

Department	Professor(s) who most recently taught the course	Course #	Crosslistings	Course Title	Course vs. Includes	Env. Soc. Econ Component	U/G (Undergrad/ Grad)	Official Course Description From Course Catalog	Justification
Anthropology	Hoelle, Jeffrey	252		Political Ecology	Course Includes Sustainability	Env. Soc	G	Study of human - environment interactions with attention to power, agency, and multi- scalar connections.	This course discusses how humans create and degrade the environment, as well as how the environment affects humans. Nature and human-environment interactions are the course's focus.
Anthropology	Hoppa, Kristin	131		North American Indians	Course Includes Sustainability	Env. Soc	U	The origins, development, and attainments of New World aboriginal cultures north of Mexico. Some emphasis is given to California groups such as the Chumash.	This course considers how North American Indians have adapted to different environments and concludes by developing awareness of issues for contemporary North American Indians, such as federal recognition, repatriation, environmental and sacred sites protection, and health concerns.
Anthropology	Walsh, Casey	117		Borders and Borderlands	Course Includes Sustainability	Env. Soc	U	The theoretical concepts of "borderlands" examined through a discussion of the societies, economics, and cultures that form on geopolitical courses. The Mexico-U.S. border will be discussed in detail.	With most focus towards the Mexico-U.S. border, students will pay attention to how these groups interact with each other through time and space by focusing on things that cross: and often contradict geographical and political borders, such as commodities, the migrations of people, environments, and aspects of global media and popular culture.
Anthropology	Walsh, Casey	147		Water and Society	Course Includes Sustainability	Env. Soc	U	Covers the longstanding debate over the relation between irrigation and state formation, as well as current developments in the study of water and society. Emphasis is placed on people living in arid and semi-arid environments.	This course analyzes the relationship of society and water as a scarce resource. Topics covered are irrigation, arid and semi-arid environments and state formation.
Anthropology	Hoelle, Jeffrey	115		Language, Culture and Place	Course Includes Sustainability	Env. Soc	U	Focuses on the dialectical interplay between humans and the environment and how people use language to classify, make sense of, and attribute moral and symbolic meaning to places and landscapes.	This class explores the way in which the environment shapes language and culture. It also assesses how humans use language to attribute meaning to the natural environment and landscapes.
Anthropology	Hoelle, Jeffrey	152	Environmental Studies 151	Environmental Anthropology	Course Includes Sustainability	Env. Soc, Econ	U	Examines the ways that humans interact with, use, and perceive the environment and nature, with a focus on the cultural, political, and economic features of human environment relationships across time and in different parts of the world. Through readings, in-class activities and discussions, field trips, and research projects, students will gain a better understanding of how anthropological theory, research, and applications can be used to address contemporary environment topics and problems.	This course examines how humans understand and interact with the environment. The class discusses the social, historical, and economic themes of human-environment relationships in various geographical regions.
Anthropology	Hoelle, Jeffrey	197JH		Gauchos, Cowboys & Indians	Course Includes Sustainability	Env. Soc	U	Intensive studies or projects focused on special problems related to Anthropology which are not covered by other courses.	This course analyzes how the environment has been represented in Indigenous and Western cultures throughout history. Environmental sustainability and the dichotomy between nature and culture are discussed.
Anthropology	Santy, Jenna	127		Hunters and Gatherers	Course Includes Sustainability	Env. Soc, Econ	U	What do Pygmies, Aborigines, and Eskimos have in common? What is the relationship between nature and culture in these simple societies? These questions and others will be examined through case studies and cross-cultural comparisons.	This course discusses the study of hunters and gatherers, within the contexts of both human evolution and the history of anthropology as a discipline. It also presents case studies of several societies; topics covered include environment, mobility, subsistence, technology, gender, and social organization. The course also examines how globalization has affected modern foraging economies.
Anthropology	Kundu, Manasendu	111		The Anthropology of Food	Sustainability Course	Env. Soc, Econ	U	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 interaction between human biology, local environment, existing culture, global economy, and politics in the context of food choices. The course discusses food as a resource and analyzes the implications of the world's food production and scarcity. The course also explores the vulnerability of major food producing systems and what can be done to make them more sustainable.
Anthropology	Curven, Michael	129MG		Behavioral Ecology of Hunter Gatherers	Course Includes Sustainability	Env. Soc, Econ	U	A thorough introduction using a behavioral ecology approach to the diversity of behaviors found among foragers in Africa, South America, Southeast Asia, and Australia. Topics include: diet and subsistence, mating, demography, social behavior, mobility and settlement patterns, gender, indigenous rights, and conservation.	This course discusses behavioral ecology as an approach to understand the lifestyle and decisions of hunters and gatherers in various regions across the world. Topics include diet and subsistence, mobility and settlement patterns, division of labor, microeconomics, and conservation.
Anthropology	LaMon, Shelley	168		Ethnology in Rural California: Transformations in Agriculture, Farm Labor, and Rural Communities	Course Includes Sustainability	Env. Soc	U	Provides a systematic review of research by anthropologists and other social scientists on the development of agriculture and its effects on rural society. Special emphasis is given to the settlement of immigrant farm workers and the formation of new communities.	See course description
Anthropology	Brown, Michelle	103		Human-Wildlife Interactions	Course Includes Sustainability	Env. Soc	U	Survey of human-wildlife interactions (e.g., bushmeat, pet trade, crop-raiding). Students examine cascading effects on wildlife, landscapes, and human populations, as well as mitigating approaches relating to our changing perceptions of wildlife and nature.	This course is designed to explore the causes, patterning, and consequences of the many types of human-wildlife interactions. Case studies are examined from around the world to illustrate specific concepts. For each topic, common themes are addressed: e.g., disease; the behavioral ecology and demography of wildlife; and the cultural practices, history, and demography of humans. Topics of the course include political conflict, landscape engineering, ecotourism, and conservation.
Anthropology	Ford, Anabel	194		Field Training Archaeology	Course Includes Sustainability	Env. Soc, Econ	U	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 Maya forest and archaeological sites. The course correlates with Dr. Ford's research involving agroecology, environmental anthropology, and economic botany in the Maya city of El Pilar.
Anthropology	Gamble, Lynn	155		Prehistory of California and the Great Basin	Course Includes Sustainability	Env. Soc	U	A survey of the prehistory of California and the Great Basin, which includes principally the states of Nevada and Utah. Consideration is also given to how archaeologists construct regional cultural developments and attempt to explain prehistoric cultural change.	This course looks at the regional natural environments of California and the Great Basin in order to consider the cultural developments in the region to investigate prehistoric cultural changes. Climate change and environmental settings are issues discussed in the course.
Anthropology	Gamble, Lynn	131		North American Indians	Course Includes Sustainability	Env. Soc	U	The origins, development, and attainments of New World aboriginal cultures north of Mexico. Some emphasis is given to California groups such as the Chumash.	This course looks at culture of Native Americans and identifies how natural diversity in the environment shaped strategies for survival.
Art	Yasuda, Kim	106IV		Advanced Spatial Practices: Isla Vista	Sustainability Course	Env. Soc, Econ	U	Advanced study and investigation of new forms and spatial practices. Individual and group projects may encompass formal and collaborative research as well as multi-disciplinary production that engages new and exploratory practices, such as interactive and performative media, public art, social design at the intersection of architecture, urbanism and contemporary art. Course content detailed in syllabus each quarter.	Through the exploration of both public and private spaces in the community of Isla Vista (IV), students and community participants will research and propose concepts surrounding local development and stewardship, exploring a range of topics and models in urban planning as well as economic, environmental and social sustainability. Students who take the course for credit will develop and execute an IV-centered, "capstone" project, exploring their individual and collaborative research and/or production skills through meaningful and effective community dialogue and engagement.

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Black Studies	Galicia, Maria	129		The Urban Dilemma	Course Includes Sustainability	Env. Soc	U	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.
Black Studies	Staff	193MW		Race and the Just City	Course Includes Sustainability	Env. Soc	U	Seminars focus on a specific topic chosen by the professor, involve in-depth reading of a number of works and the writing of papers on subjects chosen in consultation with the instructor. See department website for seminar titles.	This course examines issues of race and social justice in the context of social and environmental sustainability.
Black Studies	Galicia, Maria	154		Environmental Racism and Environmental Justice	Sustainability Course	Env. Soc	U	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 investigates environmental injustice—that some people, especially poorer people, bear a disproportionate burden of living with environmental and climate hazards—and environmental racism—that a high coincidence exists, for example, between the location of toxic waste sites and Black and Brown communities, even when they are predominantly middle class. The burden of the multiplying environmental and climate crises often exacerbates dramatically the inequalities faced by people of color, women, and impoverished individuals, communities, and regions. These constituencies are the same ones most in need of innovative solutions. The course will involve study of the social, economic, political, and environmental forces that produce environmental injustice and racism, research into ongoing efforts to ameliorate environmental justice, especially in California, and theorizing of possible long term solutions.
Chemistry and Biochemistry	de Vries, Mattanjah	123		Fundamentals of Environmental Chemistry	Sustainability Course	Env, Econ	U	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.	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.
Chicano Studies	Armbruster-Sandoval, Ralph	171		The Brown/Black Metropolis	Course Includes Sustainability	Env. Soc	U	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.
Comparative Literature	Larue, Renan	186FL		Vegetarianism: Food, Literature, Philosophy	Course Includes Sustainability	Env. Soc	U	The philosophical, religious and literary history of vegetarianism and animal ethics from the Antiquity to the present. Topics include the debate on animal consumption in the Buddhist canon and recent representations of vegetarianism in western literature.	This course discusses vegetarianism and veganism in terms of their underlying claims, philosophical roots and history, their discussion in literature and the media, and their implications on our world. Emphasis is on carnism, animal and environmental ethics, and consumption of animal products.
Earth Science	Clark, Jordan	269	Concurrently offered with Earth Science 169	Tracer and Contaminant Hydrology	Course Includes Sustainability	Env	G	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.
Earth Science	Lea, David	205	Concurrently offered with EARTH 105	Earth's Climate: Past and Present	Course Includes Sustainability	Env, Soc	G	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 the processes and mechanisms that have shaped Earth's climate throughout history. Greenhouse gases, human-environment interactions, plate tectonics, and the Ice Ages are covered.
Earth Science	Lisiecki, Lorraine	206	Concurrently offered with EARTH 106	Introduction to Climate Modeling	Course Includes Sustainability	Env	G	An introduction to climate models and their application to studies of past, modern, and future climate. Students will learn fundamental modeling concepts, gain experience running several kinds of models, and read/evaluate recent modeling papers. A variety of models will be introduced, with emphasis on atmosphere-ocean General Circulation Models (GCMs) and "simple"(zero-dimensional) models. No previous modeling or programming experience is required.	This class presents an introduction to climate modeling with an emphasis on past climate reconstruction and future climate projections. Energy balance models, glacial cycles, general circulation models, and ocean biogeochemistry are discussed.
Earth Science	Clark, Jordan	169	Concurrently offered with Earth Science 269	Tracer and Contaminant Hydrology	Course Includes Sustainability	Env	U	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.
Earth Science	Thomas, Sabina	20		Geological Catastrophes	Course Includes Sustainability	Env, Soc	U	Course deals with geologic catastrophes, e.g., earthquakes, volcanic eruptions, tsunamis, and landslides. Students will learn the basic physical causes of these naturally occurring events and discuss the consequences.	This course examines the geologic controls on natural or geologic hazards, which have the potential to become catastrophes for humans or other life forms. Students will discover why some geologic or geographic circumstances may develop into disasters while others do not. The course explores what and how we know about those hazards, and how we are trying to prevent, predict, and remedy catastrophes and the effects of climate change. It will also illustrate that vulnerability or resilience to geologic catastrophes is a question of social justice.
Earth Science	Valentine, David	4		Intro to Oceanography	Course Includes Sustainability	Env, Soc, Econ	U	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 presents an introduction to the major processes and features of the oceans. The course covers plate tectonics, waves, chemistry, ocean circulation, and environmental issues.
Earth Science	Lea, David	105	Concurrently offered with EARTH 205	Earth's Climate: Past and Present	Course Includes Sustainability	Env, Soc	U	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 the processes and mechanisms that have shaped Earth's climate throughout history. Greenhouse gases, human-environment interactions, plate tectonics, and the Ice Ages are covered.
Earth Science	Lea, David	130		Global Warming - Science and Society	Sustainability Course	Env, Soc, Econ	U	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 first discusses the physical science basis for understanding climate change and the greenhouse effect. It assesses the connection between humans, energy, emissions, and global warming. Policy responses and the implications of global warming are also examined.

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Earth Science	Lisiecki, Lorraine	106	Concurrently offered with EARTH 206	Introduction to Climate Modeling	Course Includes Sustainability	Env	U	An introduction to climate models and their application to studies of past, modern, and future climate. Students will learn fundamental modeling concepts, gain experience running several kinds of models, and read/evaluate recent modeling papers. A variety of models will be introduced, with emphasis on atmosphere-ocean General Circulation Models (GCMs) and "simple" (zero-dimensional) models. No previous modeling or programming experience is required.	This class presents an introduction to climate modeling with an emphasis on past climate reconstruction and future climate projections. Energy balance models, glacial cycles, general circulation models, and ocean biogeochemistry are discussed.
Earth Science	Gautier, Catherine	10		Antarctica: The Last Place on Earth	Course Includes Sustainability	Env, Soc	U	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 Antarctica. Topics covered include: tectonic history, global warming, ozone depletion, and mineral resources.
East Asian Culture Studies	Lewallen, Ann-Elise	241	Concurrently offered with EACS 141	Environmental Justice in Asia	Course Includes Sustainability	Env, Soc	G	Applies environmental justice, a tool for addressing social and ethnic/racial inequality in environmental conditions, to analysis of Asia. Contrasts mainstream environmental and sustainability models with the justice-based approach to analyze how local communities devise solutions for environmental crises.	This course explores environmental justice as a means to understand the identity politics and community logics relevant to environmental issues in Asia. Topics covered include energy, water, pollution, industrial accidents, militarization, and climate justice. Emphasis is placed on discussion of environmental justice issues in Asia to understand how individuals can protect their livelihood and the environment.
East Asian Culture Studies	Lewallen, Ann-Elise	14		Environment and Power in Japan	Course Includes Sustainability	Env, Soc, Econ	U	What is the relationship between forms of power and environmental health in Japan? How do traditional values and practices influence contemporary ecologies? Traces the history of environmentalism and applies social science theories to assess contemporary environmental issues in Japan.	The goal of this course is to apply social science theories to assess contemporary environmental issues in Japan, such as the 2011 Fukushima Daiichi disaster. The course explores how inequality and hierarchy, politics, economics, structural patterns, and ecosystems shape Japanese relationships with both natural and unnatural landscapes.
East Asian Culture Studies	Lewallen, Ann-Elise	140	Anthropology 191	Indigenous Movements in Asia	Course Includes Sustainability	Soc, Env	U	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 class analyzes the history, politics, and sociocultural features of Indigenous peoples on global scale with an emphasis on Indigenous peoples in Asia. Topics covered include the environment, development, globalization, and settler colonialism.
East Asian Culture Studies	Lewallen, Ann-Elise	141	Concurrently offered with EACS 241	Environmental Justice in Asia	Course Includes Sustainability	Env, Soc	U	Applies environmental justice, a tool for addressing social and ethnic/racial inequality in environmental conditions, to analysis of Asia. Contrasts mainstream environmental and sustainability models with the justice-based approach to analyze how local communities devise solutions for environmental crises.	This course explores environmental justice as a means to understand the identity politics and community logics relevant to environmental issues in Asia. Topics covered include energy, water, pollution, industrial accidents, militarization, and climate justice. Emphasis is placed on discussion of environmental justice issues in Asia to understand how individuals can protect their livelihood and the environment.
Ecology, Evolution, and Marine Biology	Melack, John	509		Levels of Biological Organization II: Communities & Ecosystems	Course Includes Sustainability	Env	G	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.
Ecology, Evolution, and Marine Biology	Stratton, Lisa	288RE		Restoration Ecology Seminar	Course Includes Sustainability	Env	G	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, and other sustainability related organizations. This course also focuses on issues of conservation and sustainability in light of impacts humans are having on the landscape. These impacts include direct impacts as well as indirect impacts such as those associated with climate change and run-off/pollution.
Ecology, Evolution, and Marine Biology	Macintyre, Sally	253	Concurrently offered with Ecology, Evolution, and Marine Biology 153	Ecology of Lakes and Wetlands	Sustainability Course	Env, Soc	G	An examination of ecological aspects of lakes, wetlands, and their catchments integrating biogeochemical processes, biological-physical coupling, and population and community ecology. Applications of remote sensing and ecological models; human-caused impacts and their management.	See course description
Ecology, Evolution, and Marine Biology	Carlson, Craig; Macintyre, Sally.	142B		Ocean Processes	Course Includes Sustainability	Env	U	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.
Ecology, Evolution, and Marine Biology	Mazer, Susan; Latto, John; Schooler, Nick	3		Introductory Biology III	Course Includes Sustainability	Env	U	Introduction to the major groups of microbes, plants, and animals.	This course touches upon how diversity of life on our planet helps to maintain the large scale biogeochemical cycles as well as ecosystem services. This course has a lecture on ocean acidification in relation to microbes as well as carbon fixation on the land and oceans.
Ecology, Evolution, and Marine Biology	D'Antonio, Carla	128	Environmental Studies 128: Concurrently offered with Ecology, Evolution, and Marine Biology 228	Foundations of Ecosystem Restoration	Sustainability Course	Env	U	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.
Ecology, Evolution, and Marine Biology	D'Antonio, Carla	228	Concurrently offered with Ecology, Evolution, and Marine Biology 128	Ecological Constraints to Ecosystem Restoration	Sustainability Course	Env	U	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 restorations, as well as the adaptive management strategies used.
Ecology, Evolution, and Marine Biology	Emery, Nate	119	Environmental Studies 119	Ecology and Management of California Wildlands	Sustainability Course	Env	U	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.
Ecology, Evolution, and Marine Biology	Mazer, Susan	127L		Plant Biology and Biodiversity Lab	Course Includes Sustainability	Env, Soc	U	Computer, lab, greenhouse, and field experience in studies of plant anatomy, physiology, reproduction, pollination, morphology, and adaptation to different environments. Live material and herbarium collections used to demonstrate plant diversity, speciation, and genetic variation. Independent and team projects.	This course offers hands on experience with cutting-edge climate change sciences and explores topics including restoration, agriculture, ecology, and evolution concerning both humans and the environment. Also, students take field trips to analyze the diversity of plants and the effects of people on its anatomy.

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Ecology, Evolution, and Marine Biology	Mazer, Susan	127		Plant Biology and Biodiversity	Sustainability Course	Env	U	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.
Ecology, Evolution, and Marine Biology	Stratton, Lisa	188 RE	EEMB 288RE	Conservation and Restoration Seminar	Course Includes Sustainability	Env	U	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, and other sustainability related organizations. This course also focuses on issues of conservation and sustainability in light of impacts humans are having on the landscape. These impacts include direct impacts as well as indirect impacts such as those associated with climate change and run-off/pollution.
Ecology, Evolution, and Marine Biology	Thorsch, Jennifer	189	Environmental Studies 191	Nature and Science Education Practicum	Course Includes Sustainability	Env, Soc	U	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.	See course description
Ecology, Evolution, and Marine Biology	Holbrook, Sally	120		Introduction to Ecology	Sustainability Course	Env, Soc, Econ	U	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.
Ecology, Evolution, and Marine Biology	Holbrook, Sally	152	Environmental Studies 152	Applied Marine Ecology	Course Includes Sustainability	Env	U	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.
Ecology, Evolution, and Marine Biology	Kuris, Armand	111		Parasitology	Course Includes Sustainability	Env, Soc, Econ	U	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 uses an ecological approach to address the life cycle, pathology, transmission, and role of various parasites in ecosystems. Course discussion includes evolutionary, genetic, immunological, sociological, political, and economic aspects.
Ecology, Evolution, and Marine Biology	Latto, John	40		Ecology of Disease	Course Includes Sustainability	Soc	U	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.	The focus of this course is to study changes in the distribution and abundance of disease to assess how such changes have influenced human history. Ten main infectious diseases and their disease-causing agents are discussed.
Ecology, Evolution, and Marine Biology	Latto, John	168		Conservation Ecology	Course Includes Sustainability	Env, Soc, Econ	U	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.	This course is an introduction to the practical application of biological principles for biodiversity conservation. Units may include emphasis on social and economic constraints to biodiversity conservation.
Ecology, Evolution, and Marine Biology	Macintyre, Sally	153	Concurrently offered with Ecology, Evolution, and Marine Biology 253	Ecology of Lakes and Wetlands	Sustainability Course	Env, Soc	U	An examination of ecological aspects of lakes, wetlands, and their catchments integrating biogeochemical processes, biological-physical coupling, and population and community ecology. Applications of remote sensing and ecological models; human-caused impacts and their management.	See course description
Ecology, Evolution, and Marine Biology	Even, Thomas	22		Concepts and Controversies in the Biological Sciences	Course Includes Sustainability	Env, Soc	U	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.
Ecology, Evolution, and Marine Biology	Burkepile, Deron	147		Coral Reef Biology and Ecology	Sustainability Course	Env, Soc	U	Coral reefs are highly diverse ecosystems that provide important ecosystem services across many areas of the tropics. Introduction to the taxonomy, biology, and ecology of the main groups of coral reef inhabitants. Analysis and discussion of the biology and ecological relationships of reef algae, plants and animals as well as contemporary challenges to the health and resilience of reefs, and potential conservation strategies to mitigate stressors on reefs.	This course looks at climate change and coral reefs, coral reef fisheries, and anthropogenic stressors to reefs.
Ecology, Evolution, and Marine Biology	French, LeeAnn	94		Issues in Marine Conservation	Course Includes Sustainability	Env, Soc, Econ	U	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.
Economics	Plantinga, Andrew	260A		Natural Resources	Sustainability Course	Env, Econ	G	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.
Economics	Benelli, Cynthia	260B		Environmental Economics	Sustainability Course	Env, Soc, Econ	G	The primarily static theory of externalities and their correction. Covers basic theory of public goods 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 goods/externalities, regulation theory, and empirical analysis in the context of environmental problems and environmental valuation. By including transboundary pollution and the effects of international trade on the environment the course also offers a global dimension.
Economics	Libecap, Gary	260C		Collective Action and Open Access	Sustainability Course	Env, Econ	G	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.

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Economics	Deschenes, Olivier	127		Climate Change	Course Includes Sustainability	Env, Econ	U	Economic and policy issues underlying threat of global climate change. In particular, role of economics in designing efficient climate policy. Present some of scientific methods in assessing climate change processes. Topics include externalities, taxation, valuation, discounting, and cost-benefit analysis.	This course relates economic patterns and how they relate to climate change. It discusses how the economy can be used to invoke policies that address the climate.
Economics	Benelli, Cynthia	115	Environmental Studies 175	Intermediate Environmental Economics	Sustainability Course	Env, Soc	U	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 class uses economic concepts to analyze issues related to the environment and natural resources. The course focuses mainly on developing the relevant economic methodologies but also uses current issues in environmental economics to discuss their application. The course is slightly short on policy and long on theoretical developments in the area of environmental economics.
English	Shewry, Teresa	122AP		Cultural Representations : Literature and the Environment: Imagining Asia and the Pacific	Course Includes Sustainability	Env	U	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.
Environmental Science and Management	Todd, Michael	444		Writing about the Environment for the Public	Course Includes Sustainability	Env, Soc	G	Explores written genres for scientists to educate and influence public audiences. Students will analyze and practice message/story development with emphasis on interviewing, analyzing and framing environmental issues in news. Students will complete course with media-ready work.	The focus of the class is teaching prospective scientists and policymakers how to present important and innovative environmental topics to the public and policymakers via the media.
Environmental Science and Management	Geyer, Roland; Palazzo, Joe	273		Life Cycle Assessment	Sustainability Course	Env	G	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.
Environmental Science and Management	Melack, John	202		Environmental Biogeochemistry	Sustainability Course	Env	G	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.
Environmental Science and Management	Frew, James	263		Geographic Information Systems	Course Includes Sustainability	Env	G	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.
Environmental Science and Management	Frew, James	264		Web Mapping/Publishing	Course Includes Sustainability	Env	G	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.
Environmental Science and Management	Keller, Arturo	222		Fate and Transport of Pollutants in the Environment	Sustainability Course	Env	G	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 class looks at how a chemical will behave in the environment (where it goes, how long does it last, will it be at toxic concentrations), and serves to design more sustainable chemical management plans.
Environmental Science and Management	Keller, Arturo	224		Sustainable Watershed Quality Management	Sustainability Course	Env	G	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.
Environmental Science and Management	Keller, Arturo	223L		Laboratory in Management of Soil and Groundwater Quality	Sustainability Course	Env	G	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.
Environmental Science and Management	Potoski, Matthew	249		Environmental Persuasion	Course Includes Sustainability	Env, Soc	G	An introduction to the practice of environmental communications in professional settings. Topics include environmental psychology, message framing, persuasion, and decision making, with a focus on public media and communication. Focuses on how to design and implement public media communication programs to be effective for particular audiences, goals and circumstances.	In this course students will explore how communications influences peoples' environmental behavior. The course will consist of classroom lectures and discussion sessions covering topics on environmental psychology, persuasion, and framing, all with a focus on public media and communication. Students will then design a concept plan for an environmental communications campaign, drawing on the material from class.
Environmental Science and Management	Stevenson, Louise	213		Ecotoxicology	Course Includes Sustainability	Env	G	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 adverse biological effects of various toxins in the environment and learn to perform risk assessments. These toxins can be natural or human-introduced. Students understand the effects of environmental contaminants on an array of living organisms, and analyze ecotoxicology papers through various case studies.
Environmental Science and Management	Plantinga, Andrew	251		Economics and Environmental Policy Analysis	Course Includes Sustainability	Env, Econ	G	Design and evaluation of public policies for addressing environmental problems. Theory of environmental policy arising from the study of markets, market failure, economic efficiency, the broader scope of analysis accounting for distributional concerns, sustainability, impact analysis, cost-effectiveness, and multi-criteria analysis.	The goal of this short course is to provide an introduction to microeconomics and its application to environmental policy analysis. The course begins with an overview of microeconomic analysis. Students will examine when markets maximize net benefits to society and under what conditions they fail to do this and how market failure arises frequently in connection to the environment. The last part of the class will focus on the design of environmental policies to improve the performance of markets.
Environmental Science and Management	Suh, Sangwon	272		Energy and Resource Productivity	Sustainability Course	Env, Soc, Econ	G	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.
Environmental Science and Management	Satzman, Jim	207		Environmental Law and Policy	Sustainability Course	Env, Soc, Econ	G	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.

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Environmental Science and Management	Willis, Mel	430		Introduction to the National Environmental Policy Act and the California Environmental Quality Act	Course Includes Sustainability	Env. Soc	G	This one-day workshop provides a basic understanding of the NEPA and CEQA processes for conducting environmental impact assessment (EIA) and familiarizes students with the differences between NEPA and CEQA	The course provides an overview of federal and California environmental law and policies for evaluating the environmental impact of proposed actions.
Environmental Science and Management	Meng, Kyle	229		Science, Economics and Policy of Climate Change	Sustainability Course	Env. Soc, Econ	G	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.
Environmental Science and Management	Taque, Naomi	237		Climate Change Impacts and Adaptation	Sustainability Course	Env. Soc	G	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 adaptation at local, regional and global scales.	This course will present the techniques used to apply science based information to support climate change assessment and adaptation. A key focus will be becoming familiar with techniques that scientists use to quantify these impacts and to disentangle the multiple causes of variability in observations. We will consider how vulnerability changes across scale and in different locations around the globe and address some of the key issues in making predictions and ultimately planning for continuing climate change.
Environmental Science and Management	Tilman, David	201		Ecology of Managed Ecosystems	Sustainability Course	Env	G	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.
Environmental Science and Management	Wilkinson, Robert	225		Water Policy	Sustainability Course	Env. Soc, Econ	G	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.
Environmental Science and Management	Libecap, Gary	245		Cost-Benefit Analysis and Nonmarket Valuation	Sustainability Course	Env, Econ	G	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.
Environmental Science and Management	Libecap, Gary	285		Environmental Markets	Sustainability Course	Env, Soc, Econ	G	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.
Environmental Science and Management	Lenihan, Hunter	254		Coastal Marine Ecosystems Processes	Course Includes Sustainability	Env, Soc	G	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 covers the basics and important details of processes in marine coastal ecosystems. Emphasis is placed on the approaches and tools associated with marine coastal management, restoration, and conservation. Human-resource interactions are also discussed.
Environmental Science and Management	Lenihan, Hunter	260		Applied Marine Ecology	Course Includes Sustainability	Env	G	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 course focuses on the application of ecological principles to environmental problems in marine ecosystems. Topics include ecological dynamics, aquaculture, marine pollution, and climate change.
Environmental Science and Management	Hankey, Casey	296		Advanced Special Topics in Environmental Management	Course Includes Sustainability	Env, Econ	G	Covers advanced special topics in environmental management.	This special topics class focuses on issues in environmental management. Topics vary from class to class but include sustainability related content. The following are examples of issues covered: Sustainable Water Markets, Advanced GIS, Equity and the managed environment, and Methods for social-ecological systems analysis: small-scale fisheries and climate change.
Environmental Science and Management	Leombruni, Lisa	437		Writing Skills for Environmental Professionals	Course Includes Sustainability	Env	G	Provides the skills to write effectively across academic and applied genres in the environmental sciences. A focus on understanding audience, good writing mechanics, and the principles of good scientific and analytical writing will help students "translate science" effectively. Topics include thesis, audience, tone, organization, structure, and citations. Also covers writing styles and formats likely encountered in an environmental career, such as proposals, evaluations, writing for the public, and professional correspondence.	This course highlights the writing mechanics and the principles of good scientific and analytical writing needed in environmental professions. The course covers various writing formats such as research and project proposals, evaluations and data summaries, policy analyses.
Environmental Science and Management	Leombruni, Lisa	449		Environmental Communication Practicum	Course Includes Sustainability	Env	G	This capstone course provides students the opportunity to apply their knowledge and communication skills in a practical setting. Working in teams, students will develop and implement an information campaign in association with an environmental firm, organization, governmental or other institution.	This course allows students to develop an outreach strategy, engage in audience research, develop creative content, and evaluate messages and tactics for a project related to environmental communication. These projects can raise awareness, promote engagement, and/or inspire environmental stewardship.
Environmental Science and Management	Holden, Patricia	214		Bioremediation	Course Includes Sustainability	Env	G	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 course examines the concepts and methods to alleviate the effects of environmental pollution through the use of biological treatment processes. It discusses feasibility assessments of such treatments, as well as mitigation and remediation efforts.
Environmental Science and Management	Holden, Patricia	219		Microbial Processes in the Environment	Course Includes Sustainability	Env, Soc	G	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 course focuses on the role of microbes in the environment. It emphasizes the importance of microbes in terms of management of the environment and natural resources.
Environmental Science and Management	Hanrahan, Michael	441		Introduction to Environmental Media Production	Course Includes Sustainability	Env	G	Hands-on course designed to give students the core skills needed to conceptualize, capture, edit, and deliver short-form environmental documentaries. The basic tools of film-making --cinematography, lighting, sound, and editing -- are covered.	This course provides students with the tools and skills needed to craft, edit, and deliver documentaries with an environmental theme. Students will develop an introductory understanding of video production.

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Environmental Science and Management	Hutton, Richard	440		Strategic Environmental Communication	Course Includes Sustainability	Env. Soc	G	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.	This course explores the science and art of environmental communication, including communication theory, understanding audiences, and developing strategy. Students practice messaging for a diversity of audiences and also learn how to tell compelling stories by exploring conflict, drama, and character.
Environmental Science and Management	Heintz, Mark	281		Corporate Environmental Management	Sustainability Course	Env. Soc, Econ	G	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 provides students with an overview of Corporate Social Responsibility (CSR) work in a corporate setting. Discussion topics include social, environmental, and community issues faced by a corporation and the ways in which such companies weigh priorities and invest resources.
Environmental Science and Management	Lea, David	239		Advanced Climate Science for Policy Makers	Sustainability Course	Env	G	Examines the science of climate change with a focus on those issues most relevant to policy makers. Topics include: Climate Forcing Agents and their Efficacy; Climate Sensitivity and Feedbacks; Anthropogenic Climate Change; Extreme Events; Energy and Greenhouse Gas Emissions; Global Temperature Limits and Mitigation Scenarios; and Geoengineering. Discussion will focus on topical issues at the nexus of climate policy and science, such as mitigation of short-lived climate pollutants like black carbon.	This course examines the science behind climate change as it relates to policymaking. Some topics include climate forcing agents, greenhouse gases, climate sensitivity, ocean acidification, and climate mitigation scenarios.
Environmental Science and Management	Hastings, Sean	257		Coastal Marine Policy & Management	Sustainability Course	Env, Econ	G	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, federal, and California coastal and marine policy programs and management. Students learn how to draft a policy brief and decision-making memo, as well as participate in real-world policy making forums and meetings.
Environmental Science and Management	Larsen, Ashley	270		Conservation Planning and Priority Setting	Course Includes Sustainability	Env. Soc, Econ	G	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 examines how the concepts and principles of conservation planning can be applied to real world settings. Lecture and lab topics include species-level conservation targets, conservation networks, RStudio, Marxan, restoration, and ecosystem services.
Environmental Science and Management	Larsen, Ashley	270P		Conservation Planning Practicum	Course Includes Sustainability	Env	G	In depth development and analysis of a specific conservation plan, from start (goal setting) to finish (spatially explicit recommendations). Practical application of theory and tools from ESM270. If appropriate, MESM Group Project locations can be used as the case study.	This course provides students with the opportunity to use analytical approaches and tools to develop a conservation plan.
Environmental Science and Management	Kendall, Bruce	211		Applied Population Ecology	Course Includes Sustainability	Env	G	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.	This course explores the variation in both abundance and density between species. Population ecology topics such as population trends, the causes of such trends, and conservation objectives are discussed. Students learn how to perform quantitative risk assessment for endangered species and identify potentially efficacious management actions.
Environmental Science and Management	Jostes, John	283		Environmental Negotiation	Course Includes Sustainability	Env, Soc	G	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.	This course prepares students with the tools necessary to engage in collaborative problem solving and negotiate effective environmental agreements when faced with resistance. The course presents case studies, and discusses how to create long-lasting, sustainable environmental agreements as well.
Environmental Science and Management	Horst, Allison	206		Data Analysis for Environmental Science and Management	Course Includes Sustainability	Env	G	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 from environmental problems.	This course provides students with the tools and skills to answer environmental questions using both qualitative and quantitative datasets. Students use R and RStudio software to analyze data.
Environmental Science and Management	Horst, Allison	244		Advanced Data Analysis for Environmental Science and Management	Course Includes Sustainability	Env	G	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 course teaches students to use specialized data analysis with regards to environmental management.
Environmental Science and Management	Jacobson, Tom	275		Principles and Practice of Environmental Planning	Sustainability Course	Env, Soc, Econ	G	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 examines the ways in which land use planning and related activities address various environmental concerns. Topics include planning for sustainable communities, transportation planning, land conservation regulations, and water resources planning. Socioeconomic elements of land planning are discussed as well.
Environmental Science and Management	Airame, Satie	240		Climate Change Biology	Sustainability Course	Env, Soc	G	Biological changes in response to climate, their causes, emerging conservation responses and policy implications.	This course focuses on the impact of climate change from a biological perspective. Students also learn about the causes behind these changes, as well as conservation methods involving public policy.
Environmental Science and Management	Dozier, Jeff	232		Environmental Modeling	Course Includes Sustainability	Env, Soc	G	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.	This course has students use computational and statistical methods in order to solve a variety of environmental problems. The areas students work in includes but is not limited to: invasive species in Santa Barbara Harbor, climate, population models, the effects of temperature change on agricultural products, and precipitation models.
Environmental Science and Management	Anderson, Sarah	269		Survey Design and Environmental Public Opinion	Course Includes Sustainability	Env, Econ	G	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.	Course focuses on survey design from an environmental perspective. Students learn practical skills on how to collect data on the environment.
Environmental Science and Management	Anderson, Sarah	241		Environmental Politics and Policy	Course Includes Sustainability	Env, Soc	G	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, enactment, and reforms. It takes into consideration the interactions across levels of social organization and socio-political systems.
Environmental Science and Management	Anderson, Sarah	243		Environmental Policy Analysis	Sustainability Course	Env, Soc, Econ	G	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.	Students gain a perspective on both how and why a given environmental policy is or is not put into place. Specifically students look at how different interests compete within institutions and how that results in a certain policy.

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Environmental Science and Management	Davis, Frank	215		Landscape Ecology	Course Includes Sustainability	Env	G	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.	Students in this course look at topics such as the effects of roads on animal abundance, land use, climate change, and many more topics related to how humans affect the environment. The course is primarily focused on understanding spatial patterns in landscape structure and ecological processes but incorporates principles of sustainability throughout.
Environmental Science and Management	Buntaine, Mark	297		Advanced Special Topics in Environmental Policy	Course Includes Sustainability	Env, Soc	G	Advanced special topics in environmental policy.	Condensed version of the following: 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.
Environmental Science and Management	Buntaine, Mark	248		Environmental Institutions: Rights, Rules, and Decision-making	Course Includes Sustainability	Env, Soc	G	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.	See course description
Environmental Science and Management	Cotter, Emily	256A		Introduction to Entrepreneurship and New Venture Creation	Course Includes Sustainability	Soc, Econ	G	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.	See course description
Environmental Science and Management	Cotter, Emily	230		Strategic Planning for Non-Profit Ventures	Course Includes Sustainability	Soc, Econ	G	Strategic planning issues unique to non-profits. Provides an entrepreneurial perspective for charitable organizations, non-government organizations, social ventures and not-for-profit organizations. Topics include stakeholder analysis, the mission statement, strategic objectives and goals, board development, fiscal management and fundraising.	This class focuses specifically on Non-Profit organizations, thereby providing students with the tools to set up successful Non-profits that address environmental and social issues.
Environmental Science and Management	Cotter, Emily	256B		New Venture Opportunity Analysis	Course Includes Sustainability	Env, Soc, Econ	G	Development of the analytical and conceptual skills required to assess the feasibility of a new venture opportunity. Topics include industry analysis, concept development, market definition, customer discovery, elements of a business model and competitive analysis.	This class focuses on examining the feasibility of a business solution that addresses both a customer problem and environmental problem.
Environmental Science and Management	Cotter, Emily	402A		New Venture Formation	Course Includes Sustainability	Env, Soc, Econ	G	This course teaches students how to pursue opportunities for new ventures and transform them into real enterprises, focusing on development of viable business models.	Students in this course work on developing a viable business model that offers an environmental or social benefit.
Environmental Science and Management	Alario, Celia	442		Grassroots Organizing, Outreach & Campaigning	Course Includes Sustainability	Env, Soc	G	Reviews the role and effectiveness of grassroots environmental efforts on local, statewide, and national scales. Students will explore organizing strategies and tactics based on various theories of change, addressing topics such as community outreach and collaboration, policy campaigning and more.	This course investigates the theory and practice of grassroots organizing, outreach and campaigning. The class offers an exploration of civic engagement and public action of all sorts. A deeper understanding of the communications strategies and tactic behind a variety of campaigns to create environmental justice and improve sustainability practices is developed.
Environmental Science and Management	Alario, Celia	445		Social Media and the Environment	Course Includes Sustainability	Env, Soc	G	Students will learn about and use different social media tools to engage and activate social networks to generate environmental awareness and action	The class explores contemporary social media communication tools and practices utilized to communicate about the environment and sustainability.
Environmental Science and Management	Dozier, Jeff	203		Earth System Science	Sustainability Course	Env	G	Energy and mass transport as applied to the atmosphere, oceans, and land models of the earth's climate and hydrology.	This course explains how the planet functions. General objectives 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.
Environmental Science and Management	Dozier, Jeff	236		Mountain Snowpack	Sustainability Course	Env	G	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 focuses on a variety of topics related to the mountain snowpack specifically dealing with physical and chemical properties of snow as well as the role of snow as it relates to watershed hydrology, water resources, and recreation.
Environmental Science and Management	Dozier, Jeff	266		Remote Sensing of the Environment	Course Includes Sustainability	Env	G	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 course involves the application of remote sensing theory to environmental science and management. Students apply knowledge to topics such as vegetation as well as water, snow, and ice.
Environmental Science and Management	Brown, Norm	223		Management of Soil and Groundwater Quality	Course Includes Sustainability	Env	G	Focuses on protection and remediation of contaminated soil, vadose zone and groundwater, including site and basin characterization, planning, and methods for corrective action. Discussion includes the determination of groundwater quality objectives based on risk assessment, technology development and testing, and cost evaluation of management strategies.	The course includes the determination of groundwater quality objectives, based on risk assessment, approaches for protecting or remediating aquifers and contaminated soils, and evaluation of management strategies.
Environmental Science and Management	Brown, Norm	226		Groundwater Management	Course Includes Sustainability	Env	G	Examines the principles and tools for groundwater management and stewardship of groundwater resources in the US and includes examples drawn from global groundwater management challenges.	This course focuses on the principles and tools needed for groundwater management and stewardship of groundwater resources; examples are drawn from challenges faced in global groundwater management.
Environmental Science and Management	Costello, Christopher	204		Economics of Environmental Management	Sustainability Course	Env, Econ	G	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.
Environmental Science and Management	Costello, Christopher	242		Natural Resource Economics and Policy	Sustainability Course	Env, Econ	G	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.
Environmental Science and Management	Davis, Frank	299		Advanced Special Topics in Environmental Science	Sustainability Course	Env	G	Advanced Special Topics in Environmental Science.	This special topics class focuses on issues in environmental science. Topics vary from class to class, but include more than 50% sustainability-related content. Examples of issues covered: Biodiversity survey and monitoring methods.

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Environmental Science and Management	Dunne, Thomas	233		River Restoration	Sustainability Course	Env	G	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 teaches students the principles and practice of restoring rivers and their underlying ecosystem values and services. It reviews the hydrologic, geomorphic, and engineering principles behind river restoration. This is important in order to recognize and reverse many of the negative impacts of human activities on rivers, and floodplains and return these environments to conditions that will sustain the ecological functions.
Environmental Science and Management	Dunne, Thomas	234		River Systems	Sustainability Course	Env	G	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, including the effects of large dams on reservoirs as related to sedimentation and morphological changes. Large river lowlands also sustain the livelihoods of millions of people and ecosystems around the world but are attractive environments for human activity. The course teaches the principles and practice of balancing hazards and productive resources to sustain economic activities as well as ecological values.
Environmental Science and Management	Dunne, Thomas	235		Watershed Analysis	Sustainability Course	Env	G	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. The course teaches the principles and practices of land and water management to sustain landscapes that are productive and safe for humans while minimizing degradation of aquatic ecosystems.
Environmental Science and Management	Gaines, Steve	293		Advanced Special Topics in Climate and Energy	Sustainability Course	Env, Soc	G	Advanced topics in climate and energy.	This special topics class focuses on issues in climate and energy. Topics vary from class to class, but include more than 50% sustainability-related content. Examples of issues covered: Science & Policy - Do they Mix?
Environmental Studies	D'Antonio, Carla	119		Ecology and Management of California Wildlands	Sustainability Course	Env, Soc	U	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.	The persistence of healthy wildlands through active management is fundamental to the preservation of biodiversity on both local and global scales. This course evaluates the ways in which California wildland ecosystems are managed, how different interest groups influence management and whether different management strategies result in degradation, preservation or enhancement of natural resources.
Environmental Studies	August-Schmidt, Lisa	128	Ecology, Evolution, and Marine Biology 128	Foundations of Ecosystem Restoration	Course Includes Sustainability	Env	U	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 focuses on the science behind ecosystem restoration. Students discuss the management steps that can be taken to improve ecosystem functions like water retention and productivity and preserve biodiversity with the goal of understanding how and why these mechanisms work and when they don't. In addition, while not the focus of the class, students also discuss some of the complexities, both practical and economic, that come with trying to scale restoration projects up. The class also touches on the importance of involving the local community and any relevant stakeholders for restoration success.
Environmental Studies	Alagona, Peter	1		Introduction to Environmental Studies	Sustainability Course	Env, Soc	U	"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.
Environmental Studies	Bell, Thomas	167		Biogeography: The Study of Plant and Animal Distributions	Course Includes Sustainability	Env	U	Basic processes governing geographic distribution patterns of biota, including migration, evolution, isolation, and endemism. Biogeographic regions and their histories and an introduction to island biogeography. Emphasis on plants and plant geography. One all-day field trip.	This course discusses how human activity (as well as ecology and climate) affects species ranges
Environmental Studies	Clark, Jordan	141		Chemistry of Global Change	Sustainability Course	Env	U	Examines the fate of fossil fuel carbon dioxide within the context of the global carbon cycle. It will address questions such as: Which reservoirs have absorbed the emitted fossil fuel carbon dioxide? Why has so little of the emitted carbon dioxide entered the ocean? Why and how will the ocean chemistry change? What are the expected effects of the marine ecosystem? Includes a term paper, problem sets, and in-class exams.	This course examines the chemistry and oceanography of the carbon cycle, how this gas contributes to global warming, and some consequences of warming to the environment.
Environmental Studies	Gilmore, Timothy	122NE	English 122NE	Cultural Representations: Nature and the Environment	Course Includes Sustainability	Env, Soc	U	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.	The purpose of this course is to begin asking questions about what nature is and how our understanding of it facilitates its exploitation and about how we relate to other animals and why. These questions provide an opportunity for us to rethink some basic assumptions we tacitly hold that have led us to our contemporary apocalyptic moment.
Environmental Studies	Pulver, Simone	139		Business and Environment	Sustainability Course	Env, Soc, Econ	U	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. Students will understand how corporations change their operations, the types of products they make, their communication strategies about products and brands and their governance structures in an effort to "go green." Students conclude the course by investigating industry and economy-wide patterns in greening and considering three theories regarding the role of business in a transition to a sustainability society.
Environmental Studies	Pellow, David	116		Sustainable Communities	Sustainability Course	Env, Soc	U	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.	See Official Course Description

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Environmental Studies	Pellow, David	180		Global Environmental Movements	Course Includes Sustainability	Env. Soc	U	Examines historical and contemporary environmental and human rights movements around the world. Subject matter includes: policy-driven/reformist environmental movements, radical underground and militant movements, indigenous peoples' movements, environmental movements in the Global South, and coalitions and transnational advocacy networks focused on confronting climate change and resource extraction associated with industrial agriculture, mining, timber harvesting, hydroelectric dam construction, fracking, oil and tarsands, and the international hazardous waste trade. Students learn theories and concepts from the social sciences and environmental humanities.	This course introduces students to historical and contemporary environmental movements within and across the U.S., Africa, Europe, Asia, the Pacific Islands, and Latin America. Close attention is paid to the ways that local, regional, national, and transnational flows of ideas, people, resources, discourses, tactics and strategies emerge and intersect to produce movements that both succeed and fail (and analyses of why this happens). Subject matter will include a consideration of: policy-driven environmental movements, radical underground and militant movements, indigenous peoples' movements, environmental movements in the Global South, and coalitions and transnational advocacy networks focused on confronting climate change and resource extraction associated with industrial agriculture, mining, timber harvesting, hydroelectric dam construction, fossil fuel extraction, and myriad international flows of ecologically hazardous waste.
Environmental Studies	Maldonado, Julie	130A	Anthropology 130A	Coupled Human and Natural Systems: Risks, Vulnerability, Resilience, and Disasters	Course Includes Sustainability	Env. Soc, Econ	U	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.	The primary goal of this course is to provide students with an understanding of different approaches to and meanings of disasters, risk, vulnerability, and resilience and how people have faced these challenges in practical ways in a range of social, cultural, and environmental contexts. The course aims to enable students to develop an understanding of the relationship between people and the environment over time, including the social construction of disasters; different ways of knowing, understanding, and responding to disasters; and the significance of this relationship in the context of a changing climate; recognize the complexity of disasters, risk, vulnerability, and resilience; and assess strategies and actions to manage and recover from disasters and reduce disaster risks.
Environmental Studies	Pulver, Simone	139		Science and Policy of Climate Change	Sustainability Course	Env. Soc	U	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 grants students the opportunity to design international treaties in relation to helping eliminate climate change, biodiversity loss, depletion of fresh water, and international hazardous waste. Students will begin by analyzing existing international environmental treaties, then studying the success and failures of that treaty in regards to its goal.
Environmental Studies	Pulver, Simone	131		International Environmental Law and Politics	Sustainability Course	Env. Soc	U	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.
Environmental Studies	Pye, Lori	129		Ecopsychology	Sustainability Course	Env. Soc	U	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 impacts the sustainability in all other systems.
Environmental Studies	Tyler, Claudia	100		Environmental Ecology	Course Includes Sustainability	Env. Soc	U	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. Students will study the principles of ecology and their implications for analyzing environmental problems. The focus of this course is on understanding the processes controlling the dynamics of populations, communities and ecosystems.
Environmental Studies	Mildenberger, Matto	177	Political Science 177	Comparative Environmental Politics	Course Includes Sustainability	Env. Soc	U	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 explores the political dimension of environmental policy action and inaction by documenting differences between countries in their domestic politics of the environment. It explores how ideas, interests, and institutions shape national environmental politics relating to such issues as climate change, long-range air pollution, biodiversity loss, ocean acidification, water shortages, ozone layer depletion, overfishing and deforestation. The course is divided into two parts. The first section will introduce students to the diverse theoretical perspectives used by political scientists to understand the politics of the environment. The second section will explore what comparative politics specifically can teach us about cross-national differences in environmental politics.
Environmental Studies	Smith, Eric	178	Political Science 175	Politics of the Environment	Course Includes Sustainability	Env. Soc	U	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.	In this course, students will examine U.S. environmental politics and policy. Students will pay attention to public opinion and the political forces that influence environmental policy. Then, students discuss how politicians respond to those forces, and some of the public policy approaches that have been developed to address environmental problems.
Environmental Studies	Wack, Paul	135A		Principles of Environmental Planning	Sustainability Course	Env. Soc, Econ	U	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. This course offers students the ability to apply their course concepts to field studies with the opportunity to go on field trips. Students also have the opportunity with a guest lecturer from the UCSB Sustainability Department to discuss local initiatives to create a more sustainable city.
Environmental Studies	Moret, Stephanie	193CP		Conservation Planning	Sustainability Course	Env. Soc	U	One-time course taught by lecturers or guest professors on a special area of interest in environmental studies. Specific course titles and topics to be announced by the Environmental Studies program each quarter.	Conservation planning practitioners have knowledge and skill sets that focus on protecting and maintaining biodiversity in the face of global changes to land, water and climate. Conservation Planning addresses the basic principles of ecosystem ecology, landscape ecology, conservation theory, conservation strategies, monitoring, adaptive management, and interdisciplinary engagement. Students will develop a facility of these principles, and in teams they'll apply this knowledge to present a conservation plan for a species or ecosystem of concern.

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Environmental Studies	Martin, Jennifer	130C		Global Food Systems	Course Includes Sustainability	Env. Soc. Econ	U	Examines history of global food system and its impacts on ecosystems, ecologies, and human nutrition and food security. How agricultural, capture fisheries, and aquacultural industries were integrated into the global food system. Provides information to make more informed decisions about consuming these products.	This course begins with understanding food security and environmental justice in the food industry. It then evolves into studying different means of agriculture including aquaculture and its benefits. This course concludes with understanding the social impacts of mass food production, focusing on situations such as the slave trade in Southeast Asia over shrimp production and how this contributes to habitat destruction and social injustices.
Environmental Studies	Schindlinger, Michael	143		Endangered Species Management	Sustainability Course	Env. Soc	U	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.
Environmental Studies	Stone, David	165A		Environmental Impact Analysis	Sustainability Course	Env. Soc. Econ	U	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 development project environmental impact assessments. It presents strategies used by environmental planners to illustrate the environmental outcome of these projects by comparing them to existing conditions, analyzing the significance of project disturbances, and identifying design solutions (mitigations) to avoid or minimize potential damage and promote sustainable policy objectives. The course also explores how these techniques are used to influence short- and long-term decisions that shape our community.
Environmental Studies	Wilkinson, Robert	116		Building Sustainable Communities	Sustainability Course	Env. Soc. Econ	U	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.
Environmental Studies	Wilkinson, Robert	117		Science and Policy Dimensions of Climate Change	Sustainability Course	Env. Soc. Econ	U	Climate change and variability due to global warming is a critical environmental, social, and economic 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.
Environmental Studies	Wilkinson, Robert	176A		Water Policy in the West: Linking Science with Environmental and Economic Values	Sustainability Course	Env. Soc. Econ	U	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.
Environmental Studies	Wilkinson, Robert	176B		Advanced Study of Water Policy	Sustainability Course	Env. Soc. Econ	U	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.
Environmental Studies	Mohr, Greg	165B		Environmental Impact Analysis	Sustainability Course	Env. Soc. Econ	U	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).
Environmental Studies	Talamantez, Ines	189	Religious Studies 193	Religion and Ecology in America	Course Includes Sustainability	Env. Soc	U	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.
Environmental Studies	Pellow, David	181		Power, Justice, and the Environment	Course Includes Sustainability	Env. Soc	U	Introduces students to the theoretical and historical foundations of research on environmental racism and environmental inequality. Examines social scientific evidence concerning these phenomena and the efforts by community residents, activists, workers, and governments to combat it. Considers the social forces that create environmental inequalities so that we may understand their causes, consequences, and the possibilities for achieving environmental justice. Students will master social scientific theories and concepts related to the subject matter.	This course introduces students to the theoretical and historical foundations of environmental racism, environmental inequality, and environmental justice. Students will examine and interrogate both the scholarly evidence concerning these phenomena and the efforts by community residents, activists, workers, and governments to combat it. Students will also consider the social forces that create environmental inequalities so that students may understand their causes, consequences, and the possibilities for achieving environmental justice. Students will be expected to master theories and concepts related to the subject matter from the fields of environmental studies, environmental social sciences, and the environmental humanities.
Environmental Studies	Heilmayr, Robert	154		Geographic Information Systems (GIS) for Environmental Applications	Course Includes Sustainability	Env. Soc. Econ	U	Explores how Geographic Information Systems (GIS) can help environmental researchers and professionals analyze and communicate the spatial patterns underpinning a wide variety of environmental concerns. Introduces students to the basic theory and application of GIS through hands-on application of the technology to environmental questions.	This course provides an introduction to the theory and application of Geographic Information Systems (GIS) as a tool for addressing environmental questions. Emphasis is on the generation of spatial questions and the skills to answer such questions. Students apply GIS techniques in weekly labs and a quarter-long group project to answer an environmental question of their choosing.
Environmental Studies	Krop, Linda	125A		Principles of Environmental Law	Course Includes Sustainability	Env. Soc	U	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 on federal environmental laws and constitutional principles as it relates to human use of the environment. The ethical, cultural and legal principles that provide the foundation for our current legal system are discussed.
Environmental Studies	Krop, Linda	125B		Land Use and Planning Law	Course Includes Sustainability	Env. Soc	U	An examination of local, state, and federal laws regulating land use and development. Selected problems analyzed through case studies.	This course examines the role played by local and state agencies in California environmental law and regulation. The legislative processes concerning these laws and their impact on the public are also discussed. The course includes land use and planning principles, as well as the administrative and judicial and regulatory processes that apply to them.
Environmental Studies	Graves, Gregory	3		Introduction to the Social and Cultural Environment	Sustainability Course	Env. Econ, Soc	U	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 chronologically assesses the relationship of human societies and cultures with the environment. Particular emphasis is placed on contrasting various cultures with regard to their practices of environmental manipulation.

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Environmental Studies	Graves, Gregory	173	History 173T	American Environmental History	Course Includes Sustainability	Env. Soc	U	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.
Environmental Studies	Graves, Gregory	188		The Ethics of Human-Environment Relations	Course Includes Sustainability	Env. Soc	U	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.
Environmental Studies	Graves, Gregory	193EF		Special Topics In Environmental Studies	Course Includes Sustainability	Env. Soc	U	One-time course taught by lecturers or guest professors on a special area of interest in environmental studies. Specific course titles and topics to be announced by the Environmental Studies program each quarter	This course explores the nature of modern environmentalism through analysis of the recent past and present, but with particular emphasis on the future. The course discusses both historical attempts to create cultural utopias and recent predictions about the environment. The primary goal is to consider what the 21st century holds for the environment and human race.
Environmental Studies	Kundu, Manasendu	112		World Population, Policies, and the Environment	Course Includes Sustainability	Env. Soc, Econ	U	Examines the history of global human population growth, with a specific emphasis on demographic dynamics within developing nations (or the Global South). Will consider the social, economic, and environmental consequences of and the relationships between population trends and human migration. Will analyze governmental policies and how they influence population growth and their myriad and often unintended consequences. Students will be expected to demonstrate familiarity with key theories and methods by scholars like Thomas Malthus, Karl Marx, and Ester Bose	This course examines the history of global population growth and its effects on environments and economies around the world. It discusses governmental policies, education, and female employment as means of population control.
Environmental Studies	Kundu, Manasendu	132		Human Behavior and Global Environment	Sustainability Course	Env. Soc, Econ	U	Study of global environmental impacts of major human technological innovations, including the use of fire, development of agriculture, and the process of industrialization. How did Western and non-Western societies view and treat nature? Evaluation of prospects for altering human behavior to encourage sustainable development is included	This course focuses on humanity's relation, attitude, and behavior to the environment and its related crises. Topics include development of agriculture, industrialization, globalization, and consumerism. The course evaluates changing human behavior to promote sustainable development.
Environmental Studies	Lewin, Bridget	127A		Foundations of Environmental Education	Course Includes Sustainability	Env. Soc	U	Introduction to the underlying principles to be an environmental educator. Includes understanding the fundamental characteristics and goals of Environmental Education (EE), evolution of the field, instructional methodologies, and how to design, implement, and assess effective EE instruction in a variety of disciplines, including: nature connection, environmental justice, outdoor education, and primary, secondary, and higher education. Course includes presentations by local EE professionals and field trips.	Within this course, the students engage in learning the pedagogy for environmental education and sustainable development education, with the intention of completing a practicum in which they teach a unit of instruction to local students and varied audiences.
Environmental Studies	Lewin, Bridget	127B		Advanced Environmental Education	Sustainability Course	Env. Soc	U	Students learn advanced teaching skills, mentoring strategies, and methods of assessing Environmental Education (EE). Course provides the opportunity to implement and evaluate one's own EE project in a self-selected local organization, school, agency, or other educational setting. Provides real-world teaching experience with support from EE professionals. Students create a portfolio to showcase their community environmentally educational placement.	The course provides the opportunity to learn advanced teaching skills within Environmental Education. Students work with the community and gain hands-on sustainability-related teaching experience.
Environmental Studies	Lewin, Roland	174		Environmental Policy And Economics	Sustainability Course	Env, Econ	U	Introductory course on economic analysis of environmental policy. Topics include market failure, the evaluation of environmental policy, energy sources, population growth, sustainable development, the optimal levels of biodiversity and pollution, and dispute resolution.	This course examines how our market-based system has played a role in environmental degradation. Economic analysis tools are discussed in regard to designing incentives to merge the goals of economic growth and environmental health. Emphasis is placed on topics such as environmental quality, market failure, role of the government, evaluation of environmental policy, and sustainable development.
Environmental Studies	Kryder, LeeAnne	160		American Environmental Literature	Course Includes Sustainability	Env, Soc	U	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.	This course involves the analysis of classic texts from American environmental literature authors such as Henry David Thoreau, Aldo Leopold, Rachel Carson, and Edward Abbey. Students explore human-environmental connections and discuss the environmental perceptions and attitudes in American cultural history.
Environmental Studies	Berry, Lisa	25		Quantitative Thinking in Environmental Studies	Course Includes Sustainability	Env	U	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.	See course description
Environmental Studies	Alario, Celia	161		Environmental Communications: Contemporary Strategies and Tactics	Course Includes Sustainability	Env. Soc	U	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.
Environmental Studies	Alario, Celia	190		Colloquium On Current Topics In Environmental Studies	Course Includes Sustainability	Env	U	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.
Environmental Studies	Benjamin, Rick	193WL	Comparative Literature 186WL	Wild Literature in the Urban Landscape	Course Includes Sustainability	Env, Soc	U	One-time course taught by lecturers or guest professors on a special area of interest in environmental studies. Specific course titles and topics to be announced by the Environmental Studies program each quarter.	Combines study of ecological writing with service to schools and community centers in Santa Barbara. Through exploration of both local and global ecological challenges, students will conduct weekly workshops combining literature and ecology in order to better understand local issues like drought, erosion and land-use, with an emphasis on eco-industrial histories. The curriculum will serve as an existing approach to environmental education through the lens of literary arts, providing an initial foundation for lesson development elsewhere.
Environmental Studies	Gee, Quentin	193CA		Special Topics	Course Includes Sustainability	Env, Soc, Econ	U	N/A	Students in this course examine several scientific, social, economic, and political aspects associated with California and climate change.

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Environmental Studies	Keller, Ed	2		Introduction to Environmental Science	Sustainability Course	Env, Soc	U	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.
Environmental Studies	Keller, Ed	113		Engineering and Environmental Geology	Sustainability Course	Env	U	Application of geologic and environmental principles to civil engineering problems. Includes: rock and soil mechanics; landslides; hydrology; earthquakes; and professional practice.	See course description
Environmental Studies	Keller, Ed	144		Form, Process And Human Use Of Rivers	Sustainability Course	Env	U	Basic understanding of fluvial (river) hydrology. In-depth evaluation of channel form and fluvial processes and impact of human use of rivers.	This course involves human use of rivers and includes discussion of river restoration and river sustainability.
Environmental Studies	Keller, Ed	134		Coastal process and Management	Course Includes Sustainability	Env	U	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.	See course description
Environmental Studies	Brown, Michael	118		Industrial Ecology: Designing for the Environment	Sustainability Course	Env, Econ	U	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 is an introduction to the field of industrial ecology and the practical application of sustainability principles to organizations and communities. The course explores theories of sustainability, resource and material flows, methodologies used in the field and the relationship between industrial ecology, business and innovation.
Environmental Studies	Brown, Michael	193CE		Environmental and Social Perspectives on the Circular Economy	Sustainability Course	Env, Econ	U	One-time course taught by lecturers or guest professors on a special area of interest in environmental studies. Specific course titles and topics to be announced by the Environmental Studies program each quarter.	"Circular Economy" is a combined seminar/lecture that is an introduction to the concept of circular economy and the practical application of sustainability principles to organizations, communities and consumers. The course explores theories of sustainability, resource and material flows, examples of existing circular economies in society, current developments in the field, factors that limit the development of circular systems and the relationship between industrial ecology, business, policy and innovation.
Environmental Studies	Feldwinn, Darby	136		Green Works- Exploring Technology and the Search for Sustainability	Sustainability Course	Env, Soc	U	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.
Environmental Studies	Cremers, Matthea	185		Human Environmental Rights	Course Includes Sustainability	Env, Soc	U	Introduction to human environmental rights. Examines the expansion of human rights to include human environmental rights, abuses of human environmental rights, associated social conflicts, and emergent social movements including environmental justice and transnational advocacy networks.	This course provides an overview of the equity and justice dimensions of climate change from the perspectives of environmental justice and human environmental rights. Although many aspects of climate change have attracted considerable scholarly, policy, and public attention, climate justice and equity have received far less consideration. The course includes an introduction to environmental justice, human rights and the environment, and vulnerability and adaptation to climate change
Environmental Studies	Cremers, Matthea	184		Gender and the Environment	Course Includes Sustainability	Env, Soc	U	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 ways men and women may relate differently to their environment. Specific issues include the nature/culture/female/male debate in anthropology, environmental activism in both the developed and the developing world, ecofeminism, ways in which development projects can take gender-specific relationships with the environment into account, and notions of masculinity and femininity as they relate to nature and the environment.
Environmental Studies	Fore, Matthew	172		Waste Management: Product Stewardship, Recycling and Renewable Energy	Sustainability Course	Env, Econ	U	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.
Environmental Studies	Maldonado, Julie	130B		Global Tourism and Environmental Conservation	Sustainability Course	Env, Soc, Econ	U	Focus on the contradictions between international tourism as an economic development strategy and environmental conservation efforts, especially in an era of climate change. One major objective is to help students make more informed decisions about their own tourist experiences.	This course focuses on assessing the sustainability of global tourism and the contradictions between global tourism and environmental conservation from an interdisciplinary perspective. Tourism was once viewed as an answer to improved living conditions for local residents and economic development for developing countries. However, scholarly, scientific, and policy evaluations have demonstrated the diverse and varied positive and negative consequences of tourism. This course reviews this evidence and explores the emergence of alternative tourism approaches, such as ecotourism and advocacy tourism, as potential solutions to previous forms of "mass tourism."
Feminist Studies	Oaks, Lauri	130		Perspectives on Women's Health	Course Includes Sustainability	Env, Soc	U	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.
Film and Media Studies	Walker, Janet	252CJ		Media and Environment: Climate Justice	Sustainability Course	Env, Econ	G	Close examination of a topic in cultural studies.	This course is designed to realize, study, and act in relation to media's profound embeddedness in local and global media ecologies of extraction, production, distribution, consumption, inhabitation, representation, and wastage. Topics to be addressed through the critical literature of what is necessarily an interdisciplinary endeavor include: sustainable media practices; "digital earth" mapping; the biopolitical and the geologic, social ecologies of disaster and disadvantaged communities; critical and participatory GIS; and green media activism.
Film and Media Studies	Hutton, Richard; Hessler, Jennifer	182		Introduction to Environmental Media	Course Includes Sustainability	Env, Soc	U	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 discusses the context surrounding environmental media, including societal, political, and cultural topics that can influence a documentary. Students collaborate to write and produce an environmental documentary on a topic of their choosing.

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Film and Media Studies	Walker, Janet	183		Film and Media of the Natural and Human Environment	Sustainability Course	Env. Soc	U	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.	The course is dedicated to the study of the fictional and nonfictional films through which people represent and comprehend the environment, and to ecological criticism as an equally creative and expansive endeavor. In addition to studying films, we will also examine other ways that media and environment shape, influence, and inhabit one another. With a focus on media in the environment (e-waste, cellular towers, hydrophones) and media infrastructures, students will probe the sustainability of the media people build, exchange, and live, and chart emerging alternatives for the future.
Film and Media Studies	Jenkins, Chris	118		Sponsored Campus Production (GreenScreen)	Course Includes Sustainability	Env. Soc	U	An interface with campus "clients" who provide the budget and goals for crew projects.	This course is a hands-on, project-based environmental media production program where students work in teams to leverage their collective production skills and environmental knowledge to create a short film. The course seeks to increase student awareness about the environment, as well as expand the way that such issues are communicated. Many of the films created in this class have been selected by the Santa Barbara International Film Festival, among others.
Geography	Lopez-Carr, David	255		Geography of Latin America	Course Includes Sustainability	Env. Soc	G	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.
Geography	Roberts, Dar	202A		Remote Sensing and Environmental Optics	Course Includes Sustainability	Env. Soc	G	Principles of radiation emission; radiative transfer equation and some solution methods; surface interactions; instrumentation; applications to remote sensing and energy budgets in atmosphere, ocean, and other media.	This course examines technology or processes which address environmental issues, such as heat flow in building and solar panel production.
Geography	Michaelson, Joel	280		Seminar on Climate Change	Sustainability Course	Env	G	A series of lectures and seminars on diverse research topics on climate change.	See course description
Geography	Loaiciga, Hugo	208		Water Resource Systems Analysis	Course Includes Sustainability	Env, Econ, Soc	G	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 examines the interactions between hydrologic systems, humans, and the environment. Students learn to analyze water resource processes to conceptualize and derive management strategies. Topics include climate change and the economics of water resources management.
Geography	Goulias, Kostas	211A		Transportation Planning & Modeling	Course Includes Sustainability	Env, Soc	G	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.	The course teaches on the history and recent developments in transportation planning problems and quantitative methods. Topics include travel, energy, and emissions.
Geography	Goulias, Kostas	211C		Activity and Travel Behavior Analysis	Course Includes Sustainability	Env, Soc	G	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.	This seminar uses reports to study travel behavior analysis. Topics in the course include social networks, land use, car ownership, and electric/hybrid technology.
Geography	Pardo-Rodriguez, Lumari	145		Society and Hazards	Sustainability Course	Env, Soc	U	Presents geographic approaches to the study of environmental hazards, exploring the evolution of theory and key concepts, causal processes, trends and patterns in the spatial distribution of vulnerability and hazard impacts, and the challenge of management and adaptation.	This course introduces students to different approaches to the study of environmental hazards and will apply some of the approaches they learned to disasters that have happened or are in the making. Students learn how disasters are the product of multiple and interacting forces: biophysical processes are only part of the equation. Exploration of how livelihoods, places and institutions come together to create hazardous situations and disastrous outcomes. Trends in hazards and losses will be looked upon, and the distribution of vulnerability and hazard impacts within and across populations and places. Problems and opportunities will be addressed for reducing vulnerability through advance planning, hazard prediction, technological adjustments, economic development, and understanding human cognition and behavioral patterns.
Geography	Cassels, Susie	152		Health Geography	Sustainability Course	Env, Soc	U	Geographic approaches to health, disease, and well-being, with an emphasis on health disparities and inequalities. Topics include social determinants of health, migration, the natural and built environment, vaccines, development, and globalization and health.	Case studies are used to understand how people interact with each other and their environment, and how these interactions lead to differential exposures and thus differences in health incomes. Students will learn which populations or individuals get what diseases, where, when, and why by understanding social and environmental factors.
Geography	Roberts, Dar	3B		Land, Water and Life	Course Includes Sustainability	Env	U	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.
Geography	Dickey, Tommy	113		The Alaskan and Arctic Environments Under Siege	Sustainability Course	Env, Soc	U	The purpose of this class is to learn about the geography of Alaska and the Arctic, including its history, climatology, oceanography, ecology, economics, and cultures. A variety of Alaskan and Arctic issues will be addressed, including indigenous people, climate change effects, natural resources, pollution, and political and military significance.	This seminar course looks at the Alaska and Arctic regions through lectures by guest speakers. Themes that are examined include the flora and fauna of the region, the future resources and world economy, ecotourism, and overall human interaction and impacts on the ecology of the Alaska and Arctic regions.
Geography	Siegel, David	3A		Oceans and Atmosphere	Sustainability Course	Env	U	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. 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.
Geography	Loaiciga, Hugo	116		Groundwater Hydrology	Course Includes Sustainability	Env, Soc	U	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 aims to prepare students in analyzing groundwater flow properties, taking into account aquifer properties, basic hydraulic factors, geologic controls, and their temporal and spatial interactions. In mastering this knowledge, students will be able to better assess water cycles with their interactions to the urban environment.

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Geography	McFadden, Joe	130		The Urban Environment	Course Includes Sustainability	Env	U	Environment and climate of cities, suburbs, and other settlements, focusing on the built environment, soils, water, solar radiation, atmosphere, vegetation, and human thermal comfort. Students produce field reports on a range of sites along an urban to exurban gradient.	This course focuses on the built environment and climate of cities, suburbs, and other settlements. Soils, water, solar radiation, and human thermal comfort are examples of aspects of the built environment that are examined in these settlement areas.
Geography	Roberts, Dar	102		Introduction to Environmental Optics in Physical Geography	Course Includes Sustainability	Env, Soc	U	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.
Geography	Sweeney, Stuart	20		Geography of Surfing	Course Includes Sustainability	Env, Soc	U	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. The goal of the course is to introduce students to geographic approaches to understanding human cultural patterns, physical processes, and their dynamic interactions.
Geography	Montello, Dan	153C		Environmental Perception and Cognition	Course Includes Sustainability	Env, Soc	U	Research and theory on human perception and cognition of environments. Topics include spatial perception, spatial learning, knowledge structures, navigation and wayfinding, language and spatial cognition, map use, the spatial skills of special populations, and other issues.	This course deals with understanding our cognitive perception of the environment and how students understand hazardous properties of the environment. It also teaches students how architecture, planning, linguistics, and anthropology have intersectionality used an environmental perspective to successful progress with any development of study or industry.
Geography	Michaelsen, Joel	119		Climatic Change and Its Consequences	Sustainability Course	Env	U	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.
Geography	Niblett, Timothy	101		Transportation Futures	Sustainability Course	Env	U	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.	This course looks at explicit environmental, social, and economic problems relating to current and future transportation trends.
Geography	King, Jennifer	134		Earth System Science	Course Includes Sustainability	Env, Soc	U	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.	This course examines the major components of the Earth system and their interactions and investigates the ways in which the Earth system is changing in response to human activities. Radiation balance, atmosphere, hydrosphere, ecosystem dynamics, soils, and biogeochemical cycles are discussed.
Geography	King, Jennifer	142		Global Biogeochemical Cycles	Course Includes Sustainability	Env, Soc	U	Examines processes driving element and energy cycling through the Earth system. Aim is to understand global patterns of element fluxes, dynamic nature of element/energy cycles, and prediction of biogeochemical cycling with changes in climate and human impacts	This course discusses the science and potential applications of biogeochemistry. It also analyzes how humans have impacted biogeochemical cycles.
Geography	Jones, Charles	148		California	Sustainability Course	Env, Econ, Soc	U	The unique landscapes of California and the physical, cultural, and biotic processes which have produced them.	This course examines the forces that shape California's landscape and how humans interact with the environment. It discusses the changing climate and its impact on human livelihood, the economy, and California's natural resources.
Geography	Knapp, Denise	149	Environmental Studies 111	The California Channel Islands	Course Includes Sustainability	Env, Soc	U	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.	This course examines connections between the climate, geology, plants, animals, and humans. It discusses how humans have threatened ecosystems of the Channel Islands, as well as how we are working to restore and manage them.
Geography	Loaiciga, Hugo	112		Environmental Hydrology	Course Includes Sustainability	Env	U	Analysis of the water cycle with emphasis on land-atmosphere interactions, precipitation-runoff, flood, snow melt, and infiltration processes.	This course is an introduction to the principles of hydrologic science that are essential to for water resources management in the urban, environmental, and agricultural domains
Geography	Loaiciga, Hugo	162	Environmental Studies 162	Water Quality	Course Includes Sustainability	Env	U	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 involves a comprehensive review of the physical, chemical, and biological characteristics of surface water and groundwaters. The treatment and management of chemically and biologically polluted waters is discussed.
Geography	Banks, Jacqueline	141A		Population Geography	Sustainability Course	Env, Econ	U	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.	The goal of this course is for students to understand population dynamics, how populations change over time and space, current and past trends etc., so that they can think critically about population trajectories and their implications. The consequences and covariates of population change affect the economy, the environment, cultures and societies. Thus, sustainability is a recurring theme within these focuses.
Geography	Bell, Thomas	158		Introduction to Marine Resources	Course Includes Sustainability	Env, Econ	U	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.
Geography	Bernstein, Jennifer	109		Economic Geography	Course Includes Sustainability	Env, Soc, Econ	U	Introduction to the study of spatial economic theories with applications at the urban, regional, and global scales. Topics include settlement system dynamics and regional development, land economics and land use policies, and regional inequality and poverty.	See course description
Geography	Ervin, Daniel	5		People, Place and Environment	Course Includes Sustainability	Env, Soc, Econ	U	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.
Geography	Gautier, Catherine	8		Living with Global Warming	Sustainability Course	Env	U	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.

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Gevirtz Graduate School of Education; Department of Education	Johnson, Susan	129		CalTeach, Elementary Science Education	Course Includes Sustainability	Env	U	Introduction to learning and teaching science in grades K-8. The course requires attending a weekly on-campus seminar and participating in 15 hours of field placement in a local school.	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.
Gevirtz Graduate School of Education; Department of Education	Johnson, Susan	131		CalTeach, Secondary Science Education	Course Includes Sustainability	Env	U	Introduction to learning and teaching science in grade 7-12. The course requires attending a weekly on-campus seminar and participating in 15 hours of field placement in a local school.	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.
Gevirtz Graduate School of Education; Department of Education	Lubach, Donald	118		The Research University and The Transfer Student Experience	Course Includes Sustainability	Env	U	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. It offers transfer students the ability to analyze social interactions in the campus concerning the environment.
Global Peace and Security Program	Nederveen Pieterse, Jan	221		Political Economy, Sustainable Development, and the Environment	Sustainability Course	Env, Soc, Econ	G	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.	This course looks at sustainable development, including the environmental, social, economic aspects.
Global and International Studies	Clemencon, Raymond	237		Global Organizations and Civil Society	Course Includes Sustainability	Env, Soc	G	A basic understanding of the development of global organizations, from multinational corporations to global civil society. The course covers the history of governmental organizations and the changing features of NGOs.	The objective of the course is to convey both a theoretical but also practical real world understanding of the role played by international organizations on a range of global challenges. Topics of the course include environmental agreements, sustainable development, and climate change.
Global and International Studies	Barandiarán, Javiera	173		Energy in Global Societies	Sustainability Course	Env, Soc	U	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.
Global and International Studies	Mehta, Aashish	130		Global Economy and Development	Sustainability Course	Env, Soc, Econ	U	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), including climate change and the adaptation of businesses and societies when faced with these issues. Developing and studying economic theories to tackle environmental challenges is also a part of the course's effort to debate and challenge conversations around environmental protection, economic growth, and a multitude of other environmentally socio-economic issues.
Global and International Studies	McCarty, Philip	1		Global History, Culture and Ideology	Course Includes Sustainability	Soc	U	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.
Global and International Studies	Juergensmeyer, Mark	124	Sociology 124	Global Conflict	Course Includes Sustainability	Soc, Env	U	Exploration of some of the major points of tension in global society since the end of the cold war, with emphasis on the rise of religious nationalism and ethnic strife in the Middle East, South and Central Asia, and Russia	This course assesses policy analyses and conflict resolution approaches with reference to real life situations. It explores case studies of conflicts on a global scale, with particular emphasis on those in the Middle East. The course also discusses global warming and other environmental issues, which have produced and exacerbated certain conflicts.
Global and International Studies	Appelbaum, Richard	2		Global Socioeconomic and Political Processes	Course Includes Sustainability	Env, Soc, Econ	U	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, workers' rights in the global economy, as well as alternative forms of sustainable development."
Global and International Studies	Bhavnani, Sapna	180A	Sociology 156A	Introduction to Women, Culture, and Development	Course Includes Sustainability	Soc	U	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.	Sustainable development is addressed in one unit of the course.
Global and International Studies	Clemencon, Raymond	161		International Environmental Politics and Policy	Sustainability Course	Env, Soc	U	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 course gives an overview of global environmental problems and the international response to them. The evolution of international agreements, negotiations and institutions related to climate change, loss of biodiversity, depletion of the ozone layer and sustainable development will be central topics. Positions of key countries and non-governmental actors will be analyzed in light of political constraints, economic interests, social and technological change and globalization trends.
History	Alagona, Peter	295		Workshop in Environmental History	Course Includes Sustainability	Env, Soc	G	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.
History	Alagona, Peter	208A		Research Seminar in Environmental History	Course Includes Sustainability	Env, Soc, Econ	G	A two-quarter graduate research seminar in environmental history.	Students learn about environmental history and how it pertains to environmental studies and environmental policy.
History	Alagona, Peter	208B		Research Seminar in Environmental History	Course Includes Sustainability	Env, Soc, Econ	G	A two-quarter graduate research seminar in environmental history.	Students learn about environmental history and how it pertains to environmental studies and environmental policy.
History	O'Connor, Alice	178A		American Urban History	Course Includes Sustainability	Env, Soc, Econ	U	A study of the political, economic, social, and intellectual impact of the city upon American history, and the impact of history upon the growth of American urbanization.	A significant portion of the course deals with environmental dimensions of urban history. Topics covered include relationships to the environment, efforts to control or remake the "limits" of nature. In the expansion of American urbanization, environmental issues arose and are adeptly covered through the lessons of this course.
History	O'Connor, Alice	178B		American Urban History	Course Includes Sustainability	Env, Soc, Econ	U	A study of the political, economic, social, and intellectual impact of the city upon American history, and the impact of history upon the growth of American urbanization.	A significant portion of the course deals with environmental dimensions of urban history. Topics covered include relationships to the environment, efforts to control or remake the "limits" of nature. In the expansion of American urbanization, environmental issues arose and are adeptly covered through the lessons of this course. This course concentrates (but is not excluded by) the history of Los Angeles and how natural ecology is a powerful reminder of how efforts to re-shape—or ignore—the demands of the physical environment can have long-lasting and unpredictable consequences.

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History	Rappaport, Erika	193F		Food in World History	Course Includes Sustainability	Env. Soc, Econ	U	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.
History	Martin, Jennifer	108O	Environmental Studies 108O	History of the Oceans	Course Includes Sustainability	Env. Soc	U	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 conservation, trade and energy, as well as discussing social justice involving the ocean. Further, this course examines human perspectives on the ocean and how those perspectives affect our interaction with the life and activity in the water.
History	Alagona, Peter	108W	Environmental Studies 108W	Wildlife in America	Course Includes Sustainability	Env. Soc	U	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.
History	Farmer, Sharon	117E		Society and Nature in the Middle Ages	Course Includes Sustainability	Env. Soc	U	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.
History	Furner, Mary	165		America in the Gilded Age, 1876 to 1900	Course Includes Sustainability	Env. Soc	U	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. They also explore how obstacles to effective regulation of labor standards by court decisions and limitations posed by the federal system of government delayed implementation of social insurance provision for the elderly, disabled, and involuntarily jobless.
History	Furner, Mary	166 A		US Progressive Era (Official Course Title: United States in the Twentieth Century)	Course Includes Sustainability	Env. Soc, Econ	U	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. Students learn about efforts to improve ineffective urban sanitation and to implement public provision or regulation of basic infrastructure components such as provision of water, gas, and light and mass transportation.
History	Furner, Mary	174 B		Wealth and Poverty in the US, 1865-1950 (Official Course Title: Wealth and Poverty in America)	Course Includes Sustainability	Env. Soc, Econ	U	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 and other new manufacturing and refining methods enabled the rise of monopoly and fueled both union growth and anti-union business practices.
History of Art and Architecture	Welter, Volker	136O	Environmental Studies 136O	Sustainable Architecture: History and Aesthetics	Sustainability Course	Env. Soc	U	Course examines history and theory of sustainable and "green" architecture since the early twentieth century. Emphasis is placed on the critical analysis of a distinct "green" architectural aesthetic; the scope is global.	The course examines both the history and theory of modern sustainable architecture as it developed from approximately the early twentieth century onwards. Emphasis is placed on the critical analysis of changing historical approaches to environmentally sound building practices and on attempts to express these practices in a distinct 'green' architectural aesthetic.
History of Art and Architecture	Chattopadhyay, Swati	136I		The City in History	Course Includes Sustainability	Env. Soc, Econ	U	An historical introduction to the ideas and forms of cities with emphasis on modern urbanism. Examination of social theory to understand the role of industrial capitalism and colonialism in shaping the culture of modern cities, the relationship between the city and the country, the phenomena of class, race and ethnic separation.	The objective of this course is to understand urban processes involving people, commerce, laws and institutions, aesthetic preferences, political and economic motives that have shaped the social life and form of cities, including their location and boundaries, street and neighborhood patterns, infrastructure and public space. This course includes lectures on industrial cities, modern planning, suburbia, and the relation between city and country under capitalism and contemporary globalization.
History of Art and Architecture	White, Jeremy	136Q		Deviant Domesticities	Course Includes Sustainability	Env. Econ	U	Suburban landscape, single-family detached house and the nuclear family, is both an architectural and a social pattern. Despite its ubiquity in North America, it now poses an acute challenge to ecological and economic sustainability.	Suburban landscape, single-family detached house and the nuclear family, is both an architectural and a social pattern. Despite its ubiquity in North America, it now poses an acute challenge to ecological and economic sustainability.
History of Art and Architecture	Sturman, Peter	134C		Chinese Painting I	Course Includes Sustainability	Env. Soc	U	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.
History of Art and Architecture	Sturman, Peter	134D		Art and Modern China	Course Includes Sustainability	Env. Soc	U	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.
History of Art and Architecture	Sturman, Peter	134E		The Art of the Chinese Landscape	Course Includes Sustainability	Env. Soc	U	Chinese approaches to landscape as subject matter in art, with a focus on painting and garden architecture. The course begins with the immortality cult in the Han Dynasty (206 B.C.-A.D.221) and ends with contemporary artists of the twentieth century.	Cultural relationship between humans and their natural environment is a theme that is explored.
Interdisciplinary Studies	Cornejo Donoso, Jorge	91		Interdisciplinary Issues in Aquatic Sciences and Policy	Sustainability Course	Env. Econ	U	A seminar-style course examining biological, environmental, political, and economic issues in aquatic topics, including oceanography, marine pharmacology and biotechnology, coastal geology and coastal processes, fisheries, and ocean policy.	This class covers sustainable practices and policies in oceanography.
Interdisciplinary Studies	de Vries, Mattanjah	94QH		Global Warming, a Hoax or a Disaster?	Sustainability Course	Env. Soc	U	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.

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Interdisciplinary Studies	Christoffersen, Rolf	94BZ		Genetic Modification of Food Crops	Course Includes Sustainability	Env	U	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.
Interdisciplinary Studies	Clark, Jordan	84JC		Honors Seminar on Drinking Water	Course Includes Sustainability	Env	U	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.
Interdisciplinary Studies	Matthys, Eric	94OV		Introduction to Sustainability	Sustainability Course	Env, Soc	U	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.
Interdisciplinary Studies	Portuges, Paul	185EM		Environmental Media	Sustainability Course	Env	U	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.
Interdisciplinary Studies	Poole, Stephen	94ES		Exciting Developments in Biology Research	Course Includes Sustainability	Env	U	Selected topics of interest to students pursuing various degrees in the College of Letters and Science. Small group discussions which emphasize active class participation. Topics will vary each quarter.	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.
Interdisciplinary Studies	Krintz, Chandra	94RY		Freshman Seminar: Working Across Disciplines for More Effective Food Production	Sustainability Course	Env, Soc	U	Selected topics of interest to students pursuing various degrees in the College of Letters and Science. Small group discussions which emphasize active class participation. Topics will vary each quarter.	This course examines world food production as it relates to ecological sustainability. Research groups investigate advances in computer science and geography that can be utilized to address the problem of sustainable food security and food safety.
Latin American and Iberian Studies	Figuroa Sanchez, Teresa	101		Interdisciplinary Approaches to the History and Societies of Latin America and Iberia	Course Includes Sustainability	Env, Soc	U	Issues central to the study of Latin America and Iberia across the social sciences and history. Topics include nationalism, revolution, politics and the state, economic development and international relations, labor, popular culture, race, gender, religion, migration, environment, imperialism, and colonialism.	See course description.
Linguistics	Rightmire, Randall	12		University Writing for Multilingual Students	Sustainability Course	Env	U	Students analyze academic discourse, develop rhetorical strategies for exposition and argument, practice examination writing, and write and revise papers.	Selected readings provided by the instructor are read by the students, where students are expected to think critically, and analyze papers. Selected readings have a general theme regarding climate change, climate change mitigation, and sociological issues affecting climate change.
Literature College of Creative Studies	Portuges, Paul	113		Subjects and Materials	Sustainability Course	Env, Soc	U	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.
Mechanical Engineering	Matthys, Eric	112		Energy Conversion	Sustainability Course	Env, Soc	U	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.
Molecular, Cellular and Developmental Biology	Low, Seng	26		Contemporary Nutrition	Course Includes Sustainability	Env, Soc	U	Presents the scientific basis for human nutrition including dietary nutrients and requirements, energy balance in health and disease, and needs of various life stages. Food safety, preservation, and undernutrition throughout the world is discussed.	This course offers students the ability to understand food safety and preservation and how it affects people around the world. Furthermore, it delves into social wellbeing and environmental health as a means of sustaining a nutritious diet.
Religious Studies	Campo, Magda; Campo, Juan	185		Religion, Food, and Culture of the Middle East	Course Includes Sustainability	Env, Soc	U	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 explores the culinary cultures of the Middle East and Mediterranean region by examining religion, society, and the environment in these areas. The topics of alimentary diversity, sustainability, urbanization, globalization, and food security are discussed as they relate to "foodscaapes." Case studies in Gaza and Iraq are focused on because of the major issues affecting the countries' food security and sustainability.
Religious Studies	Talamantez, Ines	14		Introduction to Native American Religious Traditions and Philosophies	Course Includes Sustainability	Env, Soc	U	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.

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Religious Studies	Jarrett, Gregory	156EE	Interdisciplinary Studies 156EE	Environmental Ethics	Sustainability Course	Env. Soc. Econ	U	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 discusses our moral, social, and political values in regard to the treatment of the environment and its inhabitants. Topics include pollution, economic values, environmental justice, animal welfare, biodiversity, the food system, climate change and related issues. The course is associated with the Walter H. Capps Center Forum on Environmental Ethics, in which a distinguished speaker is invited to present his or her work on the subject, to help unite the university in a conversation about some important topic. Professor Robert Bullard, often described as the "father of environmental justice," is this year's speaker. Students are highly encouraged to attend the event.
Sociology	Nederveen Pieterse, Jan	185DG		Theories of Globalization and Development	Course Includes Sustainability	Env. Soc. Econ	U	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.
Sociology	Falasca-Zamponi, Simonetta	118CW		Consumption, Waste, and the Environment	Sustainability Course	Env. Soc. Econ	U	Examines the link between consumption, waste, and the environment. Integrates environmental concerns with larger cultural questions about the role that consumption, as a way of life, has come to occupy in our contemporary societies.	This course focuses on waste as a consequence of market-driven economic development. It particularly discusses the direct relationship of waste to consumption patterns and life choices.
Sociology	Foran, John	130SD		The World in 2050: Sustainable Development and Its Alternatives	Sustainability Course	Env. Soc. Econ	U	Starting with the current political, economic, cultural, and climate crises of Earth and humanity, we consider alternatives to the present system - sustainable development, regrowth, transition towns, resilience - and our roles in building a far better world by 2050.	See course description.
Sociology	Gray, Summer	126		Urban Society	Course Includes Sustainability	Env. Soc. Econ	U	Problems of the city, (e.g., congestion, homelessness, violence) are examined in light of larger economic and social forces which structure urban life. Through use of slides depicting urban settings, causes and consequences of different ways urban settlements have been organized are considered.	See course description
Sociology	Goalwin, Greg	130ST		Special Topics in Development and Globalization	Course Includes Sustainability	Env. Soc	U	Covers topics in globalization and development, to be chosen by the instructor, including such issues as, social movements, race/ethnicity/nation, culture, and gender and sexuality, among others.	The goal of this course is to clarify what globalization is and how it is affecting societies around the world. Course begins by taking a look at some of the fundamental theories of globalization, examining how sociologists have sought to define and explain this important process. Students will then turn to the various dimensions of globalization, considering the economic, political, and cultural causes and effects of global processes in turn. Topics include climate injustice and sustainable development, but vary year due to the fact material is based on instructor decision.
Sociology	King, Zachary	130SG		Sociology of Globalization	Course Includes Sustainability	Env. Soc	U	Introduction to the sociological study of globalization. Survey of principal theories and debates in globalization studies with a focus on economic, political, and cultural transnational processes, gender/race/class and globalization, transnational social movements, and local-global linkages.	Students critically analyze what globalization means today and the ways that this phenomenon is shaping our world. Topics include, but are not limited to, inequalities, global poverty, and climate change.
Sociology	Clemencon, Raymond	134G		Green Movements and Green Parties	Sustainability Course	Env. Soc	U	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.	The course considers the evolution and influence of the environmental movement in a comparative context. How have environmental organizations and green parties influenced societal response and policy formulation on energy, climate change, nature conservation, nuclear power, GMOs, and sustainable development in general in different developed and developing countries, with a focus on the U.S. and Europe? What lessons can be learned from past social movement activism for solving today's critical environmental problems.
Sociology	Clemencon, Raymond	105E		Environmental Sociology	Sustainability Course	Env. Soc	U	Traces the history of environmentalism and applies social science theories, concepts, and methods to analyze critical contemporary environmental issues and societal responses to them.	The course traces the history of environmentalism and society-environment relationship before the background of a rapidly changing natural world and now manifest climate change. Key social science concepts, theories and analytical methods will be applied to the understanding of critical contemporary environmental issues and responses to them with an emphasis on learning how institutions and social and political processes determine policy outcomes and long-term trajectories.
Sociology	Clemencon, Raymond	172		International Organizations and Global Governance	Course Includes Sustainability	Env	U	Analyzes the evolution of and role played by international, governmental, and non-governmental organizations in global governance, including the United Nations and its specialized agencies, World Bank, IMF, WTO, European Commission and global non-governmental organizations and transnational corporations.	The objective of the course is to convey both a theoretical but also practical real world understanding of the evolution of international organizations and of the functional and normative role they are playing in global governance. Topics include international environmental organizations such as the Green Climate Fund, as well as a look at Climate and Biodiversity Conventions.
Sociology	Foran, John	134EC	Environmental Studies 134EC	Earth in Crisis	Sustainability Course	Env. Soc	U	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.
Sociology	Foran, John	134GJ		Global Justice Movements	Sustainability Course	Env. Soc	U	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.
Sociology	Foran, John	134CJ	Environmental Studies 134 CJ	Climate Justice	Sustainability Course	Env. Soc	U	Overview of the climate change problem and exploration of the meanings of the term "climate justice" as used by scholars and social movement activists to imagine and create a sustainable, equitable, democratic world for future generations.	The class explores climate justice and ways to move the world towards the most progressive possible global climate treaty, contributing to social movement participation in creating that treaty, and through both channels helping to create a low-carbon, sustainable, equitable, and deeply democratic future.
Sociology	Foran, John	134RC		Radical Social Change	Course Includes Sustainability	Env. Soc	U	Covers significant cases of radical social change, such as the revolutions of Cuba, Chile, or Chiapas, the radical reforms in Kerala, India, the global justice movement, or any of the many others of the contemporary world.	This course addresses the global climate justice movement which stands against global leaders for a fair treaty based on science and justice. The course also addresses other global justice movements on inter-related issues related to militarism, climate change, labor struggles, feminism and capitalism.

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Writing	Propen, Amy	105S		Writing About Sustainability	Sustainability Course	Env. Soc	U	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.	This is an upper-division writing course that focuses on the analysis and practice of writing and communication about sustainability in diverse interdisciplinary contexts. Students will consider how ideas about sustainability shape and are shaped by various societal forces, and how issues of sustainability are reflected through practices of writing and communication across audiences and cultures. Students will work both individually and in small groups to research, discuss, and write about concepts related to sustainability, with a focus on how writing and communication help to shape and perpetuate ideas about sustainability.
Writing	Kryder, LeeAnne	2LK		Academic Writing with Link to ES 1	Course Includes Sustainability	Env. Soc	U	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 course strengthens students' reading, critical thinking, and writing skills and is linked with the course Environmental Studies 1. Discussion topics include climate change and sustainability. Students keep a nature journal throughout the course and share their connection to place in final presentations.
Writing	Kryder, LeeAnne	107EP		Writing for Environmental Professions	Course Includes Sustainability	Env. Soc	U	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 prepares students for a career within the environmental field through the development of professional and team skills. Students write a resume, give oral presentations, and research/write a project proposal on an environmental issue. Students research sustainability and apply its theories to practical situations.

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Anthropology	15	Geography	29
Art	1	Gevirtz Graduate School of Education; Department of Education	3
Black Studies	3	Global Peace and Security Program	1
Chemistry and Biochemistry	1	Global and International Studies	8
Chicano Studies	1	History	12
Comparative Literature	1	History of Art and Architecture	6
Earth Science	10	Interdisciplinary Studies	8
East Asian Culture Studies	4	Latin American and Iberian Studies	1
Ecology, Evolution, and Marine Biology	21	Linguistics	1
Economics	5	Literature College of Creative Studies	1
English	1	Mechanical Engineering	1
Environmental Science and Management	65	Molecular, Cellular and Developmental Biology	1
Environmental Studies	57	Religious Studies	3
Feminist Studies	1	Sociology	13
Film and Media Studies	4	Writing	3