

AC 1: Academic Courses
14 points available

Requirements:

- **Sustainability-focused defined as:** the course title or description must indicate a primary and explicit focus on sustainability
- **Sustainability-related defined as:** the course description, course syllabus, or rationale provided in the course inventory must indicate that the course incorporates a unit or module on sustainability or a sustainability challenge, includes one or more sustainability-focused activities, or integrates sustainability challenges, issues, and concepts throughout the course
- **Timeframe:** From last three years
- Extensions courses should not be included
- **For each course, the inventory must include:**
 - The title, department (or equivalent), and level of the course (e.g., undergraduate or graduate).
 - A brief course description or rationale explaining why the course is included that references sustainability, the interdependence of ecological and social/economic systems, or a sustainability challenge.
 - An indication of whether the course qualifies as sustainability-focused or sustainability-inclusive (or equivalent terminology). (no course should be identified as both)
- **How were courses with multiple offerings or sections counted for the figures reported above?**
 - Each offering or section of a course was counted as an individual course
 - Each course was counted as a single course regardless of the number of offerings or sections
 - Not applicable; no courses with multiple offerings or sections were included
 - Other (Please describe below)

Total number of undergraduate courses offered by the institution:	4,226
Number of undergraduate courses offered that are sustainability-focused:	53
Number of undergraduate courses offered that are sustainability-inclusive:	42
Total number of graduate courses offered by the institution:	2,221
Number of graduate courses offered that are sustainability-focused:	37
Number of graduate courses offered that are sustainability-inclusive:	7
Total number of academic departments that offer courses (at any level):	44
Number of Academic Departments with Sustainability Course Offerings:	28

Part 1 Score: Up to 8 points available

Course type	Factor		Number of courses offered of each type		Total number of courses offered by the institution		Points earned
Sustainability-focused	40		90		6447	=	.558
Sustainability-inclusive	40	x	49	÷			.304
Total points earned →							.862

Part 2 Score: Up to 6 points available

Factor		Number of departments with sustainability course offerings		Total number of departments		Points earned
6.67	×	28	÷	44	=	4.245

Course Inventory (list, briefly describe, and distinguish between sustainability-focused or sustainability-inclusive for each course):

Undergraduate Courses			
Course Title	Cross Listed	Description	Sustainability-focused or Sustainability-inclusive
ANTH 119 - The Anthropology of Tourism		Surveys the central problems and issues in the anthropological study of tourism. Main topics include the place of tourism in the global economy, the impact of tourism on cultural identity and culture change, environmental issues in tourism development, and tourism as a form of cross- and multicultural communication.	Sustainability-inclusive
ANTH 132 - Cultural Ecology		Introduces people's relationships to their total environment. Explores strategies for managing the environment and its resources, the effects of the environment on culture and society, the impact of human management on the ecosystem, and ways in which human groups view their surroundings.	Sustainability-focused
BIEN 166 - BioInspired Engineering for Sustainable Engineering		Introduces the use of concepts from basic biological sciences (including biochemistry and biophysics) for applied energy engineering. Covers biological energy conversion (including photosynthesis) and its implication for sustainable energy technologies. Discusses recent advances in biomimetic and bioinspired energy conversion.	Sustainability-focused

BIOL 116 - Ecology and Conservation Biology		Introduces principles of ecology with emphasis on implications for the conservation of biodiversity. Topics include physiological ecology, organismal adaptations to the environment, life histories, the niche concept, population growth, interspecific interactions, and the structure and functioning of communities and ecosystems.	Sustainability-inclusive
BIOL 165 - Restoration Ecology	BPSC 165	An examination of the basic ecological principles related to land restoration. Topics include enhanced succession, plant establishment, plant adaptations, ecotypes, weed colonization and competition, nutrient cycling, functions and reintroduction of soil microorganisms, restoration for wildlife, and the determination of successful restoration. Includes field trips to restored sites.	Sustainability-focused
BPSC 011 - Plants and Human Affairs		An introduction for nonscience and non- Botany majors to the importance of plants and plant products in the shaping of human affairs and civilization. Covers the origin and practice of agriculture; the utilization of plant products; the latest agricultural advances, including genetic engineering; and the current agricultural and social issues. Plants and plant products are examined during class demonstrations and exercises.	Sustainability-inclusive
BPSC 021 - California's Cornucopia: Food from the Field to Your Table		Examines California's diverse agricultural products. Addresses related contemporary issues such as crop improvement by biotechnology, climate change, pollution, resource use, and nutrition. Also examines how the interplay of geography, history, and culture shapes the cuisine of a region.	Sustainability-inclusive

CEE 132 - Green Engineering		An introduction to the design, commercialization, and use of feasible and economical processes and products that minimize risks to human health and the environment. Topics covered include environmental risk assessment; regulations; chemical process flow-sheet analysis for pollution prevention; product life-cycle assessment; and industrial ecology.	Sustainability-focused
CEE 136 - Aerosol Technology		Explores the physical and chemical properties of aerosol and its relationship to ambient air quality, control technology, health impacts, and global climate change. Introduces the principles of aerosol measurement and aerosol measurement technology.	Sustainability-inclusive
CHE 171 - Pollution Control for Chemical Engineers		Principles of industrial pollution control in chemical engineering plants. Regulations, criteria, measurements, and pollution control systems associated with air, wastewater, and solid waste management.	Sustainability-focused
CHEM 140 - Environmental Chemistry Laboratory		Theory and application of chemical techniques for the analysis of environmentally relevant chemical processes. Discusses gas phase, condensed phase, surface, and particulate chemistry. Topics include "acid rain," photochemical smog, ozone depletion, and chemical analysis monitoring.	Sustainability-focused
CS 179 - Graphics and Electronic Games		Covers the planning, design, implementation, testing, and documentation of a graphics- or electronic game-related system. Incorporates using techniques presented in previous related courses. Emphasizes professional and ethical responsibilities; the need to stay current on technology; and its global impact on economics, society, and the environment.	Sustainability-inclusive

ECON 006 - Introduction to Environmental Economics	ENSC 006	An introduction to the basic principles of economics and their application to problems of environmental quality and natural resource utilization. Emphasis is on the failure of markets as a cause of environmental degradation and the role of government in resolving problems of resource scarcity.	Sustainability-focused
ECON 143 - Environmental Economics		An introduction to economic analysis of natural resources, the environment, and environmental quality. Topics include interactions between the environment and the economy, social choice theory, source control costs, damage valuation, efficient pollution control and design of efficient and equitable environmental policy.	Sustainability-focused
ECON 146 - Urban Economic Problems	URST 146	Applies economic principles to the major problems of the modern urban community, such as poverty, discrimination, deterioration of the environment, and housing problems. Explores programs for alleviation of or solution to these issues.	Sustainability-inclusive
ENGR 170 - Technology, Policy, and Ethics	PBPL 170	Provides contemporary perspectives on interplays between technology, public policy, and ethics. Covers social, legal, and ethical issues such as liability, as well as environmental, patent, and copyright law.	Sustainability-focused
ENGR 171 - Globalization	PBPL 171	Includes social, economic, and political consequences. Explores the cultural aspects of globalization, including barriers and drivers for economic and cultural interdependence and integration, as well as virtual global organizations.	Sustainability-focused
ENSC 002 - Introduction to Environmental Science: Environmental Quality		An introduction to environmental science, focusing on the impact of human development and technology on the quality of natural resources and living organisms. Topics covered include soil, water, and air pollution; water, land, and	Sustainability-focused

		food resources; wildlife management and species endangerment; toxicology and risk management; and solid and hazardous waste management.	
ENSC 003 - Contemporary Issues in the Environmental Sciences		An issue-oriented approach to understanding the scientific principles behind environmental issues. Case studies of environmental issues appearing in the mass media provide the context for assessing the status of scientific knowledge and its role in human decision making.	Sustainability-focused
ENSC 101 - Water Resources		An introduction to the hydrologic cycle; water sources, distribution, and conveyance; physical, chemical, and biological properties of water; water treatment and reuse; and regulatory framework.	Sustainability-inclusive
ENSC 102 - Introductory Atmospheric Science		Covers the structure of the atmosphere and man's impact upon it. The causes and consequences of air pollution. Addresses air quality standards and the stratospheric and tropospheric ozone. Also introduces the chemistry of air pollution and air pollution control strategies.	Sustainability-inclusive
ENSC 103 - Environmental Pollution and Health	ENTX 103	Focuses on the history, theory, and practice of assessing, understanding, and mitigating impacts of the natural and built environment on human health. Reviews core disciplines that underpin the field of environmental health as well as case studies from industrialized, emerging, and developing countries around the world.	Sustainability-focused
ENSC 105 - Ecohydrology		Explores the movement of water through ecosystems and interactions with biota across a range of climatic and ecological zones. Examines the major human impacts on hydrology and their ecological and environmental implications. Field trips to representative hydrological systems.	Sustainability-focused

ENSC 130 - Weather and Climate		Introduces basic principles of atmospheric dynamics on both short and long-term time scales with a focus on current examples and in-class demonstrations. Basic concepts related to atmospheric dynamics such as wind, the radiation budget, precipitation, and natural disasters will be covered, along with core principles of long-term changes.	Sustainability-inclusive
ENSC 134 - Soil Conditions and Plant Growth	BPSC 134	A study of the chemical, physical, and biological properties of soils and their influence on plant growth and development. Topics include soil-plant water relations; fundamentals of plant mineral nutrition; soil nutrient pools and cycles; soil acidity, alkalinity, salinity, and sodicity; root symbioses; and rhizosphere processes.	Sustainability-inclusive
ENSC 135 - Atmospheric Chemistry	CHEM 135 ENTX 135	Structure of the troposphere and stratosphere; formation of atmospheric ozone; tropospheric NO _x chemistry; methane oxidation cycle; phase distributions of chemicals; wet and dry deposition; chemistry of volatile organic compounds; formation of photochemical air pollution; modeling of air pollution and control strategies; stratospheric ozone depletion and global warming.	Sustainability-inclusive
ENSC 141 - Public Health Microbiology	MCBL 141	Introduction to transmission of human pathogenic microorganisms through environmental media, including drinking water, wastewater, food, and air. Topics include characterization of environmentally transmitted pathogens, microbial risk assessment, sampling and detection methods for microorganisms in environmental samples, food and waterborne disease outbreaks, wastewater reuse, and microbial regulations and standards.	Sustainability-inclusive
ENSC 144 - Solid Waste Management	ENVE 144	A study of the characterization, collection, transportation, processing, disposal, recycling, and	Sustainability-inclusive

		composting of municipal solid waste. Emphasizes accepted management strategies and design procedures for recovering or disposing solid wastes while protecting public and environmental well-being.	
ENSC 153 - Ecological Economics and Environmental Valuation		Survey of environmental valuation and economy-wide, long time-scale issues. Valuation methods covered include hedonic pricing, weak complements, contingent valuation, and ecosystem services. Environmental macroeconomic topics include population growth, biophysical constraints to economic growth, intertemporal welfare and sustainability, and sustainable development.	Sustainability-focused
ENSC 165 - Principles of Groundwater Management		Covers the fundamental understanding of groundwater resources and aquifer properties. Explores physical principles of fluid flow in sediments and rocks, surface water-groundwater interactions, and contaminant transport. Discusses current issues in groundwater management and sustainability with an emphasis on California water resources. Students present topics related to groundwater science and management.	Sustainability-inclusive
ENSC 172 - Principles of Environmental Impact Analysis		Explores the principles and theories of analyzing environmental interactions. Provides a critical analysis of methodologies for assessing the physical, biological, and social impacts on the environment by human activities. Synthesizes the subject matter through preparation of an environmental impact report.	Sustainability-focused
ENSC 174 - Law, Institutions, and the Environment		Introduction to natural resource ownership, protection, and regulation in the institutional environment of local, state, and federal laws, implementing agencies, and competing interests. Examines decision making in the context of the	Sustainability-inclusive

		rights and limits of both private parties and the broad public interest in the use and protection of resources.	
ENTM 124 - Agricultural Entomology		Identification, life history, ecology, distribution, and management of key pest and beneficial species learned through field observation, discussions with industry representatives, and laboratory study. Detailed notes and collections from field trips to all major growing regions of Southern California form the basis for laboratory discussion.	Sustainability-inclusive
ENTM 125 - Pesticides, Biological Organisms, and the Environment	ENTX 125 PLPA 125	An introduction to the chemistry, mode of action, and use of insecticides, acaricides, herbicides, and biopesticides from discovery to environmental interactions. Includes genetics of pesticide resistance development and government regulation.	Sustainability-inclusive
ENVE 133 - Fundamentals of Air Pollution Engineering		Covers principles, modeling, and design of systems for atmospheric emission control of pollutants such as photochemical smog and by-products of combustion. Explores the effects of air pollution on health.	Sustainability-focused
ENVE 134 - Technology of Air Pollution Control		Processes and design of control technologies for gaseous and particulate pollutants. Methods and design of ambient air quality measurements and air pollution source sampling for both gaseous and particulate pollutants.	Sustainability-focused
ENVE 135 - Fate and Transport of Environmental Contaminants		Covers fate and transport of contaminants in the air, water, and soil environments. Addresses description and modeling of advection, dispersion, phase transfer, and chemical transformation mechanisms.	Sustainability-inclusive
ENVE 142 - Water Quality Engineering		An introduction to the engineering aspects of water quality management. Addresses water quality characterization and modeling techniques for natural and engineered	Sustainability-focused

		systems. Discusses application of chemical equilibrium and kinetic models to water quality.	
ENVE 145 - Hazardous Waste Management		Advanced course in the study of physio- chemical, thermal, and biological treatment of hazardous waste. Emphasis is placed on the technical understanding and design of physical, biological, and thermal treatment methods; transportation of hazardous waste; and hazardous waste characterization and site assessment.	Sustainability-inclusive
GBST 130 - Management of International Water	PBPL 130	Explores basic concepts of international water law. Examines how these concepts, as well as conflict definitions, negotiation principles, and cooperation principles, are applied to international waters. Includes analysis of several major international water cases utilizing contemporary literature.	Sustainability-inclusive
GBST 140 - Haiti: Past, Present and Future		Focuses on Haitian history, ecology, earthquakes, political economy, and public health issues in world historical perspective. Incorporates presentations from experts and community activists on topics related to Haitian political, economic, and natural, and health history. Examines leadership skills needed in addressing poverty in the Global South.	Sustainability-inclusive
GEO 002 - Earth's Climate through Time		An introduction to the history of Earth's changing climate and its relationship to the evolution of life on human to geologic time scales. Topics include the interrelationships among short- and long-term carbon cycling; plate tectonics; ocean and atmosphere circulation; and greenhouse gases through time.	Sustainability-inclusive
GEO 004 - Natural Hazards and Disasters		Application of basic principles of climate and geology to recognition of natural hazards and their mitigation. Topics include fires, freezes, floods, winds, landslides, volcanic eruptions, earthquakes and	Sustainability-inclusive

		tsunamis. Emphasis is on confronting hazards of concern to home-buyers, planners, and conservationists in the western United States, especially southern California.	
GEO 009 - Oceanography		A general introduction to the geological, physical, chemical, and biological processes related to the characteristics and evolution of the ocean system. Explores the role oceans play in regulating climate and the cycling of elements on the Earth's surface. Illustrates how the ocean system has been, and continues to be, one of the most important influences on life.	Sustainability-inclusive
GEO 009H - Honors Oceanography		A general introduction to the geological, physical, chemical, and biological processes related to the characteristics and evolution of the ocean system. Explores the role oceans play in regulating climate and the cycling of elements on the Earth's surface. Illustrates how the ocean system has been, and continues to be, one of the most important influences on life.	Sustainability-inclusive
GEO 010 - Earth Resources and Sustainability		An introduction to the occurrence, availability, marketing, and usage of metals, minerals, fossil fuels, nuclear fuels and other geologic resources, including both historic and recent trends. Addresses conflicts between modern society's need for increasingly scarce resources and mounting environmental problems. Also covers achieving sustainability through conservation, recycling, and substitution.	Sustainability-focused
GEO 011 - Global Climate Change and Sustainability		Provides an understanding of Earth's feedback systems that regulate the climate over long- and short-term time scales. Includes oceanic and atmospheric circulation patterns, the major reservoirs and global carbon cycle, and the	Sustainability-focused

		influence and origin of greenhouse gases. Investigates sustainability, climate change policies, adaptation, and mitigation.	
GEO 011H - Honors Global Climate Change and Sustainability		Provides an understanding of Earth's feedback systems that regulate the climate over long- and short-term time scales. Includes oceanic and atmospheric circulation patterns, the major reservoirs and global carbon cycle, and the influence and origin of greenhouse gases. Investigates sustainability, climate change policies, adaptation, and mitigation.	Sustainability-focused
GEO 012 - At Home in the Universe		Considers the place of humans in space and time and the means by which this is discerned. Presents a synopsis of the history of the cosmos, Earth, life, and humanity from a science-based perspective. Discuss the implications of such knowledge for how responsible individuals choose to conduct themselves.	Sustainability-inclusive
GEO 160 - Global Climate Change		Surveys historical and paleoclimate change using basic principles on gas laws, radiant energy exchange, atmospheric circulation and oceanography, and proxy data. Topics include variability in modern climate, greenhouse gases, global warming, El Nino, Pacific decadal oscillation, ozone hole, volcanism, ice age climate, and Milankovitch cycles. Also covers stable isotope profiles, plate tectonics, greenhouse climates, paleovegetation, modern species diversity, and snowball Earth.	Sustainability-focused
GEO 167 - Conservation Biogeography		Application of biogeographic and ecological theories in the conservation of plants, animals, and wildlands. Topics include biological preserve design, ecological consequences of land development, and wildlife-habitat relationships.	Sustainability-focused
GEO 169 - California Vegetation		Survey of the flora, distribution, and ecology of California ecosystems,	Sustainability-focused

		including Mediterranean shrubland, conifer forests, desert scrub, valley forbfields, and exotic grasslands. Discusses vegetation in relation to climate, physiography, fire, landscape steady states, biological invasions, paleobotany, and broad-scale change due to land development, invasive species, grazing, and fire suppression.	
GSST 021 - Gender and Sustainability		Introduction to the relationship between gender and sustainability in global context. Draws on science, political ecology, and feminism as analytical lenses. Topics may include gender mainstreaming, economic development, ethics, ecology, population management, water treatment, sanitation, air quality, renewable energy, agriculture, political participation, community development, global capitalism, and environmental health.	Sustainability-focused
GSST 131 - Sustainability, Gender and Development in the Global South		Investigates the intersection of sustainable practices, development pressures, and gender in the Global South. Explores nonwestern concepts of sex/gender and nature as epistemological resources in addressing the impact of climate change on livelihoods and social organization. Asks how sustainability theory and practice can be transnational and socially inclusive.	Sustainability-focused
GSST 148 - Intersectionality, Ecology, and Design Science		Introduces regenerative design, an ecological approach to agricultural and social design emphasizing stability and resiliency of natural systems, and intersectional praxis of environmental justice. Sustaining food, water, and shelter requires understanding the structures of power that shape and maintain discrimination.	Sustainability-focused
GSST 171 - Environmental Health and Social Justice		Interdisciplinary examination of the relationship between environmental health and social justice emphasizing	Sustainability-focused

		gender, race, class, and globalization as analytical lenses. Topics include urban pollution, workplace exposure, industrial catastrophe, invisible environmental hazards, community activism, reproductive health, global capitalism, and new health challenges imposed by climate change.	
GSST 173 - Gender and Climate Change		Examines the global social impacts of climate change that are magnified based on existing inequalities. Focuses on the disparity between women and men in their vulnerability and ability to cope with the global phenomenon. Investigates both women as victims of global warming and their positive roles in climate change mitigation.	Sustainability-focused
GSST 183 - Feminist Politics of Food		Explores politics of food using gender, race, class, and globalization as analytical lenses. Examines expressions of gender and sexuality in food consumption. Investigates relationships between diet and structural racism and between feminist politics and food movements. Topics include food and advertisement, industrial and sustainable agriculture, food security, health, and bioengineering.	Sustainability-focused
GSST 191C - Seminar in Gender and Sexuality Studies: Research Practicum in Gender and Sustainability		Provides interdisciplinary theoretical and practical experience in framing, developing, and implementing projects pertaining to sustainability, gender, and sexuality. Investigates how gender and sexuality shape and are shaped by local, national, and transnational approaches to such issues as climate change, food and water security, species diversity, and renewable resources.	Sustainability-focused
LNST 189 - Economic Development in Brazil	ECON 189	An analysis of the successes and failures of economic development in the largest country in Latin America. Reviews current issues facing Brazilian policy makers. Topics include	Sustainability-inclusive

		historical legacies, import substitution and industrialization, poverty and inequality, agriculture and land reform, and the environmental impact of development.	
MCS 122 - Sustainability as the Future of Democracy		A critical cultural analysis of the discourses underlining and validating the degradation and destruction of our natural environments, engendering vast income inequalities.	Sustainability-focused
ME 004 - Energy and the Environment		Covers energy conservation, energy sources, market dynamics, and climate change. Addresses cultural, political, and social trends and their impact on the ecosystem. Discusses renewable and nonrenewable energy sources.	Sustainability-focused
ME 136 - Environmental Impacts of Energy Production and Conversion		Covers thermodynamics, heat transfer, and fluid mechanics as applied to the examination of the environmental impacts of energy production and conversion. Topics include pollution associated with fossil fuel combustion, environmental impacts of energy use, turbulent transport of pollutants, and principles used in the design of pollution control equipment.	Sustainability-focused
ME 176 - Sustainable Product Design		Introduces the principles of sustainable product design. Topics include life cycle design; design for reliability, maintainability, and recycling/reuse/remanufacture; materials selection; and manufacturing processes. Includes project in which students analyze the environmental impact of a product and redesign it to reduce the impact.	Sustainability-focused
NASC 096 - Environment and Society	ENGR 096 HASS 096	Presents major environmental issues facing society from an interdisciplinary perspective. Topics may include water, energy, climate change, and urbanization.	Sustainability-focused
PBPL 129 - Understanding		Survey of the concepts, principles and tools from	Sustainability-focused

Sustainability		diverse fields that contribute to understanding and responding to problems such as climate change, environmental degradation, and unequal distribution of limited resources. Leads to an appreciation of the social, gendered, political, economic, natural and social scientific principles and theories underlying sustainability.	
PHIL 117 - Environmental Ethics		A philosophic consideration of ethical problems that arise from the use and exploitation of the environment. Topics covered include workplace pollution hazards; environmental pollution and protection of collective natural resources; the rights of future generations; the rights of animals; the protection of endangered species.	Sustainability-focused
PHYS 018 - Energy and the Environment		Covers the physics of energy (thermal, kinetic, potential, chemical, nuclear), its storage and use, primary sources of energy (fossil fuel, nuclear, wind, solar) and their relative effects on the environment. Particular emphasis on determining individual carbon footprints, physical models of global climate change and identifying pathways toward a sustainable infrastructure.	Sustainability-focused
PHYS 168 - Environmental Physics		Covers the application of physics to environmental problems. Includes global climate, energy for human use, transport of pollutants, noise, environmental spectroscopy, and the evaluation of environmental issues in the context of society.	Sustainability-focused
POSC 106 - Environmental Political Thought		Addresses various philosophical aspects of the human relationship to the environment from social, political, and economic perspectives. Includes debates related to issues such as how should human beings interact with their environment, as well as the relationship of environmental practice to liberalism, democracy, and capitalism.	Sustainability-focused

POSC 127 - Global Environmental Politics		Introduces the study and practice of global environmental politics. Explores major developments in the evolution of international environmental law and policy. Covers ozone depletion, acid rain, marine pollution and whaling, tropical deforestation, overpopulation, and the impact of environmental degradation.	Sustainability-focused
POSC 137 - Environmental Justice and Human Rights		Examines how notions of justice and human rights have been brought to bear on environmental and sustainability debates. Also examines the theoretical and historical basis of the environmental justice and human rights movements. Topics include local concerns (including "food deserts") and air pollution, as well as global problems.	Sustainability-focused
POSC 139 - Environment, Sustainability, and Society		Examines the relationship of human society to the natural environment from a multi-disciplinary approach. Considers ways in which values, paradigms, policies, technologies, and their interactions have determined humans' current unsustainable relationship with the earth. Explores challenges inherent in moving society toward a more environmentally sustainable future.	Sustainability-focused
POSC 180 - The Politics of Public Health		Focuses on the social, environmental, and political factors that shape population health. Utilizes public health topics to illustrate the fundamental problems of the politics of regulation and social policy.	Sustainability-inclusive
SOC 002G - Introduction to Global Change and Inequality		Introduces basic concepts and perspectives in the macro-comparative study of social change and inequality at the global level. Explores causes and consequences of globalization in the arenas of economy, polity, and culture. Emphasizes their impacts upon various forms of inequality worldwide.	Sustainability-inclusive

SOC 127 - Sociological Determinants of Health		Introduces the role that social factors play in shaping the occurrence and distribution of disease and death in populations with an emphasis on socioeconomic status, racism, social relationships and social stress. A particular emphasis is placed on sociological origins of health inequalities.	Sustainability-inclusive
SOC 137 - Population		Introduction to the study of human populations including theories, concepts, and measures. Explores the social causes and consequences of population trends. Emphasizes population problems including population growth, fertility, migration, and mortality.	Sustainability-inclusive
SOC 184 - Environmental Sociology		A sociological approach to the study of mainstream environmentalism. Addresses societal implications of environmental reform; the nature of distributive impacts (costs and benefits); environmental conflict resolution; land-use decision making; and the placement of noxious facilities in minority, working class, and poor communities.	Sustainability-focused

Graduate Courses			
Course Title	Cross Listed	Description	Sustainability-focused or Sustainability-inclusive
ANTH 263 - Seminar in Ecological Anthropology		Selected topics in method and theory of ecological anthropology, including ethnobiology, food production and consumption, development issues, views of the environment, and questions about the relationship of humans to their environments.	Sustainability-focused
CEE 232 - Green Engineering		A study of the design, commercialization, and use of feasible and economical processes and products that	Sustainability-focused

		<p>minimize risks to human health and the environment. Topics include environmental issues, risk assessment, and regulations; flow of chemical and manufacturing unit processes and flow-sheet analysis for pollution prevention; product life-cycle assessment; and industrial ecology.</p>	
CEE 233 - Advanced Air Pollution Control Engineering		<p>Covers principles necessary to understand the atmospheric behavior of air pollutants. Topics include gas- and aerosol-phase chemistry, atmospheric diffusion, removal processes and residence times, and the formation and fate of gas and aerosol pollutants.</p>	Sustainability-inclusive
CEE 236 - Energy Production, Use, Economics, and Sustainability		<p>Provides insights into current and future sustainable energy production technologies including key governing physical and chemical principles. Considers economics and life cycle implications of energy options. Also examines current and projected energy use patterns and environmental impacts. Considers energy policies that can facilitate introduction of sustainable energy production systems.</p>	Sustainability-focused
CEE 244 - Vehicle Emissions Control Technology, Measurement Procedures, and Alternative Fuels		<p>Covers the nature of gaseous and particulate emissions and the technical aspects of energy efficiency from mobile sources.</p>	Sustainability-focused
CEE 251 - Microbial Engineering and Environmental Biotechnology		<p>Discusses the recent development of novel biocatalysts and biological materials for degrading toxic pollutants or synthesizing environmentally friendly chemicals.</p>	Sustainability-inclusive
CEE 253 - Biodegradation and Bioremediation		<p>Special emphasis is placed on biological techniques for air pollution control, bioremediation of methyl tert-butyl ether, and molecular techniques for microorganism monitoring.</p>	Sustainability-focused

CEE 256 - Special Topics in Particulate Measurement and Air Quality		Topics include atmospheric chemistry, aerosol chemistry and physics, and measurement techniques used for source and ambient sampling of gases and aerosols.	Sustainability-inclusive
CEE 268 - Special Topics in Environmental Chemistry		Addresses the key role that environmental chemical processes play in water quality, pollutant fate, and the development of strategies for the treatment and reuse of contaminated natural resources.	Sustainability-focused
CEE 269 - Special Topics in Aerosols and Climate		Introduces research at the interface of particle air quality and climate. Focuses on the effects of particle formation and composition on climate.	Sustainability-focused
ECON 207 - Environmental Economics		Covers the theory and methods of environmental economics. Topics include externality theory, bargaining solutions, property rights, and resource allocation mechanisms. Also covers environmental policy under uncertainty and asymmetric information, as well as dynamic and general equilibrium models of environmental quality.	Sustainability-focused
ECON 208 - Natural Resource Economics		Covers dynamic models of nonrenewable resources. Topics include uncertainty, game theory, and the measurement of resource scarcity. Examines empirical models of nonrenewable and renewable resources.	Sustainability-focused
ECON 209 - Nonmarket Valuation and Environmental Policy		A study of economic valuation of natural resources and the environment. Includes environmental demand theory, travel cost models, random utility models, discrete choice models, the contingent valuation technique, and hedonic wage and pricing models. Also covers theory, empirical methods, and applications.	Sustainability-focused
ECON 210 - Topics in Environmental Economics		An in-depth study in selected areas of environmental and natural resource economics. E.	Sustainability-focused

		Transportation and Environmental Quality. F. Political Economy of Environmental Policy.	
ECON 265 - Agricultural and Rural Development		This course is concerned with the economics of agricultural and rural development in developing countries. Topics examined include technical change, sharecropping and interlinked factor markets, migration, poverty and famine, land reform, environmental aspects of rural development, and structural adjustment within agriculture.	Sustainability-focused
ENSC 200 - Fate and Transport of Chemicals in the Environment	CHEM 246 ENTX 200	Covers identification of toxicants and their sources in the environment; equilibrium partitioning of chemicals between air, water, soil, sediment, and biota using physico-chemical properties; and the transport and transformations of chemicals in air, water, and soil media. Includes case studies of fate and transport of selected toxic chemicals.	Sustainability-focused
ENSC 203 - Human and Ecological Risk Assessment	ENTX 203	Focuses on history, theory, and practice of predicting, managing, and communicating potential human health and environmental risks of hazardous chemicals. Reviews fundamental components and explores uncertainties, probabilistic approaches, and real-world challenges of risk analysis.	Sustainability-focused
ENSC 206 - Environmental Policy and Law	POSC 206	An introduction to the process and politics of environmental regulation in the United States and the negotiation and implementation of international environmental accords. Uses social scientific methods of analysis to investigate specific issues such as air quality, energy, and biodiversity.	Sustainability-focused
ENSC 207 - Surface Water Quality Modeling		Introduction to the principles of surface water quality modeling. Explores mathematical representations of surface water systems. Reviews	Sustainability-focused

		theory and develops analytical and numerical solutions to describe hydrodynamics and mixing in surface waters, surface water quality, eutrophication, and the cycling and fate of contaminants in lake and river ecosystems.	
ENSC 208 - Ecotoxicology	ENTX 208 SWSC 208	Introduction to the impact of chemicals upon ecological systems. Examination of the fate and effects of environmental chemicals in various hierarchies of biological organization to learn how to carry out precise and accurate assessments of ecological risk.	Sustainability-focused
ENSC 227 - Global Change and the Earth System		Examines the fundamental principles of earth system science in the context of global change. Emphasizes contemporary research on the relationship between humans and the Earth's environment. Topics include the earth system prior to human influence; the Anthropocene era (1850 to present); the responses of the Earth's support machinery to human activities; consequences of global change for human well-being; and pathways towards global sustainability.	Sustainability-focused
ENSC 232 Biogeochemistry		A study of the biogeochemical cycling and exchange of carbon and important nutrients (N, S, base cations) between the lithosphere, hydrosphere, and atmosphere. Quantitatively describes processes at scales ranging from local to global. Addresses modern concerns about water and atmospheric quality, including global climate change.	Sustainability-focused
ENSC 265 - Special Topics in Earth and Environmental Systems	GEO 265	Involves oral presentations and small-group discussions of selected topics in the areas of biogeochemistry, global climate change, geomicrobiology, earth surface processes, and interplanetary life.	Sustainability-inclusive

GEO 260 - Global Climate Change		Explores global climate change in historic and geologic time scales. Topics include ocean-atmosphere feedbacks, El Niño, Pacific decadal oscillation, anthropogenic CO ₂ , volcanism, cosmic rays, polar ozone depletion, global climate modeling, stable isotopes, "ice house" Pleistocene climates, "greenhouse" climates of the Mesozoic and Tertiary, plate tectonics, and the "snowball" Earth.	Sustainability-focused
GEO 261 - Atmosphere, Ocean and Climate Dynamics		Explores selected contemporary topics in the areas of atmospheric science, oceanography, climate dynamics, aerosol physics, and climate change through the twentieth and twenty-first centuries.	Sustainability-focused
HIST 287A - Research Seminar in Nature, Place, and Space: Environmental and Spatial Approaches to History		Surveys historical literature and methodologies involved in spatial and environmental analyses of the past. Examines technical and methodological issues involved in using spatial documents (maps). Discusses applications of historical research to environmental remediation.	Sustainability-focused
HIST 287B - Research Seminar in Nature, Place, and Space: Environmental and Spatial Approaches to History		Surveys historical literature and methodologies involved in spatial and environmental analyses of the past. Examines technical and methodological issues involved in using spatial documents (maps). Discusses applications of historical research to environmental remediation.	Sustainability-focused
ME 210 - Sustainable Product Design		Introduces the principles of sustainable product design. Topics include life cycle design; design for reliability, maintainability, and recycling/reuse/remanufacture; materials selection; and manufacturing processes. Includes project in which students analyze the environmental impact of a product and redesign it to reduce the impact.	Sustainability-focused
PBPL 220 - Policy		Explores the interactions between environment and	Sustainability-focused

Evaluation		society and the consequent policy implications with an emphasis on internalization of environmental and social externalities.	
PBPL 224 - Global-local Policy Connections: Case Studies in Poverty, Water, and Sustainable Development		Discusses commonalities of public policies across the world. Illustrates how the United States can learn from the successful policy experiences of other countries, and vice versa. Explores global experiences in four topical areas including poverty, environment, urbanism, and health.	Sustainability-inclusive
PBPL 232 - Sustainability Policy		Covers Sustainability as practice and policy at the local, regional, national and global levels. After grounding ourselves in the history and science behind Sustainability, we will examine the various policies and policy making organizations surrounding Sustainability and Sustainable Development.	Sustainability-focused
PBPL 233 - Environmental Economics and Policy		Theory and practice of environmental economics and its application to environmental policymaking. Applies tools of economic theory to problems of managing natural resources and environmental quality, with particular emphasis on externalities, sustainability, pollution control, resource extraction, and environmental valuation. Alternative public policy instruments for environmental management are considered and evaluated.	Sustainability-focused
PBPL 240 - Global Environmental Policy		Case-based introduction to global environmental policy. Structured to familiarize students both with important developments in the evolution of international environmental policy and law, and with central analytical concepts and practical methods of conflict resolution and collective action.	Sustainability-focused
PBPL 241 - Climate Change Policy		Introduction to Climate Change policy at the local, regional, national and global levels. Examines the	Sustainability-focused

		various policies and policy making organizations surrounding the issue of Climate Change. Includes channels for disseminating Climate Change Policy, as well as, specific gendered, ethnic, class and racial dynamics of policy creation.	
PBPL 242 - Applied Environmental History		Explores historical research methodologies applied to environmental policy in four major areas - chemical pollution, conservation, water, and air - emphasis on the use of primary and secondary sources. Introduction to primary sources useful to environmental history analysis including maps and satellite imagery, environmental data, and various document archives.	Sustainability-focused
PBPL 244 - Water Resource Economics		Provides a working knowledge of water resource economics for future water managers, planners and students wishing to improve their comprehension of these problems. The course will discuss and consider relevant policy options regarding water use and allocation. Application of empirical methods to water management, especially within a benefit- cost framework.	Sustainability-inclusive
PBPL 245 - Global Water Policy		Covers issues and problems faced by developing and industrialized countries. Compares and analyzes the debate about efficiency vs. equity and protection of the environment, prices vs. quotas, water as a public good, economic good or social good, and adaptation in the water sector to climate change.	Sustainability-focused