic costs and benefits, and social involvement in urban systems.
Wilkinson, robert	Environmental Studies	117		Science and Policy Dimensions of Climate Change	Climate change and variability due to glabal warming is a critical environmental, social, and economical issue. Course will review the scientific basis of our understanding of climate change and policy responses to the problem including "no regrets" and multiple-benefit responses.	This course examines climate change and variability due to global warming as a critical environmental, social, and economic issue.
Raney, David	Environmental Studies	118		Industrial Ecology: Designing for the Environment	Industrial Ecology is a philosophical and methodical framework interwoven with concepts in ecology and economics used to aid in understanding of how industrial systems interact with the environment. Capital, energy, and material flows are examined and viewed in cultural context.	This course investigates how the concepts of industrial ecology, producer responsibility, and sustainability relate and analyzes how individual corporate firms have considered and implemented sustainable practices in their operations. The course also explores governance factors in regulation, environmental management, and other areas of industrial ecology.

Pye, Lori	Environmental Studies	129		EcoPsychology	Course explores the theories and practices of psychologists, educators, and others whose work is focused on the connections between "inner" human nature and "outer" nature within which humans experience themselves and the rest of the world.	Ecopsychology recognizes that the psychology of the individual is reflected in the psychology of the culture, of our nations, and in our world's complex issues, and that all life systems (personal, social, ecological, economic, and cultural) are linked through multiple narratives and relationships. This course investigates how humans, as individuals and as a culture, have come to interact with the planet in an "eco-suicidal" way. The course examines and discusses how a sustainable psychological system directly promotes the sustainability in all other systems.
Pulver, Simone	Environmental Studies	131		International Environmental Law and Politics	An examination of the actors and institutions of international environmental law and politics, with an emphasis on explaining patterns of success and failure in addressing global environmental problems.	This course investigates global environmental problems such as climate change and biodiversity loss through the lens of international environmental politics.
Kundu, Manasendu	Environmental Studies	132		Human Behavior and Global Environment	Study of global environmental impacts of major human technological innovations, including the use of fire, development of agricultural tools, and the process of industrialization. Evaluation of prospects for altering human behavior to encourage sustainable development is included.	This course focuses on how the current environmental crises of the planet developed and investigates the human behavior that may have been root causes of environmental issues. The course looks at the impact of anthropogenic forces, such as agriculture, industrialization, and a global economy and how they affect the environment.
Pulver, Simone	Environmental Studies	139		Business and Environment	Analysis of the practices of environmentally responsible firms and of the drivers of business greening at the level of individual firms, particular industries, and of the economy as a whole.	This course explores the strategies corporations use when they "go green" and what prompts corporate behavior to adopt sustainable production and management systems.
Schindlinger, Michael	Environmental Studies	143		Endangered Species Management	Examination of the protection and management of endangered species through analysis of the state and federal endangered species acts. Topics include biodiversity, speciation and extinction rates, the history of endangered species legislation, and selected species' case studies.	This course examines issues of species conservation and how to identify and address the causes and challenges of endangered species management.

Clark, Jordan	Environmental Studies	147		Air Quality and the Environment	Types, sources, effects, and control of air pollution. Topics include gaseous pollutants particulates, toxic contaminants, atmospheric dispersion, photochemical smog, acid rain control measures, the clean air act and regulatory trends, indoor air.	This course applies fundamental chemical principles in the context of atmospheric problems and discusses the roles of carbon dioxide and the oceans in global climate change.
Cleveland, David	Environmental Studies	149	Anthropology 149 and Geography 161	World Agriculture, Food, and Population	Evolution, current status, and alternative futures of agriculture, food and population worldwide. Achieving environmentally, socially, and economically sustainable food systems; soil, water, crops, energy and labor; diversity, stability and ecosystems management; farmer and scientist knowledge and collaboration; common property management.	This course directly examines the issue of world agriculture, food, and population through a sustainability lens by looking at ecosystems management, resource management, sustainable agriculture, and the implications of the world food crisis.
Cleveland, David	Environmental Studies	157		Santa Barbara County Agrifood System	Investigates current agricultural system and potential benefits and costs of localization. Covers theory, data collection, analysis methods, key indicators (greenhouse gas emissions, biodiversity, migrant labor, nutrition, community health), policies and actions for change. Students conduct and present research as team.	This course focuses on potential solutions to how the Santa Barbara County agrifood system can be localized in ways that synergistically increase sustainability socially, environmentally, and economically.
Alario, Celia	Environmental Studies	161		Environmental Communications: Contemporary Strategies and Tactics	Surveys strategies and tactics for communicating about the environment and sustainability in various organizational, political, cultural, business, mass media and social media contexts. Students will analyze, evaluate and practice communications methods using a spectrum of communications channels.	This course surveys contemporary communications practices utilized to address issues of the environment and sustainability.
Loaiciga, Hugo	Environmental Studies	162	Geography 162	Water Quality	Study of physio-chemical and biological characteristics of natural waters, analysis of water pollution and treatment, water-quality regulations. Laboratory: independent and supervised research of water pollutants and treatment, quantitative analysis of water-quality data and one-day field work.	This course conducts a comprehensive review of the physical, chemical, and biological characteristics of surface water and ground waters and studies the treatment and management of chemically and biologically polluted waters.
Rells, Paul	Environmental Studies	172		Waste Management: Product Stewardship, Recycling and Renewable Energy	Overview of policy, technology, and economic dimensions of managing wastes in the twenty-first century. Covers the emergence of product stewardship, domestic and international recycling, composting of organic materials, conversion of organic materials to renewable energy, waste incineration and land filling.	This course studies the archaeology of waste; U.S. and European waste and composting; landfills and incinerators; product design for recyclability, waste reduction, and zero waste; and technologies to convert waste to energy, producing biofuels, electricity, and fuel chemicals.

Graves, Gregory	Environmental Studies	173		American Environmental History	Traces the history of American attitudes and behavior toward nature. Focus on wilderness, the conservation movement, and modern forms of environmentalism.	This course examines how historical changes in attitudes have resulted in society's attitude towards the environment today. The course traces economic, social, cultural, geographic, and scientific issues throughout history to understand how land, water, and resource issues of today are addressed.
Lewin, Bridget	Environmental Studies	174		Environmental Policy And Economics	Introductory course on economic analysis of environmental policy. Topics include incentives and regulation, protection of the stratospheric ozone layer, global climate change, and equity issues.	This course examines how our market-based system has played a role in environmental degradation. The course also covers the environmental, economic, and social factors in issues such as environmental policy, energy, population growth, and sustainable development.
Deacon, Robert T.	Environmental Studies	179		Natural Resource Economics	Theory and capital theory applied to problems of conservation and management of natural resources. Analysis of public policy with special emphasis on nonrenewable resources, management of forests, deforestation and species extinction, and use of fish and game resources.	This course examines markets for natural resources and how economic issues relate to biodiversity and deforestation.
Wack, Paul	Environmental Studies	135A		Principles of Environmental Planning	Introduction to the history, theory, and trends of urban, regional, and environmental planning in both California and the United States. Field trips to local urban areas.	This course looks at environmental planning and the natural and human systems involved. The course covers the economic, social, and environmental factors involved in sustainable environmental planning.
Wack, Paul	Environmental Studies	135B		Advanced Environmental Planning	Advanced seminar applying principles presented in environmental studies 135A to regional and local government planning processes. Field analysis of local planning issues.	This course investigates environmental planning, specifically in terms of prevention of future environmental degradation. Comprehensive and strategic land use planning and planning for future sustainability are core topics in this course.

Stone, David	Environmental Studies	165A		Environmental Impact Analysis	Analyzes the historical and theoretical approaches to environmental assessment methodology and procedures for preparing and reviewing environmental impact reports. Explores strengths and weaknesses of current public policy context.	This course covers the basis for undertaking environmental impact assessments. It presents strategies used by environmental planners to illustrate how development can result in undesirable environmental outcomes, including characterizing existing conditions, analyzing the significance of project disturbances, and identifying design solutions to avoid or minimize potential damage. The course also explores how these techniques are used to influence short- and long-term decisions that shape our community.
Mohr, Greg	Environmental Studies	165B		Environmental Impact Analysis	Advanced seminar during which students prepare their own focused environmental impact report on a specific development project. Includes in-depth discussion of baseline, mitigation, impacts, and public comments. Assignments based on research and fieldwork provide reality professional environmental planning experience.	This course expands on the fundamental ideas presented in ENV S 165A in regards to environmental impact assessment and applies them in an environmental impact report project that is completed throughout the quarter. This project is supplemented with seven written assignments that build up to the final product. Emphasis is given to identifying potentially significant adverse impacts of a hypothetical development project on campus; the identification of feasible measures to avoid or reduce such impacts; and describing project alternatives that would accomplish the basic project objectives while avoiding or reducing such impacts. Field work also is involved: one visit to the project site and another to see actual mitigation measures being implemented for actual campus development (sites vary, based upon best opportunities).
Wilkinson, Robert	Environmental Studies	176A		Water Policy in the West: Linking Science with Environmental and Economic Values	Examines water supply and use, the science of water systems and watersheds, key concepts in water policy, and the basics of water law as a fundamental element of the history and context for water policy in the West.	This class explores water policy and the nexus between water policy, energy and climate policy, environmental issues, and economics. The course examines these issues and their broad environmental, social, and economic significance.
Wilkinson, Robert	Environmental Studies	176B		Advanced Study of Water Policy	Students are in the field full-time for approximately two weeks to study watersheds and water systems including Yosemite/Hetch Hetchy, Mono Lake, and the state and federal water systems in California.	This course is a follow-on from ENV 176A and includes a field study of the same material. The course still focuses on policy issues of broad environmental, social, and economic significance.

Jenkins, Chris	Film Studies	118		Sponsored Campus Production	An interface with campus "clients" who provide the budget and goals for crew projects.	This 4-unit course is a project-based environmental media production course. Students will work in small teams to create their own environmental video production.
Various	Film Studies	182		Introduction to Environmental Media	Ties the acquisition of critical viewing skills for film to the practice of conceiving and writing short environmental documentaries. Students screen narrative films and documentaries, deconstruct them, and use their new proficiency to write their own documentary treatments.	This course ties the acquisition of critical viewing skills for film to the practice of conceiving and writing short environmental documentaries. Students screen narrative films and documentaries, deconstruct them, and use their new proficiency to write their own documentary treatments.
Walker, Janet	Film Studies	183		Films of the Natural and Human Environment	Presents popular films, professional documentaries representing trends, images, and issues associated with natural and human environments. Visual images and critical thinking skills are combined to enhance understanding of media presentation of environmental issues. May be linked to short creative projects.	This course presents popular films, professional documentaries representing trends, images, and issues associated with natural and human environments. Visual images and critical thinking skills are combined to enhance understanding of media presentation of environmental issues. May be linked to short creative projects.
Various	Film Studies	109EM		Introduction to Environmental Media	This course is designed to give students the core skills needed to conceptualize, capture, edit, and deliver short-form documentaries with an environmental theme. Basic aspects of cinematography, lighting, sound and editing are covered.	This course is designed to give students the core skills needed to conceptualize, capture, edit, and deliver short-form documentaries with an environmental theme.
Gautier, Catherine	Geography	7		Energy, Water, and Climate	Oil and water are two key strategic resources dominating the international scene. This class provides an overview of global distributions of oil and water resources and analyzes some of the social, economic, and geopolitical ramifications of these distributions.	This course examines global distributions of oil and water resources and analyzes the social, economic, and geopolitical ramifications of these distributions.
Gautier, Catherine	Geography	8		Living with Global Warming	Overview of global warming and climate change processes. Description of complex relationships between scientific, technological, economic, social, political, and historical facets of global warming and climate change. Introduction to the concept and practice of climate modeling.	This course gives an overview of global warming and climate change processes.

Church, Richard	Geography	101		Transportation Futures	Introduction to transportation problems involving energy, the environment, congestion, infrastructure, and future trends. Historical perspective on transportation innovations and their impacts on urban form. Reviews current problems, including the movement of freight and the development of transit-oriented neighborhoods.	Looks at explicit environmental, social, and economic problems relating to transportation.
Loaiciga, Hugo	Geography	112		Environmental Hydrology	Analysis of the water cycle with emphasis on land-atmosphere interactions, precipitation-runoff, flood, snow melt, and infiltration processes.	This course examines the protection of rivers and lakes. It considers the sustainability of hydrologic ecosystems and water supply systems in relation to urban and agricultural users.
Michaelsen, Joel	Geography	119		Climatic Change and Its Consequences	Mechanisms and processes which produce climate change. Methods for reconstructing paleo-climates. Impacts of past climate change on human societies.	This course looks at how climate change is produced and how it has impacted human societies.
Siegel, David	Geography	158		Introduction to Marine Resources	Introduction to the marine resources of the California coast. The interplay of oceanographic, climatic, biogeochemical and geologic factors and the influences of humankind will be addressed. Topics include: climate, circulation, biogeography, fisheries, marine mammals, petroleum, pollution and exploration history.	This course looks at human interactions with marine resources. Main focuses of the course include fishery management, marine reserves, and pollution.
David, Cleveland	Geography	161	Anthropology 149 and Environmental Studies 149	World Agriculture, Food, and Population	Evolution, current status, and alternative futures of agriculture, food and population worldwide. Achieving environmentally, socially, and economically sustainable food systems; soil, water, crops, energy and labor; diversity, stability and ecosystems management; farmer and scientist knowledge and collaboration; common property management.	This course directly examines the issue of world agriculture, food, and population through a sustainability lens by looking at ecosystems management, resource management, sustainable agriculture, and the implications of the world food crisis.
Gautier, Catherine	Geography	135S		Mock Environmental Summit	A mock summit in which students act as representatives of different countries, participating in environmental treaty negotiations. Issues addressed during the summit include energy and greenhouse gases.	A mock summit in which students act as representatives of different countries, participating in environmental treaty negotiations. Issues addressed during the summit include energy and greenhouse gases.

Lopez-Carr, David	Geography	141A		Population Geography	Various geographic dimensions of human population dynamics: fertility, mortality, and migration. The concepts and language of demography are introduced. The causes and consequences of population dynamics are investigated, including links among population, environment, and development.	This course looks at the socio-economic and environmental causes and consequences related to population dynamics in world regions and over time.
Cleveland, David	Geography	171 BT	Anthropology 166BT and Environmental Studies 166BT	Biotechnology, Food, and Agriculture	Social, cultural, ethical, biological, and environmental issues surrounding biotechnology (BT) and food systems. Includes theory and method of BT; scientific, social, and political control of BT; effect of BT on genetic diversity, small-scale farmers, environment, food supply, consumer health.	This course examines the economic justifications, environmental impacts, and social implications of agricultural biotechnology, specifically through the discussion of transgenic crop varieties and their role in the future of the world's agrifood system.
Cleveland, David	Geography	171 FP	Anthropology 166FP and Environmental Studies 166FP	Small-Scale Food Production	Biological, ecological, social, and economic principles of small-scale food production and their practical applications. Includes each student cultivating a garden plot; lab exercises, field trips to local farms and gardens.	This course investigates small scale food production and its role in the sustainability of the world's agrifood systems. The course critically examines hypotheses that small scale, locally oriented alternative food production is more environmentally, socially, and economically sustainable, compared to large scale, conventional food production.
Dickey, T D	Geography	3A		Oceans and Atmosphere	Introduction to the oceans and atmosphere and their role in the Earth's climate and its weather patterns. Focus on the flows of solar energy through the ocean and atmosphere systems. Human impacts of the Earth's climate are also introduced.	This course considers human impacts on the Earth's climate. Course objectives include posing meaningful question concerning problems in atmospheric sciences and oceanography, as well as learning about methodologies/technologies applied to monitoring, studying, and predicting the states of the atmosphere and the ocean.
Bouraad-Nash, Marguerite	Global Peace and Security	137		World Society in Transformation: Building Enduring Peace	Fundamental exploration of issues relating to global peace and security with a focus on "positive peace"--peace as human rights, sustainable development, ecological balance, political participation and other positive aspects of human security.	This course looks at the fundamental exploration of issues relating to global peace and security, with a focus on "positive peace"--peace in terms of human rights, sustainable development, ecological balance, political participation, and other positive aspects of human security.

Barandiaran, Javiera	Global Studies	161		Global Environmental Policy and Politics	The evolution of international environmental negotiations, agreements, and organizations, and the role governmental and non-governmental actors are playing in shaping them are examined. Climate change, biodiversity conservation, and equitable global sustainable development are among the critical policy challenges considered.	This class looks at the evolution of international environmental negotiations, agreements, and organizations, and the roles that governmental and non-governmental actors are playing in shaping them are examined. Climate change, biodiversity conservation, and equitable global sustainable development are among the critical policy challenges considered.
Darian-Smith, Eve	Global Studies	171		Global Environmental Law & Policy	A focus on global environmental problems in our time, particularly climate change and its impact on resource scarcity, human security, energy geopolitics, and democracy in an unevenly structured world system, including the search for world order solutions.	This course focuses on global environmental problems in our time, particularly climate change and its impact on resource scarcity, human security, energy geopolitics, and democracy in an unevenly structured world system, including the search for world order solutions.
Barandian, Javiera	Global Studies	197		Energy in Global Societies	Examines how energy choices reflect the Earth's natural resources and reconfigure our views of nature, society and markets. We will read historical and contemporary accounts of energy politics to understand the linkages between the global and local.	This course looks at energy issues from a cultural, environmental, social, and political perspective.
Jarrett, Gregory	Interdisciplinary Studies	156EE	Religious Studies 156EE	Environmental Ethics	Environmental Ethics probes questions of duty and policy regarding human impact on the natural world. Topics such as climate change, sustainable economics, population explosion, and the standing of non-human animals are examined from various perspectives.	This course examines human impact on the natural world with regards to policy and questions of duty. Topics such as climate change, sustainable economics, population explosion, and the standing of non-human animals are examined from various perspectives.
Portuges, Paul	Interdisciplinary Studies	185EM		Environmental Media	This course introduces students to the theory and practice of writing short documentaries. Students will study approaches to non-fiction storytelling and create a treatment for a short film on an environmental topic.	In this course, students have the opportunity to write a short film on an environmental topic.

Hofmann, Gretchen	Interdisciplinary Studies	94OR		Studying Climate Change in the Oceans	This seminar will explore the global change biology of climate change impacts on the world's oceans. We will cover topics that pertain to the way the environment is changing, how the organisms might respond and what the impacts might be on critical marine ecosystems such as coral reefs. Professor Gretchen Hofmann is an eco-physiologist whose research focuses on the effects of climate and climate change on the performance of marine species. In particular, her recent research investigates the impact on marine organisms of rising atmospheric CO2 concentrations via global warming and ocean acidification.	This seminar explores the global change biology of climate change impact on the world's oceans. Topics covered include the way the environment is changing, how organisms might respond to environmental change, and what impact environmental change might have on critical marine ecosystems, such as coral reefs.
Matthys, Eric	Interdisciplinary Studies	94OV		Introduction to Sustainability	The Seminar will introduce the students to the concept of Sustainability and its implementation on campus and in the local community by various groups including student organizations. Various topics will be addressed such as Energy, Recycling, Water, Food, Land use etc. Professor Matthys has been teaching and researching issues related to Energy for many years. He has also taught broad-based non-technical Freshman Seminars about Energy to introduce students to the general concept of where Energy is coming from, how it's being used and how we will produce the needed Energy for the World in the future.	This seminar introduces students to the concept of sustainability and its implementation on campus and in the local community by various groups, including student organizations. Various topics such as energy, recycling, water, food, and land use are addressed.
Gautier, Catherine	Interdisciplinary Studies	94PD		Understanding the Global Energy and Climate Systems to Best Invest in Our Future	The need for energy independence for economic and political reasons and plans to mitigate climate change is influencing the US energy policy for the upcoming decades. The choices made now will impact many aspects of our lives, and more importantly our future economic growth and environmental well being. These decisions will require a population with a solid knowledge and understanding of the various options available and their potential consequences. This seminar will discuss these options.	This course looks at climate change and global energy holistically, as a multifaceted issue likely to impact many aspects of our personal lives, as well as our future economic growth and environmental well-being.

Walker, Janet	Interdisciplinary Studies	94QB		Imaging and Imagining Sea Level Rise	How do different communities from the populations of sinking islands to the residents of coastal California experience, visually represent, and respond to sea level rise? In conjunction with this year's Critical Issues in America theme of sea level rise, students will meet as a group and attend film screenings, guest lectures, and other special events.	This seminar explores how different communities experience, visually represent, and respond to sea level rise. Students in this seminar attend film screenings, guest lectures, and other special events to explore the theme of sea level rise in conjunction with this year's Critical Issues in America.
De Vries, Mattanjah S.	Interdisciplinary Studies	94QH		Global Warming, a Hoax or a Disaster?	The number of Americans who worry about global warming has gone down in the last ten years from 75% to about 50%. Is there less to worry about? What really is the science of climate change? Are the skeptics right? We will explore both the science and the politics of what may (or may not be) either the greatest hoax or the greatest crisis facing planet earth.	This seminar explores both the science and politics of global warming and discusses whether or not it is the greatest hoax or the greatest crisis facing planet earth.
Gough, Judy	Linguistics	12		University Writing for Multilingual Students	Students analyze academic discourse, develop rhetorical strategies for exposition and argument, practice examination writing, and write and revise papers.	Students research a problem related to sustainability, then interview sustainability group members at UCSB to determine how their group addresses the problem. For example, one small group of students reads about problems related to the use and disposal of plastics (published articles on plastic pollution). Students use what they learn through their research and interviews to write a 4-5 page paper, as well as to create an oral presentation in order to share what they learn with the class. This project is funded by a sustainability instructional grant.
Macker, Teddy	Literature College of Creative Studies	101		The Nest of the Robin: Exploring the Relationship Between Poetry and the Welfare of "Nature" (Official Course Title: Writing: Verse)	Practice in the writing of original verse.	This workshop-oriented course explores the relationship between poetry and the welfare of "nature." The class covers a wide range of poetry and explores the role and power of art and various definitions of "nature."

Athanassakis, Apostolos	Literature College of Creative Studies	114		Contemporary Literature of Food and the Environment: The Politics of Consumption (Official Course Title: Themes and Motifs)	Emphasis on structure and meaning in literary texts: analytic focus on principles of representation, and on recurrent features, in the literature studied. Extensive reading and exposition.	This course combines the disciplines of Food Studies and Environmental Justice. The ecological cost of America's overconsumption is a frequent topic in today's media, but it is often exclusively spoken of in terms of meat and oil. To address these issues, the course will examine visual and written texts of our times and investigate the representations of consumption (of land, peoples, toxins, and capital).
Portuges, Paul	Literature College of Creative Studies	103/113		Environmental Media (Official Course Title: Subjects and Materials)	Emphasis on style and content of literary texts: critical investigation of how matter and manner work together in serious literature. Extensive reading and exposition.	This course involves the study and practice of environmental media. Students study the ways and means of how to inform the world about environmental problems and issues, then learn the techniques of writing and shooting documentary media. Students either write a research paper on media and environmental issues (climate change, pollution, population, etc.) or write and/or make a short documentary video. In-class viewing and discussions of environmental documentaries (Food, Silent Spring, Fuel, An Inconvenient Truth, etc.) and feature films (Erin Brockovich, China Syndrome, etc.) take place.
Marschall, Ekkehard Matthys, Eric	Mechanical Engineering	112		Energy Conversion	Introduction to the field of Energetics. Topics may include energy sources and production, energy usage, renewable technologies, hardware, operating principles, environmental impact, energy reserves, national and global energy budgets, historical perspectives, economics, societal considerations, and others.	This course provides an overview of energy usage and production from prehistory to present times (technical, environmental, and societal issues). It includes a technical analysis of the modern means of energy production (fossil, nuclear, hydro, wind, solar, geothermal, biomass, etc.) and an investigation of operating principles, hardware, engineering issues, environmental impact, etc.

Foltz, Kathleen	Molecular, Cellular and Developmental Biology	194KF		Science for the Common Good	Oral reports by students.	As part of this course, students must identify a local, regional, or global challenge (health/environment-related), propose a solution, seek funding, and then try to resolve the challenge. In 2012, for example, the students compiled data regarding energy use and street lighting in Isla Vista, overlaying street light maps with crime incidence rates. They then partnered with other campus and community organizations to lobby the county to install LED lighting at more locations in IV.
Smith, Eric	Political Science	175	Environmental Studies 178	Politics of the Environment	Analysis of environmental policy issues and their treatment in the political process. Discussion of the interplay of substantive issues, ideology, institutions, and private groups in the development, management, protection, and preservation of natural resources and the natural environment.	Class focuses include the problems of climate change and energy supply, the history of the environmental movement, and public opinion on environmental issues.
Moosebrugger, Lorelei	Political Science	177		Comparative Environmental Politics	Course is structured around the major issues in environmental politics, for example: global warming, nuclear waste, deforestation, and chemical pollution. The roles of economics, technology and social organization are each considered as explanatory variables for understanding environmental problems.	This course is structured around the major issues in environmental politics, i.e.: global warming, nuclear waste, deforestation, and chemical pollution. The roles of economics, technology, and social organization are each considered as explanatory variables for understanding environmental problems.
Foran, John	Sociology	134EC		Earth in Crisis	Explores the causes and consequences of climate change on a global scale, covering the state of the science in layman's terms, the current and future social impacts of climate change, the global negotiations process, and climate justice activism.	This course assesses the depth of the climate crisis, its impact on societies around the world, the state of the negotiations for a global climate treaty, and the rise of a global climate justice movement.
Clemencon, Raymond	Sociology	134G		Green Movements and Green Parties	Examines how environmental organizations and green political parties are shaping policy formulation on environmental issues in different developed and developing countries, with a focus on the US experience.	This course examines environmental organizations and green political parties and how they shape policy formation on environmental issues.
Foran, John	Sociology	134GJ		Global Justice Movements	Study of the origins, present situation, and future prospects on contemporary social movements for global justice, in the realms of climate change, militarization, local and national autonomy, human rights, and the many forms of global and local inequalities, amongst others.	This course investigates the origins, development, and future prospects of contemporary social movements for global justice and also examines climate change, alternative economies, and human rights.

Juergensmeyer, Mark	Sociology	138G	Global Studies 124	Global Conflict	The focus of this course is on global conflict--how to analyze and understand it and how to resolve it. The current "war on terrorism" following the catastrophic terrorist attack on September 11 2001 and the subsequent US occupation of Afghanistan and Iraq are the most obvious of a series of cases that illustrate the new realities of global tension in the twenty-first century. The rise of new transnational economic powers, the emergence of religious nationalism and ethnic strife, and the rapid spread of new communications technologies around the world have also given birth to new kinds of conflicts and concerns.	This course considers economic crises in the US and the EU and the challenge of ethnic strife in Africa. It additionally looks at the looming threat of global warming and other environmental problems which have produced different kinds of conflicts and concerns.
Miele, Ilene	Writing	105C		Writing about Sustainability	The focus of the course is writing about sustainability. We cover foundational ideas first, then students research various kinds of publication to examine how issues are being covered. We look at work being done locally and on campus. Finally students write to a specific audience to promote change using the methods for persuading audiences that we've covered throughout the quarter.	Obvious from title.
Miele, Ilene	Writing	105S		Writing About Sustainability	Analysis and practice of various forms of writing that address sustainability in interdisciplinary contexts. Students will research, write, and reflect on concepts and practices of sustainability, examining the role of words and images in communicating sustainability ideas to diverse audiences.	The 105 S class is designed to cover sustainability throughout the entire course. The focus is on writing about sustainability; the course examines how others write about it and considers what kinds of methods convince audiences and effect change. Students conduct field research to find out what kind of sustainability work is being done locally, they review print and online resources, and they analyze the strategies being used to communicate about sustainability. Finally, they choose methods and write a piece directed at a specific audience and designed to produce change.
Sustainability Related Courses						
Hoelle, Jeffrey	Anthropology	2		Introduction to Cultural Anthropology	The nature of culture: survey of the range of cultural phenomena, including material culture, social organization, religion, and other topics.	This course covers human-environment interactions as part of an investigation of how cultural developments govern human behavior in a variety of settings around the world.

Ford, Anabel	Anthropology	194		Field Training Archaeology	Introduction to design of research projects and techniques of data collection in archaeology. The number of units taken in one course will depend on the amount of training and experience received.	This course involves working with data collection in the Mayan forest and archaeological sites. The course correlates with Dr. Ford's research involving agroecology, environmental anthropology, and economic botany in the Mayan city of El Pilar.
Gurven, Michael	Anthropology	129MG	Anthropology 129	Behavioral Ecology of Hunter-Gatherers	This course examines the historical development of human behavior as a result of food acquisition. The course applies principles of behavioral ecology to the investigation of health, behavior, cultural development, and conservation.	This course examines the historical development of human behavior as a result of food acquisition. The course applies principles of behavioral ecology in the investigation of health, behavior, cultural development, and conservation.
Stonich, Susan	Anthropology	130A		Third World Environments: Problems and Prospects	Examines human dimensions of global environmental change in developing countries from an interdisciplinary social science perspective. Compares and contrasts alternative conceptual and analytical models of dynamic, interrelated human-environmental systems and presents recent approaches to understanding risk, vulnerability, resilience, and disasters.	This course is intended to help students understand environmental problems from a multivariate view that includes historical, social, cultural, economic, and political factors, as well as perspectives from the biophysical sciences. The course introduces conceptual and analytical models of social-ecological systems and applies them to understanding environmental issues and natural systems.
Stonich, Susan	Anthropology	130C		Third World Environments: Response and Resistance	Concerned with response and resistance to economic globalization, impoverishment, and environmental degradation: household economic strategies; migration, urbanization; social conflict; environmental movements of the poor; the information revolution; and alternative development strategies.	This course uses the history of the global food system to examine the impacts on environmental justice, economics in developing countries, and the effect on human nutrition and food security. The course examines specific environmental issues related to the global food system, such as the rise of aquaculture and its environmental, economic, and social implications.
Sturman, Peter	Anthropology	134B		Art of Chinese Landscape	A survey of the art and archaeology of Ancient China, from neolithic times through the Tang Dynasty (A.D. 618-906). Emphasis on the development and transformation of pictorial traditions, leading to early painting theory and practice.	Cultural relationship between humans and their natural environment is a theme that is explored.
Various	Anthropology	153T		Seminar on Primate and Human Sexual Behavior	A critical examination of the nature and determinants of human sexuality, emphasizing evolutionary and cross-cultural approaches.	Students in this class learn about primate extinction as a result of habitat loss.

Sturman, Peter	Art History	134C		Chinese Painting I	Chinese painting and theory, from beginnings through the fourteenth century. Introduction to major developments and masters in their cultural context with a focus on meaning and agency.	Cultural relationship between humans and their natural environment is a theme that is explored.
Sturman, Peter	Art History	134D		Art and Modern China	An exploration of trends and issues in nineteenth and twentieth-century Chinese art, as China awakens and responds to the challenges of modernity and the West. Topics include the continuity of tradition, the exile identity, and trends after Tiananmen (1989).	Cultural relationship between humans and their natural environment is a theme that is explored.
Various	Black Studies	129		The Urban Dilemma	Examines the evolution of African-American urban communities. Focuses on theoretical and historiographical debates including: social organization; conditions; daily life; culture; social movements; sustainable development; and class, gender, race relations. Analysis of current policy debates and community initiatives.	This course examines the evolution of African-American urban communities and includes segments discussing the sustainable development and environmentally related social justice issues of these communities.
Stewart, Jeffrey	Black Studies	154		Environmental Racism and Environmental Justice	This course investigates environmental injustice—that some people, especially poorer people, bear a disproportionate burden of living in communities with environmental hazards—and environmental racism—that a high coincidence exists between the location of toxic waste sites and Black and Brown communities, even when they are predominantly middle class.	This course discusses social inequality and its connection with the unequal burden of environmental degradation and other related environmental issues.
White, Mia	Black Studies	190		Race, Space, and Place (Official course title: Senior Thesis Seminar in Black Studies)	Capstone course for the Black Studies major, designed to sharpen knowledge of major themes and strengthen skills in research, critical analysis, and writing. Emphasizes primary research and the writing of a major paper or thesis based on that research.	This course explores four topical themes: environmental justice/community health; gang injunctions; redistricting; and property ownership, in order to explore the relationship between the social and the spatial, the human and the environment, the racial and the spatial, and the political and the historical.
White, Mia	Black Studies	193M W		Race and the Just City	No official description readily available.	This course examines issues of race and social justice in the context of social and environmental sustainability.
Israelachvili, Jacob	Chemical Engineering	102/202	Chemical Engineering 102	Biomaterials and Biosurfaces	Fundamentals of natural and artificial biomaterials and biosurfaces with emphasis on molecular level structure and function and the interactions of biomaterials and surfaces with the body. Design issues of grafts and biopolymers. Basic biological and biochemical systems reviewed for nonbiologists.	This course looks at the chemical foundation of life and its impact on human nutrition.

Doherty, Michael	Chemical Engineering	184A		Chemical Process Design	Application of chemical engineering principles to plant design. Spreadsheets and flowsheeting methods. Engineering cost principles and economic aspects.	This course focuses on the application of chemical engineering principles to plant design. Parts of the class include units on economic decision making and energy integration as related to plants.
De Vries, Mattanjah S.	Chemistry and Bio Chemistry	123		Fundamentals of Environmental Chemistry	Study of Earth's biogeochemical cycles with respect to carbon, nitrogen, and sulfur. Introduction to the science of climate change, including effects of global warming on terrestrial and aquatic ecosystems. Environmental impacts of fossil fuel and biofuel technologies. Chemistry of the atmosphere, hydrosphere, and lithosphere, with emphasis on ozone depletion, photochemical smog, acid rain, global ocean acidification, soil and groundwater contamination, and environmental costs of industrialized agriculture.	Focuses of this course include the science of climate change, effects of global warming on terrestrial and aquatic ecosystems, and environmental impacts of fossil fuel and biofuel technologies.
Armbrust-Sandoval	Chicano Studies	171		The Brown/Black Metropolis	Traces the transition of Browns/Blacks from a rural urban population and examines trends in family size, language, usage, segregation and social inequality. Issues of urban decay and community conflict are also examined.	This course examines social justice issues between Brown/Black urban populations and includes a section on environmental justice issues in relation to race and class.
Wyss, Andy	Earth Science	2		Physical Geology	Introduction to the science of the Earth; properties and processes of its surface and interior, including plate tectonics, volcanism, earthquakes, glaciation, mountain building, formation of rocks, minerals, and the structural basis of landforms.	This course includes a unit discussing climate change and the study of Earth's resources.
Lea, David	Earth Science	4		Intro to Oceanography	An introduction to oceanography covering the major physical, chemical, and geological features of the oceans, their role in earth history, and potential use as a natural resource. Lab and lecture.	This course includes a unit discussing the ocean's potential use as a natural resource.
Still, Christopher	Earth Science	10		Antartica	The interrelations of the physical and biological environments on the continent Antarctica; Antarctica as an Earth System. Included are studies of tectonic history, global warming, ozone depletion, mineral resources, and the history of scientific exploration of the continent.	This course discusses climate change issues from the perspective of Antartica. Topics covered include: tectonic history, global warming, ozone depletion, and mineral resources.

Lea, David	Earth Science	105		Earth's Climate: Past and Present	Description and quantitative analysis of climate processes and paleoclimate proxies. Processes include radiation and the Earth's energy budget, the influence of orbital cycles, ocean circulation, monsoons, ENSO, and ice sheets. Paleoclimate reconstructions from tectonic-scale to the last millennium, with emphasis on glacial cycles and Plio-Pleistocene climate evolution.	This course examines human-environment interactions throughout the history of Earth's climate and their development in today's climate. The course examines Earth processes that affect climate, such as tectonics, the greenhouse effect, and glacial cycles.
Clark, Jordan	Earth Science	169/269	Earth Science 269	Tracer Contaminants	Introduction to principles of chemical and isotope tracer hydrology. Emphasis on methods of groundwater dating, the use of tracers as management tools, and contaminate plume monitoring.	This course focuses on shallow groundwater and problems associated with groundwater contamination plumes, aquifer storage and recovery, and agricultural impacts.
Lewallen, Ann-Elise	East Asian Culture Studies	140		Indigenous Movements in Asia	Examines the emergence of indigenous peoples as a new kind of political community in Asia. Reading across ethnographic, historical, and politic-legal perspectives, we will explore the material and symbolic benefits of claiming to be indigenous in non-western contexts.	This course includes a unit on indigenous people, development, and the environment.
Carlson, Craig and Various	Ecology, Evolution, and Marine Biology	3		Introductory Biology III	Introduction to the major groups of microbes, plants, and animals.	Introduction to the major groups of microbes, plants, and animals.
Even, Thomas	Ecology, Evolution, and Marine Biology	22		Concepts and Controversies in the Biological Sciences	Introduction to the principles of evolution as a foundation for understanding topics such as adaptation, physiology and ecology. Focuses on areas of biology that encompass important political, economic, social, and philosophical issues. Examines perspectives on currently relevant, and biologically based topics such as evolution / scientific creationism, sociobiology, biotechnology, right to life issues, animal rights, AIDS and other epidemics, and overpopulation.	This course mainly looks at evolution through species interactions; units on social issues such as the right to life and the effects of overpopulation on an ecosystem are included.
Hofmann, Gretchen	Ecology, Evolution, and Marine Biology	55		Global Change Biology	A general overview of the physical science of environmental change but with an emphasis on living organisms, the ecosystems in which they live, and the biological consequences of a changing planet. The course will cover terrestrial and aquatic systems with special emphasis on ocean and critical marine ecosystems.	This class looks at the biological consequences of a changing planet. Topics include an emphasis on living organisms, the ecosystems in which they live, and effects on critical marine organisms.

Various	Ecology, Evolution, and Marine Biology	94		Issues in Marine Conservation	Seminar course exploring a variety of current conservation issues affecting California's coastal ecosystems. Seminars include a range of guest speakers working on the scientific issues underlying the marine conservation challenges.	Topics for this seminar course include major threats currently facing California marine ecosystems and many proposed approaches for mitigating threats and sustainably managing ecosystems. Case studies are used to highlight the biological, socio-economic, and political aspects of marine conservation.
Warner, Robert	Ecology, Evolution, and Marine Biology	106		Biology of Fishes	The evolution, systematics, biogeography, and ecology of fishes.	The evolution, systematics, biogeography, and ecology of fishes.
Schmitt, Holbrook	Ecology, Evolution, and Marine Biology	152	Environmental Studies 152	Applied Marine Ecology	Introduction to the application of ecological principles and methods to environmental problems in marine habitats. Focus on problems that are local, regional, and global in scale. Concepts illustrated with case studies.	This course contains many sections on marine dynamics and communities. There is one specific section devoted to the impacts of climate change on marine ecosystems.
Even, Thomas	Ecology, Evolution, and Marine Biology	159		Tropical Ecology	Examination of ecological processes in terrestrial and aquatic tropical environments.	Examination of ecological processes in terrestrial and aquatic tropical environments.
Latto, John	Ecology, Evolution, and Marine Biology	168		Conservation Ecology	Introduction to the practical application of biological principles to conserving biodiversity. Covers tools and theory derived from both ecology and evolutionary biology such as metapopulation theory and population viability analysis as applied to real world examples.	Introduction to the practical application of biological principles to conserving biodiversity. Units may include emphasis on social and economic constraints to biodiversity conservation.
Prezelin, Barbara Macintyre, Sally Carlson, Craig	Ecology, Evolution, and Marine Biology	142B		Ocean Processes	A discussion of biological, chemical, physical, and optical processes in marine and freshwater environments and the linkage between these processes. Emphasis on primary production, global biogeochemical cycles, nutrient dynamics, and synoptic mapping of biological and physical patterns.	A discussion of biological, chemical, physical, and optical processes in marine and freshwater environments and the linkage between these processes. Emphasis on primary production, global biogeochemical cycles, nutrient dynamics, and synoptic mapping of biological and physical patterns.
Stratton, Lisa	Ecology, Evolution, and Marine Biology	188 RE		Conservation and Restoration Seminar	Seminar explores current topics in conservation biology and restoration ecology including basic and applied questions related to the conservation, restoration and management of populations, communities and ecosystems. Presentations and discussions may include model ecosystem studies, hands on restoration or conservation projects & lessons learned, and political, economic and philosophical issues.	This seminar course invites local professionals working on restoration projects to share information on the successes and difficulties behind a specific project. Speakers have represented such organizations as the National Park Service, the Coal Oil Point Reserve, and the Matilija Creek Arundo Control and Restoration Project.

Benelli, Cynthia	Economics	114		Economic Development	Applications of economic theory to the problems of developing nations.	This course studies the special problems faced by less developed countries (i.e. poverty and malnutrition) and the economic mechanisms in raising living standards. Topics include population growth, rural-urban migration, and agriculture issues.
Sonstelie, Jon	Economics	120		Urban regional Economics	Economic analysis applied to current urban and regional problems.	This course contains units on the topics of population density, urban transportation issues, and limits to the growth of cities.
Grossman, Zack	Economics	100B		Intermediate Microeconomic Theory	Economic theory relating to imperfectly competitive product markets, input market, and welfare, with emphasis on applications. Includes an introduction to game theory.	This course contains multiple units on the implications and costs of a carbon tax, as well as the influence that the market has on natural resources.
Lubach, Donald	Education	20		Introduction to the University Experience	Designed to introduce first year students to the research university. Topics include: the university as a community of scholars, student subculture, student rights, university and community, university as policy, and personal growth in college.	This course has a unit which covers the history of UCSB, including its environmental impact and involvement in the environmental studies movement.
Lubach, Donald	Education	118		The Research University and The Transfer Student Experience	Introduces new transfer students to the mission of the research university, the role of higher education in society and their role, as students, within the community of scholars. Topics cover academic, social and personal issues relevant to college students, specifically transfer students.	This course has a unit which covers the history of UCSB, including its environmental impact and involvement in the environmental studies movement.
Johnson, Susan	Education	131		Teaching science in grades 7-12 (Official course title: California Teach 2: Science)	Introduction to learning and teaching science in grades 7-12. The two-credit option includes the weekly on-campus course and 15 hours of field placement in a local school. The three-credit option requires 30 hours of field placement.	This course covers teaching science education to students in grades 7-12. The students in this course are involved with projects that often deal with environmental and sustainability issues.
Lubach, Donald	Education	173		Introduction to Leadership Development	This course is an overview of theoretical constructs and practical applications of leadership. Through lectures, readings, discussions, and projects, the course will assist students in developing individual approaches to effective leadership.	In this course, students in leadership teams take on projects, many of which are related to sustainability.
Johnson, Susan	Education	4A		Teaching Science in grades K-8 (Official course title: California Teacher 1: Science)	Introduction to learning and teaching science in grades K-8. The two-credit option includes the weekly on-campus course and 15 hours of field placement in a local school. The three-credit option requires 30 hours of field placement.	This course covers teaching science education to students in grades K-8. The students in this course are involved with projects that often deal with environmental and sustainability issues.

Shewry, Teresa	English	122AP		Cultural Representations : Literature and the Environment: Imagining Asia and the Pacific	Students on the wait-list must attend the first day of lecture/section to enroll in the course. For more information see the English Department Crash Policy.	This course explores how nature and the natural world are perceived of in literary texts. The course specifically focuses on texts from Asia and the Pacific.
Callaway, Elizabeth	English	122NE		Cultural Representations: Nature and the Environment	Perceptions of nature have changed throughout history and vary across cultures. Course explores changing expressions of our changing relations to the world we live in, with emphasis on cultural movements (films, literature, newspapers, etc.) that have affected contemporary American experience.	This course focuses on representations of environmental sustainability in literary and cultural texts from the Brundtland report of 1987 to the present day. This course also traces the history of sustainability in order to understand how sustainability affects and accommodates a changing world.
Gilbert, Marty	Environmental Science and Management	3		Nutrition For Health	An examination of the interdependent relationships between diet, health, and disease. Basic nutrition principles, food selection, proper diet, and lifetime health habits are emphasized.	An examination of the interdependent relationships between diet, health, and disease. Basic nutrition principles, food selection, proper diet, and lifetime health habits are emphasized.
Tyler, Claudia	Environmental Studies	100		Environmental Ecology	A study of principles of ecology and their implications for analyzing environmental problems. Focus on understanding the processes controlling the dynamics of populations, communities and ecosystems. Specific examples emphasize the application of these concepts to the management of natural resources.	This course includes a unit on sustainable harvests, invasive species control, and conservation and restoration ecology.
D'Antonio, Carla	Environmental Studies	119		Ecological Management of CA Wildlands	Explore ecological processes in California habitats and the challenges of their management through field trips, discussions with landmanagers, lectures and readings. Focus on regional habitats including specialized habitats such as coastal salt marsh and vernal pools, and more widespread such as oak savanna and chaparral.	This course exposes students to a range of California ecosystems and how they differ as a result of their climate, landscape position, geology and soils, history, and management. Students will evaluate the importance of science in management decision making regarding species and habitat management.
Muller, Erik	Environmental Studies	120		Toxics in the Environment	Effects and implications for the future of introducing toxins into the biosphere. Examination of physiological and biochemical effects and the mechanisms of action of the potential toxins. Discussion of methodological approaches and legal ramifications of studies in environmental toxicology.	This course examines the nature and characteristics of toxic compounds in the environment and how these toxic compounds affect biological systems.

Keller, Ed	Environmental Studies	134		Coastal process and Management	Using representative coastal regimes, students study the major processes at work in our nation's coastal zones and examine the nature and efficacy of the planning and management programs that have been put in place in these areas.	This course includes a unit on coastal zone management.
Kryder, LeAnne	Environmental Studies	160		American Environmental Literature	Assesses contributions of literary texts to American environmental movements. Examines influences of writers such as Thoreau, Rachel Carson, and Edward Abbey upon environmental perceptions, values, and attitudes in American cultural history and upon rhetorics and politics of contemporary environmental debates.	In this course, students read, discuss, and write about classics from American Environmental Literature by authors such as Thoreau, Aldo Leopold, Rachel Carson, and Edward Abbey as they explore human-environmental connections.
Kolstad, Charles	Environmental Studies	175		Environmental Economics	provides a rigorous treatment of environmental economics. topics include welfare analysis, ethical dimensions of economic criteria for protecting the environment, measuring the demand for environmental goods, property rights, economic incentives, including marketable permits and emission fees, and regulating risk.	This course focuses on using economic concepts to analyze issues related to the environment and natural resources.
Smith, Eric	Environmental Studies	178		Politics of the Environment	Analysis of environmental policy issues and their treatment in the political process. Discussion of the interplay of substantive issues, ideology, institutions, and private groups in the development, management, protection, and preservation of natural resources and the natural environment.	Class focuses include the problems of climate change and energy supply, the history of the environmental movement, and public opinion on environmental issues.
Wack, Paul	Environmental Studies	183		Film of the Natural Human Environment	Course presents a series of popular films and professional documentaries representing a range of trends, images, and issues associated with the natural and human environments. Visual images and critical thinking skills are combined to enhance understanding of environmental issues presented by the media.	This course presents a series of popular films, professional documentaries, and short subjects that represent a wide range of trends, images, and issues associated with the natural and human environment. The course demonstrates the importance of understanding the power of "media literacy" and applies this skill in evaluating the message provided by a film when portraying the environment.

Creemers, Matthea	Environmental Studies	184		Gender and the Environment	A philosophical, evolutionary, and cross-cultural analysis of the ways women and men may relate differently to their environment resulting in the design of gender-sensitive and sustainable policies for planning and development in both the developing and the developed world.	This course examines the different ways men and women relate to the environment. The course investigates the role of ecofeminism and the way gender affects specific development projects that affect the environment. The course connects the anthropological debate of nature, culture, and female and male with the environment.
Graves, Gregory	Environmental Studies	188		The Ethics of Human-Environment Relations	Survey of contemporary environmental ethics, focusing on both philosophical and applied issues. Topics include anthropocentrism and its alternatives, the role of science and aesthetics, multicultural perspectives and the problem of relativism, and the conflict between radical and reformist environmentalism.	This course connects human behavior and the environment through the discussion of ethics. The course explores the historical development of environmental ethics and modern issues of environmental ethics.
Talamantez, Ines	Environmental Studies	189	Religious Studies 193	Religion and Ecology in America	An overview of the growing field of religion and ecology in the Americas. Focus on spiritual traditions and landbased knowledge indigenous to the Western hemisphere.	This course explores the connection between our inner human nature and the natural world by examining the environmental impact that arose out of colonialism. The course also discusses how the perception of nature has changed across culture over time.
Alario, Celia	Environmental Studies	190		Colloquium On Current Topics In Environmental Studies	Required attendance a six public lectures dealing with environmental topics. Weekly discussion sections on the lectures and brief written evaluations of six lectures. Open to all students.	This course provides insight into current issues in diverse areas that constitute environmental studies.
Krop, Linda	Environmental Studies	125A		Principles of Environmental Law	An introduction to the history and methodology of law as it relates to human use of the environment. Case studies are used to examine common law, constitutional and modern environmental laws, with an emphasis on current theories and principles.	This course focuses primarily on federal environmental law and assesses the development of environmental law through a review of ethical, cultural, and legal principles.
Krop, Linda	Environmental Studies	125B		Land Use and Planning Law	An examination of local, state, and federal laws regulating land use and development. Selected problems analyzed through case studies.	This course focuses on the development of land use laws in California and how the legislative process concerning these laws affects the government and the people of California.
Oaks, Laury	Feminist Studies	130		Perspectives on Women's Health	Investigation of the power that medicine has in shaping health experts' and lay individuals' understandings of health and health practices. Particular attention is paid to how women's health issues come to be seen as "social problems," past and present.	This course includes a segment that discusses activism by women in the realm of environmental justice in relationship to women's health.

Montello, Daniel	Geography	5		People, Place and Environment	Survey of spatial differentiation and organization of human activity and interaction with the Earth's biophysical systems. Sample topics include human spatial decision-making behavior, migration, population growth, economic development, industrial location, urbanization, and human impacts on the natural environment.	This course considers human-environment relations and examines the issue of classifying hazards as natural versus anthropogenic.
Sweeney, Stuart	Geography	20		Geography of Surfing	Social and physical science concepts manifested in the sport of surfing. Topics include wave generation and forecasting, economics of the surf industry, spatial search, strategic behavior under crowding, territorialism, and the generation/diffusion of regional surf cultures.	An aspect of this course examines surfing as a reflection of global climate patterns interacting with reef formation and sedimentation. The course also considers how surfers tend to have a strong awareness of environmental issues and the potential negative human impacts on the environment.
Roberts, Dar	Geography	102/20 2A	Geography 202A	Environmental Optics	Basic physical principles of electromagnetic radiation in the environment and their application to physical geography and remote sensing. Radiative transfer in atmosphere, oceans, snow and ice, inland waters, rock, soil, and vegetation. Spectral signatures in remote sensing.	This course examines technology or processes which address environmental issues, such as heat flow in building and solar panel production.
King, Jennifer Gautier, Catherine	Geography	134		Earth System Science	Description of various components of earth system: climate and hydrologic systems, biogeochemical dynamics, ecological dynamics, human interactions, and global change. Observations and modeling of earth system.	Students investigate ways in which Earth is changing in response to human activities, and they look specifically at human-managed ecosystems.
Keller, Ed	Geography	144	Environmental Studies 144	Form, Process, and Human Use of Rivers	Same as ES 144. Basic understanding of fluvial (river) hydrology. In-depth evaluation of channel form and fluvial processes and impact of human use on rivers.	Students are taught about land use and urbanization with respect to streams and also look at the impact of human use of rivers.
Michaelsen, Joel	Geography	148		California	The unique landscapes of California and the physical, cultural, and biotic processes which have produced them.	This course examines California's water development and the future of California's water prospects in a warmer world.
Still, Christopher	Geography	149	ENV S 111	The California Channel Islands	Discussion of biological, geological, ecological, anthropological, and oceanographic characteristics of the Channel Islands area as well as the management and human uses of this region. Emphasis on islands and ocean waters off Southern California.	A segment of this course focuses on restoration ecology, as well as the management and human use of the Channel Islands.

Loaiciga, Hugo	Geography	162	ENV S 162	Environmental Water Quality	Study of physio-chemical and biological characteristics of natural waters, analysis of water pollution and treatment, water-quality regulations. Laboratory: independent and supervised research on water pollutants and treatment, quantitative analysis of water-quality data and one-day field work.	Topics covered in this course include the improvement of drinking water quality, as well as appropriate treatment/management of chemically and biologically polluted water.
Roberts, Dar	Geography	175		Environmental Data Analysis	Introduction to measurement and interpretation of physical-environmental data (temperature, humidity, precipitation) and integrated environmental measures (e.g. potential evapotranspiration). Working with micrometeorological towers deployed across an environmental gradient, students develop and test hypothesis using real-time tower data.	This course considers the relationship between earth systems, as measured with real data and analyzed by students.
Church, Richard	Geography	185B		Environmental Issues and Location Decision Making	Introduction to decision-making techniques with regard to land use allocation and planning. Emphasizes addressing conflicts involving environmental concerns and multiple objectives. Examples include water resources development, corridor location (rights-of-way), preservation of endangered species, and power plant siting.	Discussion of Daoism (2014 Survey) and the cultural relationship between humans and the natural environment.
King, Jennifer Gautier, Catherine	Geography	3B		Land, Water and Life	Study of the interactions among water, landforms, soil, and vegetation that create and modify the surface of the Earth. Impacts of physical environment on human societies and humans as agents of environmental change.	This course looks at environmental changes, specifically how Earth is modified by human activities.
Mccarty, Philip	Global Studies	1		Global History, Culture and Ideology	A survey of the historical processes that have brought different areas of the world into closer contact. Topics include ideologies of nationalism, democracy, and liberalism; international trade and migrations; technological changes; colonialism; the globalization of culture; and the reactions to them.	This course contains a unit on the development of environmentalism as a global social movement.
Appelbaum, Richard	Global Studies	2		Global Socioeconomic and Political Processes	Examination of contemporary social, economic, political, and environmental change in a global context; the emergence of a global economy and new systems of world order; and the debate over "globalization" and whether or not it is desirable.	Topics of this course include issues regarding protection of the global environment, as well as alternative forms of sustainable development.

Appelbaum, Richard	Global Studies	130		Global Economy and Development	Examines recent theories and perspectives on global political economy and development studies. Topics include, among others, the new global economy, transnational corporations, transnational labor markets, international trade and finance, social and economic development, and North-South relations.	This course contains units on externalities (environmental consequences), as well as units on climate change.
Darian-Smith, Eve	Global Studies	152		Global Indigenous Movements	The course explores indigenous movements around the world. Issues examined are the construction of indigenous identity, transnational political and legal mobilization among native communities, human rights, environmental rights, and intellectual property rights as they impact indigenous peoples.	This course contains a unit on the development and idea of environmental rights and injustice.
Hancock, Mary Bhavnani, Kum-Kum	Global Studies	180A	Sociology 156A	Introduction to Women, Culture, and Development	Critical examination of the interrelationships between women, culture and development. Topics include colonialism, violence, globalization and the state, health and reproduction, religion and nationalism, sustainable development, biotechnology, representation, and resistance movements.	This course contains a unit on sustainable development.
McCray, Patrick	History	109		Science and Technology in America	Science and technology in American intellectual, cultural, religious, and political life with focus on 19th/20th centuries. Examples include rise of scientific enterprise and infrastructure; technology and America's economic growth; American research styles; science and the military; space program; environmentalism; biotechnology.	Topics of this course include environmentalism and economic growth.
Furner, Mary	History	165		America in the Gilded Age, 1876 to 1900	The responses of American people and institutions to the opportunities and problems of industrialization and rapid social change in the late nineteenth century.	Students learn about the impacts of coal-driven mechanization of production on community life and workers' health, how settlement of the West transformed ecological systems, and how Native American land use differed from Euro-American patterns imposed during expansion.
Martin, Denise	History	1080	Environmental Studies 1080	History of the Oceans	Explores how people have experienced, understood, transformed, and attempted to conserve the world's oceans throughout human history. Interdisciplinary approach includes aspects of science, technology, politics, law, culture, and material biophysical relationships.	This course examines the history of the ocean in history, science, culture, and law. It contains units that cover the oceans role in trade and energy, as well as discussing social justice involving the ocean.

Alagona, Peter	History	108W	Environmental Studies 108W	Wildlife in America	Explores the turbulent, contested, and colorful history of human interactions with wild animals in North America from the Pleistocene to the present. Readings will explore historical changes in science, politics, law, management, and cultural ideas about nature.	The goal of this course is to examine the changing relationships between people and wild animals over time. Students develop an understanding of how wildlife debates have been shaped by socioeconomic, cultural, and political factors and how history can inform current policy and management for wildlife in the United States and beyond.
Farmer, Sharon	History	117E		Society and Nature in the Middle Ages	Human-environmental interaction from the fall of Rome to environmental and epidemiological disasters of the fourteenth century. Topics include agricultural impact on the environment, introduction of new animal species to northern Europe, and selective breeding of livestock and plant life.	This course looks at historical human-environmental interaction and considers such topics as the agricultural impact on the environment.
Cline, Sarah	History	151G		Latin America and Globalization	History of commodity chains, sustainable development, NGOs in modern Latin America.	This course teaches students about globalization responses, including NGOs, fair trade movements, and sustainable development.
Furner, Mary	History	166 A		US Progressive Era (Official Course Title: United States in the Twentieth Century)	Political, cultural, social, and economic development of the United States from 1900 to the present: A. 1900-1929.	This course covers the conservation movement and movements to preserve pristine natural areas during the Progressive Era in the United States.
Graves, Gregory	History	173T	Environmental Studies 173	American Environmental History	Traces the history of American attitudes and behavior toward nature. Focus on wilderness, the conservation movement, and modern forms of environmentalism.	This course looks at the changing attitudes of Americans toward the environment. It also looks at modern forms of environmentalism and the conservation movement.
Furner, Mary	History	174 B		Wealth and Poverty in the US, 1865-1950 (Official Course Title: Wealth and Poverty in America)	Changing patterns and conceptions of inequality, seventeenth century to present. Examines influence of economic transformation, race, gender, class, attitudes towards work and welfare, social movements, social knowledge, law and public policy on opportunity, income, status, and power. Divides at Civil War and World War II.	In this course, students learn how poverty affected the living and work environments of the poor, how wealth and race and class privilege made demands on resources, how monoculture affected soil quality while also sustaining slavery and share-cropping, and how production of machines to mechanize agriculture enabled the rise of monopoly and fueled both union growth and anti-union business practices.
Roberts, Luke	History	187A		Japan Under the Tokugawa Shoguns	A survey of Japanese social and cultural history from the mid-sixteenth century to the nineteenth century.	The main textbook used in this course frames the history of the era in terms of human-environment interdependence, and some of the lectures address the issues of 17th century development and growth regarding population, irrigation, forestry, and mining.

Jacobson, Lisa Rappaport, Erika	History	193F		Food in World History	Explores the cultural, economic, and geopolitical roles of food and drink in world history. Topics include: trade, production, and consumption; global food chains; morality and food reform; identities and body image; scarcity, food scares, and food security.	This course discusses the history of food and includes a segment examining food scarcity and abundance. This segment of the course discusses the politics behind food production and consumption and also involves "Green Revolutions" and the future of food.
Various	Interdisciplinary Studies	75		Underserved Medicine	Explores unique medical needs of vulnerable, underserved populations internationally and locally by using service and problem-based learning methodologies. Topics include refugee health, homelessness, humanitarian aid in conflict zones, veterans care, global health development, migrant farm workers care, and more.	This course contains topics which include the relationship between poverty and poor health, global health development, and sustainable capacity building.
Various	Interdisciplinary Studies	84JC		Honors Seminar on Drinking Water	Provides an introduction to research and scholarship on current issues of national and/or international concern.	In this seminar, new methods for ensuring drinking water for the 21st century are addressed by reading a recently published book that examines the problem and possible solutions.
Christoffersen, Rolf	Interdisciplinary Studies	94BZ		Genetic Modification of Food Crops	The seminar will explore the implications of genetic modification of our food crops with special emphasis on the application of recombinant DNA technology for crop improvement. The scientific basis of these technologies will be explained at the level of a non-science major. Course materials will include a critical review of articles from the popular scientific press concerning the dangers and benefits of GM crops. The potential impact (both good and bad) on agriculture in developing countries will also be covered.	This seminar explores the implications of genetic modification of food crops, specifically emphasizing the application of recombinant DNA technology for crop improvement. Another topic covered is the potential impact of genetic modification on agriculture in developing countries.
Poole, Stephen	Interdisciplinary Studies	94ES		Exciting Developments in Biology Research	This seminar will explore topics related to current ongoing research within the departments of Ecology, Evolution and Marine Biology and Molecular, Cellular and Developmental Biology. Students will learn about the latest developments from a variety of experts in fields ranging from molecular mechanisms of animal development to evolutionary studies of genomes to ecological effects of climate change.	This seminar will explore topics related to current ongoing research within the departments of Ecology, Evolution and Marine Biology and Molecular, Cellular and Developmental Biology. One of the topics covered is the ecological effects of climate change.

Still, Christopher	Interdisciplinary Studies	94JS		Introduction to Santa Cruz Island	This Freshman Seminar will be an all-day visit to Santa Cruz Island. We will meet at the Ventura Harbor, take a boat to the island and hopefully get in some whale watching, and we will then take a 6 mile round-trip hike on the north side of the island. We will hang out at Pelican Bay and have lunch, and then hike back to the dock for the return trip to the mainland. The hike is fantastic and there is a nice hiking guide to go with it. I conduct ecological research on the island and know the flora and fauna well, and we will discuss the many amazing and unique aspects of the islands and the surrounding marine environment.	The course is geared towards freshman and was developed with the intention of helping students develop a sense of place and appreciation for the local natural environment. This course includes an all day visit to Santa Cruz Island.
Thrower, Doug T	Interdisciplinary Studies	94LV		Biotechnology and Society	This course will cover topics including the high cost of drugs, genetically modified organisms, genetic profiling, gene therapy, cloning, stem cells, forensic biology, biotechnology and global warming, and will conclude with a "field trip" to a research lab.	This seminar explores the relationship of biotechnology and society and includes a segment discussing the relationship between biotechnology, society, and global warming.
Clark, Jordan	Interdisciplinary Studies	94ZA		Mono Lake, Owens Valley and LA's Water Supply	This seminar will introduce the history of the LA water supply starting with the construction of the LA Aqueduct, followed by a discussion of the Mono Lake 'public trust' court case and efforts to increase water reuse in the basin. The class will include a 3-day field trip (Early Friday to Late Sunday) to Mono Basin to exam the aqueduct and tour Mono Lake. We will stay at the UC reserve station, SNARL.	This seminar introduces the history of the LA water supply, starting with the construction of the LA Aqueduct and followed by a discussion of the Mono Lake 'public trust' court case and efforts to increase water reuse in the basin. The class also includes a 3-day field trip to Mono Basin to examine the aqueduct and tour Mono Lake.
Waite, Hebert	Molecular, Cellular and Developmental Biology	145		Post-translational Protein Processing	Structure/function relationships in interesting macromolecules isolated from marine organisms. Focus is on well-characterized pathways from horseshoe crabs, abalones, mussels, and fish as well as others.	Future sustainability depends critically on engineering better exchange surfaces for energy conversion and storage, as well as for water and air purification. At present, such surfaces are fabricated with 50-200 m ² /g surface areas, which are only 25% or less of a typical biological exchange surface. The course focuses on the composition and biofabrication of several natural exchange surfaces, including diatom frustules, mussel adhesion, and squid beak gradients.
Weatherford, Stephen	Political Science	153		Political Interest Groups	The nature and function of organized interest groups and their impact upon public opinion and government.	Aspects of this course include the role of interest groups in environmental policy.

Gable, Shelly	Psychological and Brain Sciences	158		Positive Psychology	Investigates empirical approaches to the psychology of a fulfilling and flourishing life. Topics include research on positive emotions, happiness, empathy, friendship, goal setting, love, achievement, morality, creativity, mindfulness, spirituality and humor.	This course examines environment and well-being research and consumption and well-being research.
Talamantez, Ines	Religious Studies	14		Introduction to Native American Religious Traditions and Philosophies	This course is designed as an introduction to the contribution that Native American religions make to the general study of religion. Metaphysical and philosophical aspects of North American native culture. Major concepts of belief systems, religion, and medicine. Theories of balance, harmony, knowledge, power, ritual, and ceremony.	This course contains a unit on religious/ spiritual connections that humans have with nature.
Campo, Magda	Religious Studies	185		Religion, Food, and Culture of the Middle East	Explores the significance of foods in the religious and cultural life of Middle Eastern peoples. Focuses on Jewish, Christian, and Muslim feasting, fasting, and dietary rules. Includes culinary traditions of Arab, Persian, Turkish, and Israeli ethnic groups, and related topics.	This course examines alimentary diversity, sustainability, urbanization, globalization, and food security in the context of Middle Eastern history and culture.
Talamantez, Ines	Religious Studies	193	Environmental Studies 189	Religion and Ecology in America	An overview of the growing field of religion and ecology in the Americas. Focus on spiritual traditions and landbased knowledge indigenous to the western hemisphere.	This course looks at contemporary ecological and environmental concerns of indigenous Americans. Topics discussed include efficient energy use and sustainable community concerns.
Talamantez, Ines	Religious Studies	14H		Introduction to Native American Religious Traditions and Philosophies	This course is designed as an introduction to the contribution that Native American religions make to the general study of religion. Metaphysical and philosophical aspects of North American native culture. Major concepts of belief systems, religion, and medicine. Theories of balance, harmony, knowledge, power, ritual, and ceremony.	This course contains a unit on religious/ spiritual connections that humans have with nature.
Wallace, Vesna	Religious Studies	164C		Buddhist Ethics	A study of Buddhist ethical traditions, including a consideration of soteriological, social, political, environmental, and gender issues. Critical analysis and assessment of various ethical perspectives based on Buddhist textual sources and ethnographic evidence from the lives of contemporary Buddhist practitioners.	This course looks at Buddhist ethical concerns related to the environment.

Yang, Mayfair	Religious Studies	183B	East Asian Languages & Cultural Studies 183B	Relig Practice & the State in China	Historical and anthropological approaches to the interaction between religious practice and state forces, with emphasis on popular religion and the decline and revival of religion in Chinese modernity.	This course includes a discussion of Daoism and looks at the cultural relationship between humans and the natural environment.
Appelbaum, Richard	Sociology	130		Development and Its Alternatives	Survey of development and social change, emphasizing the third world; modernization, dependency and other theories applied to cases drawn from Latin America, Asia, and Africa; examination of social structure, culture, social problems, and mechanisms of change.	This course has modules which focus on environmental issues and labor practices. It also includes guest speakers who talk about sustainable business practices.
Clemencon, Raymond	Sociology	105E		Environmental Sociology	Traces the history of environmentalism and applies social science theories, concepts, and methods to analyze critical contemporary environmental issues and societal responses to them.	This course traces the history of environmentalism and analyzes contemporary environmental issues and societal responses to them.
Nederveen, Pie	Sociology	185DG		Theories of Globalization and Development	Analyzes major trends in development and globalization thinking/policy. Discusses theories in political economy through modernization theory, dependency, alternative development, neoliberalism, human development and post-development. Addresses ongoing debates on globalization, and the rise of Asia and emerging societies.	Part of this course looks at sustainable development and the environment. It specifically focuses on how environmental concerns interact with development and inequality, as well as how emerging societies address sustainable development.
Kryder, LeAnne	Writing	109ES		Writing for Environmental Studies	Analysis and practice of various forms of writing for environmental studies, both academic and professional. Attention to research methods, design of papers, development of graphics, stylistic clarity, and editing strategies.	This course involves the analysis and practice of various forms of writing for environmental studies, both academic and professional.
Donelan, James	Writing	109SS		Writing for Social Sciences	Advanced research essays and/or position papers related to sustainability projects in Haiti, or development projects involving sustainability and politics.	This course includes advanced research essays and/or position papers related to sustainability projects in Haiti or development projects involving sustainability and politics.
Kryder, LeAnne	Writing	2LK		Academic Writing with Link to ES 1	A writing course focusing on developing analytical skills, synthesizing multiple sources, sustaining coherent arguments, and revising for clarity of style. This course is taught in conjunction with a specified companion course in such areas as classics, music, psychology, sociology. Readings and assignments are related to the subject matter of the companion course.	This writing course, focused on environmental writing and linked to Environmental Studies 1, involves reading, composing, and improving essays focused on science, social science, and humanities.
Graduate Courses						

Sustainability Courses						
Deacon, Robert T.	Economics	260A		Natural Resources	Capital theory and welfare economics applied to the primarily dynamic questions concerning the uses of nonrenewable resources such as minerals, the use of renewable resources such as fisheries and forests, and the preservation of species and natural environments.	This course examines the operation of markets for natural resources, including minerals, fossil fuels, forest resources, fish, water, and natural environments. The use of natural resources is ultimately linked to the release of waste products into the environment, so the course includes considerations of environmental degradation.
Vallejo, Paulina Oliva	Economics	260B		Environmental Economics	The primarily static theory of externalities and their correction. Covers basic theory of public bads and externalities, regulation theory related to environmental problems and applications, the valuation of environmental goods, transboundary pollution, and international trade and the environment.	The class focuses on the theory of public bads/externalities, regulation theory, and empirical analysis in the context of environmental problems and environmental valuation.
Libecap, Gary	Economics	260C		Collective Action and Open Access	Collective action problems addressing open access losses, including uncertainty, heterogeneous parties and information costs. Covers timing and nature of regulation and the assignment of property rights. Empirical topics include; water, air pollution, oil and gas extraction, and climate change.	This class provides a better understanding of the timing, nature, and impact of responses to open access losses. Such topics include the management of groundwater and oil and gas reservoirs; factors leading to deforestation; effective (and not so effective) responses to overharvest in fisheries; and transboundary problems, such as global emissions and migratory species.
Bogart, Karen Smith	Engineering	258	Engineering 258F	Asia Business Opportunities	None Readily Available.	This course provides students with analytical frameworks for critically assessing the changing technological business environments in China and India. Topics addressed during the course include challenges associated with sustainability, renewable energy, biotechnology, and electric cars.
Tilman, David	Environmental Science and Management	201		Ecology of Managed Ecosystems	Principles of individual ecology, population ecology, community ecology, and ecosystem ecology. Emphasis on applications (conservation, resources management, ecological effects of pollution and habitat fragmentation, etc.).	This course looks at issues relating to human impact on the functioning, productivity, and sustainability of ecosystems at local to global scales. Such topics include human domination of global ecosystems, human population increase and dynamics, sustainable harvests of fish, sustainable agriculture, environmental impacts on food, the importance of biodiversity loss, climatic variations, and energy systems.

Various	Environmental Science and Management	202		Environmental Biogeochemistry	Biogeochemical processes as applied to the earth's atmosphere, oceans, land and inland water, and applications to environmental issues such as eutrophication, toxic pollution, carbon sequestration and acidification.	This course contains units on understanding air/water quality issues, drivers of pollution and solutions with regards to the carbon cycle, and emerging pollutants.
Dozier, Jeff	Environmental Science and Management	203		Earth System Science	Energy and mass transport as applied to the atmosphere, oceans, and land models of the earth's climate and hydrology.	General objectives of this course include understanding global processes, such as climate change, the radiation balance of Earth, the hydrologic cycle, the natural and human influence on global patterns of soil erosion, and the interaction between policy-making and environmental predictions.
Libecap, Gary	Environmental Science and Management	204		Economics of Environmental Management	Environmental regulation (incentives and command and control), asymmetric information (cost revelation and auditing), regulatory incidence, dynamics and discounting, exhaustible and renewable resources, valuation, environmental macroeconomics, trade and the environment, comparative regulatory analysis.	This course provides students with the economic analysis tools needed to address environmental problems. Topics covered in the class include environmental economics, the costs of environmental projects, benefits of environmental protection, and renewable natural resources.
Salzman, James	Environmental Science and Management	207		Environmental Law and Policy	Basic elements of the legal system as it specifically relates to environmental issues. Study of the different stages and different institutions involved in environmental policy making.	This class places equal emphasis on the scientific, political, and economic issues driving environmental conflicts. It examines environmental policies, such as the Clean Air Act, the Clean Water Act, NEPA, and the Endangered Species Act.
Potoski, Matt	Environmental Science and Management	210		Business and the Environment	Introduction to business objectives and structure, discuss new business models and tools that incorporate principles of environmental management and corporate performance. Emphasis on corporate strategies that deliver value to shareholders while responding to environmental concerns.	This course aims to better understand the factors affecting firm responses to the environment and resource problems, as well as how to work with firms as leaders to explore strategies for providing environmental and resource benefits. Topics include introduction to finance and marketing, environmental strategy and marketing, environmental products, and environmental management within companies.
Various	Environmental Science and Management	213		Ecotoxicology	Ecotoxicology will examine the biochemistry and biology of the responses of organisms in ecosystems to the presence of substances in the environment that can cause adverse effects upon the organisms. The course will also present case studies from recent literature.	This course offers students the opportunity to study the biological effects of various toxins in the environment. These toxins can be natural or human-introduced.

Holden, Patricia	Environmental Science and Management	214		Bioremediation	Concepts and approaches to correct and alleviate the effects of environmental pollution using biological processes. Biochemical, ecological, and physiochemical aspects of remediation and mitigation. Assessing and monitoring applicability/efficacy of biological treatment. Natural and engineered methods for adversely affected biological resources.	This class looks at the concepts and efforts to alleviate effects of environmental pollution by using biological processes. It focuses on remediation, as well as mitigation of the adverse effects of pollution.
Holden, Patricia	Environmental Science and Management	219		Microbial Processes in the Environment	Microbes are the most abundant organisms on earth and are responsible for most biogeochemical cycling. Who and where are they, what do they do, and how? This course provides an integrated understanding applicable to managing the environment and natural resources.	This class focuses on the role of microbes in the environment. It emphasizes the importance of microbes in terms of the management of the environment and natural resources.
Keller, Ed	Environmental Science and Management	222		Fate and Transport of Pollutants in the Environment	Transport and biogeochemical transformation of pollutants in the environment. Review of pollutant properties and media characteristics that affect transport, accumulation, and degradation of pollutants. Basic tools for managing pollutants in the environment, including prevention, detection, and remediation.	This course reviews pollutants in the environment as related to transport, accumulation, and degradation. It includes units on managing pollutants in the environment to prevent, detect, and remediate.
Brown, Norm	Environmental Science and Management	223		Management of Soil and Groundwater Quality	Focuses on protection and remediation of contaminated aquifers. Covers the determination of groundwater quality objectives based on risk assessment, approaches for protecting or remediating aquifers and contaminated soils, and cost evaluation of management strategies.	Focuses on protection and remediation of contaminated aquifers. Covers the determination of groundwater quality objectives, based on risk assessment, approaches for protecting or remediating aquifers and contaminated soils, and cost evaluation of management strategies.
Keller, Ed	Environmental Science and Management	224		Sustainable Watershed Quality Management	Integrates environmental science and management to address sustainable watershed management. Learn the elements of a watershed management plan and become familiar with the development process that takes into consideration various issues and concerns and provides concrete actions to address them.	This class looks at the human disturbance of the water cycle and the release of pollutants, the quantification of impacts and effects, and possible approaches to sustainable watershed management.
Wilkinson, Robert	Environmental Science and Management	225		Water Policy	Explores key water policy issues in the context of science, technology, and the practical management of water systems. Focuses on the nexus of science, technology, economics, law, and the role social and political factors play in the policy process.	Explores key water policy issues in the context of science, technology, and the practical management of water systems. Focuses on the nexus of science, technology, economics, law, and the role social and political factors play in the policy process.

Kolstad, Charles Tague, Christina	Environmental Science and Management	229		Science, Economics and Policy of Climate Change	Natural and social science of climate change. Human causes, expected impacts and how systems might adapt. Greenhouse gas generation, possible mitigation strategies and policy actions, assessments of current and projected future change and strategies for ameliorating impacts. Use of an integrated assessment model.	Natural and social science of climate change. Human causes, expected impacts, and how systems might adapt. Greenhouse gas generation, possible mitigation strategies and policy actions, assessments of current and projected future change, and strategies for ameliorating impacts. Use of an integrated assessment model.
Costello, Christopher Dozier, Jeff	Environmental Science and Management	232		Environmental Modeling	Introduction to the development, evaluation, interpretation, and presentation of models as applied to environmental problems. Course consists of theory and many practical examples building and interpreting models using computers.	Introduction to the development, evaluation, interpretation, and presentation of models, as applied to environmental problems. Course consists of theory and many practical examples of building and interpreting models, using computers.
Dunne, Thomas	Environmental Science and Management	233		River Restoration	Review of hydrologic, geomorphic, and engineering principles used in restoration of rivers, floodplains, and riparian zones for safety, land management, and ecosystem improvement. The course involves lectures and the analysis and reporting of general principles and case studies.	This class reviews the hydrologic, geomorphic, and engineering principles behind river restoration. Units include lectures on land management, ecosystem improvement, and floodplain restoration. This is important in order to recognize the human impact on river zones and efforts to manage that impact.
Dunne, Thomas	Environmental Science and Management	234		River Systems	Hydrologic and geomorphic basis of environmental management problems concerning large river systems. Analysis of the processes of flooding, sedimentation, and morphological change in channels, flood plains, deltas, and alluvial fans. Effects of climate, land use, and engineering.	This class covers the hydrologic and geomorphic basis of environmental management problems concerning large river systems. It looks at issues with river management, as well as the effects of large dams on reservoirs as related to sedimentation and morphological changes.
Dunne, Thomas	Environmental Science and Management	235		Watershed Analysis	Hydrologic and geomorphic basis of environmental management problems concerning land surfaces and channels in small drainage basins, including the effects of land use and engineering. Emphasis placed on the use of theory and field methods.	This course looks at the effects of land use and engineering on small drainage basins. It examines various environmental management problems related to hydrologic and geomorphic issues.
Dozier, Jeff	Environmental Science and Management	236		Mountain Snowpack	Intensive field, laboratory and classroom study of physical processes in mountain snowpack. Snow accumulation and ablation, metamorphism physical and chemical properties, and remote sensing. Role of snow in watershed hydrology, water resources and recreation. Normally offered spring break.	This course looks at the physical processes in mountain snowpack. It focuses on the role of snow in watershed hydrology and water resources, and it contains units on water management.

Kolstad, Charles Tague, Christina	Environmental Science and Management	237		Climate Change Impacts and Adaptation	How does a changing climate impact natural and human-dominated systems. The use of observations and models to identify impacts that are already occurring and to project future changes and vulnerability. Strategies for adaption at local, regional and global scales.	This course looks at adaptation strategies for the impacts of climate change on the local, regional, and global scale.
Various	Environmental Science and Management	238		Climate Change Agreements and Politics	International climate agreements: historic origins, institutional architecture, and political forces. The role of regional and sub-national initiatives. Examines the topic using a combined international relations approach to international regime formation and a comparative politics approach.	This class focuses on international climate agreements by looking at historical origins and political forces. It covers aspects of social, political, and economic influence that impact climate agreements.
Various	Environmental Science and Management	240		Climate Change Biology	Biological changes in response to climate, their causes, emerging conservation responses and policy implications.	This course looks at biological changes in response to climate, their causes, and emerging conservation responses and policy implications.
Anderson, Sarah	Environmental Science and Management	241		Environmental Politics and Policy	The politics of environmental policy making from agenda formation to the stages of implementation, assessment, and reforms. Emphasis on national and state level policy making in the U.S. coupled with a consideration of interactions across levels of social organization and comparisons across socio-political systems.	This course focuses on the politics of environmental policy making from agenda formation to the stages of implementation, assessment, and reforms. It takes into consideration the interactions across levels of social organization and socio-political systems.
Costello, Christopher	Environmental Science and Management	242		Natural Resource Economics and Policy	Economic principles and policy issues of the use of exhaustible and renewable resources including fossil fuels, water, minerals, fisheries, forests, and biodiversity. Management of resource markets on regional and international scale.	This class looks at the economic principles and policy issues of the use of exhaustible and renewable resources, including fossil fuels, water, minerals, fisheries, forests, and biodiversity. It also looks at the management of resource markets on regional and international scales.
Anderson, Sarah	Environmental Science and Management	243		Environmental Policy Analysis	Developing and analyzing environmental policies involves balancing social, political, and economic considerations. This process is covered, including problem identification, formation of alternative policy responses, methods of analyzing and selecting the most appropriate policy response, and effective communication of results to clients/policymakers.	This class gives students the opportunity to develop and analyze environmental policies that balance social, political, and economic considerations.

Kendall, Bruce	Environmental Science and Management	244		Advanced Data Analysis for Environmental Science and Management	Learn to use specialized data analysis techniques commonly employed in ESM. Topics include: environmental monitoring, incorporating methods for censored data and for time series; spatial data interpolation and prediction; and multi- criteria decision analysis.	This class teaches students to use specialized data analysis with regards to environmental management.
Various	Environmental Science and Management	245		Cost-Benefit Analysis and Nonmarket Valuation	Economic theory of environmental policy, with special emphasis on the role of cost-benefit analysis. Techniques for estimating economic values for nonmarket environmental resources. Case studies involving ecosystem protection, pollution control, and other topics to illustrate the necessary analytical tools.	This class focuses on the economic theory of environmental policy, with special emphasis on the role of cost-benefit analysis. It teaches students techniques for estimating economic values for nonmarket environmental resources. Case studies include ecosystem protection and pollution control.
Various	Environmental Science and Management	248	Political Science 293	Environmental Institutions: Rights, Rules, and Decision-making Systems	Comparative study of management systems or regimes addressing natural resource and environmental concerns and operating at scales ranging from local to global. Topics include characterization of individual regimes and factors affecting the formation, evolution, and effectiveness of these institutional arrangements.	This class compares different management systems or regimes as related to natural resources and environmental concerns.
Kotchen, Matthew	Environmental Science and Management	251		Introduction to Environmental Policy Analysis	Design and evaluation of public policies for addressing environmental problems. Theory of environmental policy that arises from the study of markets, market failure, and economic efficiency as well as the broader scope of analysis that accounts for distributional concerns, sustainability, impact analysis, cost effectiveness, and multi-criteria analysis.	This class focuses on the design and evaluation of public policies for addressing environmental problems. Topics include theories of environmental policy that arise from the study of markets, market failure, and economic efficiency, as well as the broader scope of analysis that accounts for distributional concerns, sustainability, impact analysis, cost effectiveness, and multi-criteria analysis.
Lenihan, Hunter	Environmental Science and Management	254		Coastal Marine Ecosystems Processes	Examination of physical, chemical, and geological processes in coastal ecosystems, including estuaries, that are influenced by human activities. Focus centers on dynamical processes that control biological communities and resources, and the relationship of the science to marine resource management and policy.	This class examines the physical, chemical, and geological processes in coastal ecosystems, including estuaries, that are influenced by human activities. It looks at the relationship of science within marine resource management and policy.

Various	Environmental Science and Management	257		Coastal Marine Policy & Management	Overview of international, U.S. and California coastal and marine policy and management, including case studies and tools that can be used to inform and shape current and future policy and management actions.	This class presents an overview of international, U.S., and California coastal and marine policy and management, including case studies and tools that can be used to inform and shape current and future policy and management actions.
Lenihan, Hunter	Environmental Science and Management	260		Applied Marine Ecology	The application of ecological principles and methods to environmental problems in marine ecosystems. Emphasis is placed on design and execution of field sampling and experiments to assess biological impacts of anthropogenic disturbances and restoration activities. Concepts illustrated with case studies.	This class focuses on the application of ecological principles and methods to environmental problems in marine ecosystems. Emphasis is placed on design and execution of field sampling and experiments to assess biological impacts of anthropogenic disturbances and restoration activities.
Frew, James	Environmental Science and Management	263		Geographic Information Systems	Advanced introduction to Geographic Information System (GIS) theory and technology, emphasizing spatial analysis and cartographic presentation. Typical algorithms and data structures. Role of GIS in environmental information management. Integration of GIS with other analytical tools.	This is an advanced introduction to Geographic Information System (GIS) theory and technology. The course emphasizes the role of GIS in environmental information management.
Frew, James	Environmental Science and Management	264		Web Mapping/Publishing	Tools and techniques for publishing, accessing, and manipulating environmental information on the World Wide Web, including: web-services; scientific and geographic markup languages; virtual globes; distributed geographic information systems; open-source tools; geographic mash-ups.	This course examines the tools and techniques for publishing, accessing, and manipulating environmental information on the internet. This can help us better understand certain environmental issues.
Dozier, Jeff	Environmental Science and Management	266		Remote Sensing of the Environment	Advanced introduction to remote sensing theory, technology, and applications in environmental science and management. Survey of principles and analytical methods throughout the electromagnetic spectrum. Integration of remote sensing with other tools.	This is an advanced introduction to remote sensing theory and technology as related to environmental science. This course applies remote sensing to environmental management issues.
Davis, Frank	Environmental Science and Management	270		Conservation Planning and Priority Setting	Analytical approaches that can be used to direct energy and resources toward conservation that yields the greatest return on investment. Case studies of how government agencies, international multilateral institution and non-governmental agencies identify where to invest their conservation efforts.	This course provides analytical approaches that can be used to direct energy and resources toward conservation that yields the greatest return on investment. Case studies include how government agencies, international multilateral institutions, and non-governmental agencies identify where to invest their conservation efforts.

Suh, Sangwon	Environmental Science and Management	271		Carbon footprints and Carbon Accounting	Using the BSI's PAS 2050, the WRI's GHG Protocols, and the ISO14067, basic skills and knowledge necessary to establish corporate carbon accounts and to calculate carbon footprints will be covered.	This course teaches basic skills and knowledge necessary to establish corporate carbon accounts and to calculate carbon footprints.
Suh, Sangwon	Environmental Science and Management	272		Energy and Resource Productivity	Options for improving energy and resources productivity are evaluated from technology, economics, and policy point of view. Energy, housing, transportation and agro-food sectors will be elaborated, and energy-resource nexus will be discussed.	This class focuses on the options for improving energy and resources productivity from a technological, economic, and policy point of view. Energy, housing, transportation, and agro-food sectors are elaborated, and energy-resource nexus is discussed.
Geyer, Roland	Environmental Science and Management	273		Life Cycle Assessment	Advanced introduction to life cycle assessment (LCA) tools and practice. Students will conduct an LCA according to ISO 14040/44 (2006) using professional LCA software. Goal and scope definition, parametric life cycle inventory modeling, impact assessment, sensitivity analysis, reporting.	This course is an advanced introduction to life cycle assessment (LCA) tools and practice. Students will conduct an LCA related to environmental issues and management.
Libecap, Gary	Environmental Science and Management	274		Business Planning for Eco-Entrepreneurs	Analysis of the competitive forces that an organization launching environmental innovations considers in devising strategies for entrepreneurial success. Technology or product benefits to society and the firm, industry and competitor analysis, production processes and nature of input supplies, identification of target markets and consumer response.	This class provides an analysis of the competitive forces that an organization launching environmental innovations considers in devising strategies for entrepreneurial success.
Various	Environmental Science and Management	275		Principles and Practice of Environmental Planning	Principles, concepts, and techniques of environmental planning at the state, regional, and local government levels, with emphasis on emerging trends in addressing environmental problems. Green plans, sustainable communities, coastal planning, agricultural land preservation, smart development, new urbanism, and mitigation monitoring.	This course looks at the principles, concepts, and techniques of environmental planning at the state, regional, and local government levels, with emphasis on emerging trends in addressing environmental problems. Green plans, sustainable communities, coastal planning, agricultural land preservation, smart development, new urbanism, and mitigation monitoring are examples of topics covered in this class.

Various	Environmental Science and Management	276		Ethical Decision-Making for the Environment	Ethical and legal issues surrounding environmental decision-making by individuals and in organizations. Environmental challenges facing public, non-profit and for-profit organizations. Analysis of behavior according to ethical standards; examination of opportunities for corporate social responsibility and initiatives; application of ethical frameworks to decision-making.	This course looks at the ethical and legal issues surrounding environmental decision-making by individuals and in organizations. It focuses on environmental challenges facing public, non-profit, and for-profit organizations.
Various	Environmental Science and Management	279		Financial Management and Environmental Accounting	Corporate financial management and reporting and environmental accounting. Function of stock markets, discounted cash flows, investment appraisal and decisions, valuation of bonds and stocks, the capital structure decision, the accounting model, management and control of enterprises, financial reporting and financial statement analysis.	This class focuses on corporate financial management and reporting and environmental accounting.
Various	Environmental Science and Management	280		Organizations and Environmental Leadership	Individuals play an important role in leading organizations toward environmental sustainability. Participants learn about their own behaviors, which can effectively influence the environmental decision-making of groups, organizations, and society. This course explores both theory and practice.	Individuals play an important role in leading organizations toward environmental sustainability. In this class, participants learn that their own behavior can effectively influence the environmental decision-making of groups, organizations, and society. This course explores both theory and practice.
Various	Environmental Science and Management	281		Corporate Environmental Management	This course prepares students to use creatively conceptual tools and management strategies to improve the environmental performances of firms. Corporate, societal, and political barriers to implementing these innovative strategies will be analyzed and methods for overcoming these constraints discussed.	This course prepares students to use creative conceptual tools and management strategies to improve the environmental performances of firms. Corporate, societal, and political barriers to implementing these innovative strategies are analyzed, and methods for overcoming these constraints are discussed.
Geyer, Roland	Environmental Science and Management	282		Industrial Ecology	Introduction to the study of material and energy flows in industrial and consumer activities, their environmental impacts, and economic and operational implications. Course covers concepts such as green supply chain management, industrial ecosystems, life cycle assessment, and material flow analysis.	This course is an introduction to the study of material and energy flows in industrial and consumer activities, their environmental impacts, and economic and operational implications. The course covers concepts such as green supply chain management, industrial ecosystems, and life cycle assessment.

Various	Environmental Science and Management	283		Environmental Negotiation	Strategic negotiations take place daily. Their successful outcome depends on the competence of the negotiators. Using environmental case studies and negotiation exercises, course participants gain a hands-on understanding of the negotiation process and how they can influence it.	Using environmental case studies and negotiation exercises, course participants gain a hands-on understanding of the negotiation process and how they can influence it.
Libecap, Gary	Environmental Science and Management	285		Environmental Markets	Environmental and resource problems are due to incomplete property rights. Defining rights and using environmental markets can be an alternative to regulation. Emphasis on when this might be the case and analysis of markets in fisheries, water, land use, and emissions.	Environmental and resource problems are due to incomplete property rights. Defining rights and using environmental markets can be an alternative to regulation. This class provides an emphasis on when this might be the case and an analysis of markets in fisheries, water, land use, and emissions.
Geyer, Roland	Environmental Science and Management	288		Energy, Technology and the Environment	Covers the main physical principles of energy conversion and the environmental impacts related to it. Also explores the balance between resource availability and demand, and the relationship between energy use and technology.	This course covers the main physical principles of energy conversion and the environmental impacts related to it. It also explores the balance between resource availability and demand and the relationship between energy use and technology.
Various	Environmental Science and Management	293		Advanced Special Topics in Climate and Energy	Advanced topics in climate and energy.	This special topics class focuses on issues in climate and energy. Topics vary from class to class.
Various	Environmental Science and Management	294		Advanced Special Topics in Environmental Law	Advanced Special Topics in Environmental Law.	This special topics class focuses on issues in environmental law. Topics vary from class to class.
Various	Environmental Science and Management	296		Advanced Special Topics in Environmental Management	Advanced Special Topics in Environmental Management.	This special topics class focuses on issues in environmental management. Topics vary from class to class.
Various	Environmental Science and Management	297		Advanced Special Topics in Environmental Policy	Advanced Special Topics in Environmental Policy.	This special topics class focuses on issues in environmental policy. Topics vary from class to class.
Various	Environmental Science and Management	298		Advanced Special Topics in Eco-Entrepreneurship	Advanced Special Topics in Eco-Entrepreneurship.	This special topics class focuses on issues in eco-entrepreneurship. Topics vary from class to class.
Various	Environmental Science and Management	299		Advanced Special Topics in Environmental Science	Advanced Special Topics in Environmental Science.	This special topics class focuses on issues in environmental science. Topics vary from class to class.

Tague, Christina	Environmental Science and Management	206A		Data Analysis for Environmental Science and Management	Develop skills and conceptual framework to effectively use data to solve practical problems. Topics include descriptive statistics, hypothesis testing, experimental design, exploratory data analysis, probability and uncertainty, time series analysis, and spatial stats. Emphasis on case studies involving environmental problems.	This course teaches students to develop skills and a conceptual framework to effectively use data to solve practical problems. Students work on case studies involving environmental problems.
Tague, Christina	Environmental Science and Management	206B		Data Analysis for Environmental Science and Management	Develop skills and conceptual framework to effectively use data to solve practical problems. Topics include descriptive statistics, hypothesis testing, experimental design, exploratory data analysis, probability and uncertainty, time series analysis, and spatial stats. Emphasis on case studies involving environmental problems.	This course teaches students to develop skills and a conceptual framework to effectively use data to solve practical problems. Students work on case studies involving environmental problems.
Keller, Ed	Environmental Science and Management	223L		Laboratory in Management of Soil and Groundwater Quality	A hands-on approach to learning how to sample and treat contaminated soil and groundwater. The series of lab modules covers field sampling, analysis, unit treatment processes, and a remediation design project. Students are presented with state-of-the-art technologies for dealing with contamination.	This class offers a hands-on approach to learning how to sample and treat contaminated soil and groundwater. Students develop solutions to soil and water contamination.
Chan, Emily	Environmental Science and Management	256A		Introduction to Entrepreneurship and New Venture Creation	Introduction to entrepreneurship for students interested in launching a new product or service that offers an environmental and/or social benefit. Provides an entrepreneurial perspective and overview of the venture creation process. Emphasis on idea generation, opportunity recognition and initial concept development.	This class offers an introduction to entrepreneurship for students interested in launching a new product or service that offers an environmental and/or social benefit.
Tague, Christina	Environmental Science and Management	401A		Group Project in Environmental Science and Management	First quarter of a year-long group study of an environmental problem. Includes in-class training sessions to develop skills necessary to efficiently and effectively conduct the study.	This course is the first part of a year-long group study of an environmental problem. It includes in-class training sessions to develop skills necessary to conduct the study.
Cleveland, David	Environmental Studies	257		Advanced Santa Barbara County Agrifood System	Investigates current agricultural system and potential benefits and costs of localization. Covers theory, data collection, analysis methods, key indicators (greenhouse gas emissions, biodiversity, migrant labor, nutrition, community health), policies and actions for change. Students conduct and present research at advanced level.	This course focuses on potential solutions to how the Santa Barbara County agrifood system can be localized in ways that synergistically increase sustainability socially, environmentally, and economically.

Loaiciga, Hugo	Geography	208		Water Resource Systems Analysis	Quantitative methods (operations research, applied mathematics and statistics, numerical simulation) are used to analyze and synthesize complex water resources systems. Topics include economic analysis, hydropower, flood control, groundwater management, and reservoirs.	This course looks at hydrology-human-environment interactions. The course prepares students to analyze water resource processes and further conceptualize and derive solutions to water resources management.
Gautier, Catherine Michaelson, Joel	Geography	280		Seminar on Climate Change	A series of lectures and seminars on diverse research topics on climate change.	Focuses on diverse research topics related to climate change.
Various	Global Studies	221		Political Economy, Sustainable Development, and the Environment	Critical examination of the political and economic aspects of globalization, focusing on the prospects and challenges of an economic development that is both socially equitable and environmentally sustainable. This specialization gateway course is required of all first year students.	Obvious from title.
Darian-Smith, Eve	Global Studies	271		Global Environmental Politics	Global environmental problems in our time, particularly climate change and its impact on resource scarcity, human security, energy geopolitics, and democracy in an unevenly structured world system, including the search for world order solutions.	Topics of this course focus on global environmental problems in our time, including climate change and its impact on resource scarcity, human security, energy geopolitics, and democracy in an unevenly structured world system.
Smith, Eric	Political Science	294		Environmental Politics and Policy	This seminar focuses on development of the environmental movement in American politics and the resulting institutional responses. Environmental policy making and implementation is examined in light of relevant theories. Emergence of an environmental ethic in American politics is considered.	This course looks at public opinion of environmental issues, climate change, and environmental justice.
Sustainability Related Courses						
Lea, David	Earth Science	205		Earth's Climate: Past and Present	Description and quantitative analysis of climate processes and paleoclimate proxies. Processes include radiation and the Earth's energy budget, the influence of orbital cycles, ocean circulation, monsoons, ENSO, and ice sheets. Paleoclimate reconstructions from tectonic-scale to the last millennium, with emphasis on glacial cycles and Pliocene-Pleistocene climate evolution.	This course examines human-environment interactions through the history of Earth's climate and its development into the climate today. The course examines Earth processes that affect climate, such as tectonics, the greenhouse effect, and glacial cycles. This course is the upper division form of EARTH 105.

Oakley, Todd	Ecology, Evolution, and Marine Biology	509		Levels of Biological Organization II: Communities & Ecosystems	This is the second in a set of advanced courses in ecology and evolution, and includes modules on the origins of diversity, species interactions and coexistence, the causes and consequences of food-web complexity, and ecosystem level processes.	This is the second in a set of advanced courses in ecology and evolution, and it includes modules on the origins of diversity, species interactions and coexistence, the causes and consequences of food-web complexity, and ecosystem level processes.
Debdeep, Jena	Electrical and Computer Engineering	594F		SP Top: Solid State	This course changes based on the desire of the faculty member. If they want to have a lab meeting, for example, they make their members sign up for this class. It's an experimental course.	The electronic and photonic devices studied in the course lead to sustainable applications, such as solar cells, devices for power electronics and switching, thermoelectric power generators, and such.
Kendall, Bruce	Environmental Science and Management	211		Applied Population Ecology	Examination of the application of population ecology to conservation of rare species and management of harvested populations. Topics include population regulation, population viability analysis, fisheries management, metapopulation dynamics, and population monitoring.	In this class, students learn how to do quantitative risk assessment for endangered species and identify potentially efficacious management actions.
Davis, Frank	Environmental Science and Management	215		Landscape Ecology	Relationship between spatial patterns in landscape structure (physical, biological, and cultural) and ecological processes. Role of ecosystem pattern in mass and energy transfers, disturbance regimes, species' persistence, and applications of remote sensing and GIS for landscape characterization and modeling.	This course allows students to study the relationships between spatial patterns in landscape structure (including physical, biological, and cultural patterns) and ecological processes.
Anderson Sarah	Environmental Science and Management	269		Survey Design and Environmental Public Opinion	Issues of survey design, including sampling, questionnaire design, data collection and data processing. Students will design and field an original survey, analyze the survey data and report the results.	This class addresses issues of survey design, including sampling, questionnaire design, data collection, and data processing. Students can design an original survey, usually based on environmental public opinion.
Various	Environmental Science and Management	430		Workshop in Environmental Science and Management	Workshops to develop professional skills for careers in environmental science and management.	Obvious from title.
Various	Environmental Science and Management	436		Legal Issues in Environmental Problem Solving	Workshops to expose students to a range of legal subject areas and to develop unique skills.	Obvious from title.
Various	Environmental Science and Management	440		Advanced Environmental Communication	Workshop to provide effective strategies for workplace writing. Focus of this course is on concise and targeted communication of a clear message. Students will also learn data visualization techniques and effective presentation slide and poster design.	Obvious from title.

Couclelis, Helen, Montello, Daniel	Geography	229	Geography 153C	Environmental Perception and Cognition	Theories and methods related to acquiring, representing, and analyzing knowledge of complex large-scale environments.	Part of the course examines environmental problems as hazards, using climate change as an example.
Lopez-Carr, David	Geography	255		Geography of Latin America	Graduate seminar supplements Geography 155 with further exploration of primary texts probing historical and spatial patterns of society, politics, and demographics with emphasis on human-environment interactions. Students discuss assigned reading and present in class, and write a term paper.	Through the course, students learn about the economic, social, and environmental consequences of Latin American economic liberalization and globalization and obtain an understanding of how these three forces coalesce to shape different geographies of (un)sustainable development throughout the diverse regions of Latin America.
Goulias, Kostas	Geography	211A		Transportation Planning & Modeling	Issues, problems, technologies, policies, plans, and the transportation-environment relationship. Transportation systems simulation, data collection, and model building. Applications in planning, design, and operations. Lab: Critically examine transportation plans and programs and explore travel surveys.	Students learn about air quality issues.
Goulias, Kostas	Geography	211C		Activity and Travel Behavior Analysis	Time-use, activity analysis, travel behavior in space, time, and social context. Cross-sectional and longitudinal data collection and analysis with emphasis on using time, travel, technology, information, and telecommunication. Applications using simultaneous equations, multilevel, latent class, and structural equations models.	Students learn about electric/hybrid technology.
Alagona, Peter	History	295		Workshop in Environmental History	Writing workshop, professionalization seminar, and guest lecture series for graduate students working in area of environmental history. Meets monthly throughout the academic year, and includes occasional campus events and field trips.	This course is a writing workshop, professionalization seminar, and guest lecture series for graduate students working in the area of environmental history.
Furner, Mary	History	201 AM		Capitalism, Crisis, and Political Economy Readings (Official Title by Catalog: Advanced Historical Literature)	A reading course in a field of the professor's specialty. Introduces the student to the sources and literature of the field in question. Written work as prescribed by the instructor. AM. America.	Readings covered in this course include illustrations of how unplanned construction of western railroads wasted both human and natural resources and how development of irrigated farming in arid regions caused economic and environmental damage.
Alagona, Peter	History	208A		Research Seminar in Environmental History	A two-quarter graduate research seminar in environmental history.	Students learn about environmental history and how it pertains to environmental studies and environmental policy.

Alagona, Peter	History	208B		Research Seminar in Environmental History	A two-quarter graduate research seminar in environmental history.	Students learn about environmental history and how it pertains to environmental studies and environmental policy.
Appelbaum, Richard	Sociology	265I	Global Studies 292MD	Development and Philanthropy	Introduces students to the range of core issues and debates within the fields of global, international, and development sociology, from political economy to culture, gender to REN, social movements to micro-issues.	This course looks at global philanthropy as it has evolved to foster self-sustained development. It additionally brings in guest speakers who talk about sustainable business practices.