

Sustainability Focus UG

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.

ANTH 134 Anthropology of Resource Management

Anthropological approaches to the study of resource use and management in cross-cultural perspective. Issues include conservation, development, sustainability, and common property management. Focuses management of plant and animal resources in foraging, farming, and fishing societies.

BIEN 166 Bioinspired Engineering for Sustainable Energy

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.

BIOL 165 Restoration Ecology

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. Cross-listed with BPSC 165.

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.

ECON 143A Environmental Economics

An introduction to economic analysis of natural resources and the environment emphasizing environmental quality. Topics include environment-economy interactions and social choice theory; source control costs, damage valuation, and efficient pollution control; and design of efficient and equitable environmental policy. Cross-listed with ENSC 143A.

ECON 143B Natural Resource Economics

Considers the extraction and use of natural resources. Topics include land use and natural capital economics and valuation; economics of mineral and nonrenewable resources including recycling; and managing biological and renewable resources, including common property, efficient usage, and regulation. Cross-listed with ENSC 143B.

ECON 143C 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. Cross-listed with ENSC 143C.

ECON/ENSC 143 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.

ENSC 001 Natural Resources

An introduction to environmental science, focusing on natural resource description, management, and conservation. Topics covered include ecosystem characteristics and function; material and energy flows; population dynamics and influence of population on the environment; energy resources and conservation; and mineral and soil resources and their management.

ENSC 002 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 food resources; wildlife management and species endangerment; toxicology and risk management; and solid and hazardous waste management.

ENSC003 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.

ENSC006 Introduction to Environmental Economics (see ECON 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. Cross-listed with ECON 006.

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.

ENSC142 Water Quality

Description not available.

ENSC 143 B Natural Resource Economics

Considers the extraction and use of natural resources. Topics include land use and natural capital economics and valuation; economics of mineral and nonrenewable resources including recycling; and managing biological and renewable resources, including common property, efficient usage, and regulation. Cross-listed with ECON 143B.

ENSC 143 C 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. Cross-listed with ECON 143C.

ENSC 144 Solid Waste Management (cross listed ENVE 144)

A study of the characterization, collection, transportation, processing, disposal, recycling, and 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. Cross-listed with ENVE 144.

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.

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 rights and limits of both private parties and the broad public interest in the use and protection of resources.

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.

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.

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.

ENVE 144 Solid Waste Management (see ENSC 144)

A study of the characterization, collection, transportation, processing, disposal, recycling, and 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. Cross-listed with ENSC 144.

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.

ENVE 146 Water Quality System Design

Analysis and design of water conveyance systems including water distribution networks, wastewater and storm water collection systems, structures for flow measurement and control, and pumps and pump stations. Includes projects to develop design process skills including problem specification, modeling, and analysis.

GBST 130 Management of International Water

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.

GEO 002 Earth's Climate through Times

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.

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.

GEO 009H 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.

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.

GEO 011 Global Climate Change

Application of the scientific method to the global climate change debate. 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.

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.

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.

GEO 161 Quaternary Paleoenvironmental Change

Examines geological evidence of environmental change throughout Quaternary times “(Ice Age)” to provide a framework for understanding natural environmental change and for predicting future change.

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.

GSST 106 Feminist Bioethics

An exploration of the ways in which feminist theory provides insight on contemporary issues in bioethics. Topics include women in clinical research, cosmetic surgery, abortion, contract gestation, fetal protection policies, and the politics of mental illness. Cross-listed with PHIL 171.

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.

GSST 171 Environmental health and Social Justice

Interdisciplinary examination of the relationship between environmental health and social justice emphasizing 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.

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.

GSST 191C 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.

HASS 096 Environment and Society

Presents major environmental issues facing society from an interdisciplinary perspective. Topics may include water, energy, climate change, and urbanization.

LNST 189 Economic Development in Brazil

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 historical legacies, import substitution and industrialization, poverty and inequality, agriculture and land reform, and the environmental impact of development. Cross-listed with ECON 189.

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.

ME 004 Energy and 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. Technical background not required.

ME 136 Environmental Impacts of Energy Production and Conservation

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.

ME 176 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.

PBPL 129 Understanding Sustainability

Survey of the concepts, principles and tools from 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.

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.

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.

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.

POSC 137S 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.

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.

POSC 189 Life After Oil: Understanding the New Energy Order

Examines the combined effects of planetary warming and depleted fossil fuel reserves from a transdisciplinary perspective. Integrates environmental engineering, global environmental politics, natural resource economics, and cultural studies.

SOC 181 World Systems and Globalization

Systematic comparisons of societies and world-systems with emphasis on changes in the logic of social development

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.

UCDC 191D Seminar in Environmental Policy

Covers theoretical perspectives and methodological approaches used in determining the environmental sustainability of various public policies. Complements the internship experience of students whose internships relate to the environment by connecting their internship experience to a focused research project. Guides students through the process of conducting focused and detailed research.

Sustainability related UG

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.

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

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.

ECON 146 Urban Economic Problems

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.

ENSC102 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

ENSC 134 Soil Conditions and Plant Growth

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. Cross-listed with BPSC 134.

ENSC 135 Chemistry of the Clean and Polluted Atmosphere

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. Cross-listed with CHEM 135 and ENTX 135.

ENSC 141 Public Health Microbiology

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. Cross-listed with MCBL 141.

ENSC 142

Description not available.

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.

ENTM 125 Pesticides, Biological Organisms, and the Environment

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. Cross-listed with ENTX 125 and PLPA 125.

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.

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.

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 tsunamis. Emphasis is on confronting hazards of concern to home-buyers, planners, and conservationists in the western United States, especially southern California.

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.

GEO 169 California Vegetation

Survey of the flora, distribution, and ecology of California ecosystems, 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.

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 Focused Grad

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.

CEE 232 Green Engineering

A study of the design, commercialization, and use of feasible and economical processes and products that 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.

ECON 209 Non market 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. Cross-listed with ENSC 209.

ENSC 201 Environmental Management

An introduction to economic instruments used to make environmental policy to address pollution control and natural resource protection on local and international scales. Investigates public and private incentives for single and multiple polluters to reduce pollution and conserve exhaustible and renewable resources.

ENSC 206 Environmental Policy and Law

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. Cross-listed with POSC 206.

ENSC 207 Surface Water Quality Modeling

Introduction to the principles of surface water quality modeling. Explores mathematical representations of surface water systems. Reviews 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 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. Cross-listed with ECON 209.

ENSC 212 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. Cross-listed with ECON 208.

ENSC 227 Global Change and 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.

GEO 261 Atmosphere, Ocean and Climate Dynamics Seminar

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.

HIST (287 A/B) Research Seminar in Nature, Space, and Place: 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. Includes work on a research paper.

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.

PBPL 220 Environmental and Social Policies: Interactions, Synergies, and Unintended Consequences

Explores the interactions between environment and society and the consequent policy implications with an emphasis on internalization of environmental and social externalities. Topics include immigration, land use, biodiversity, traffic congestion, air and water quality, and public health.

POSC 206 Environmental Policy and Law

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. Cross-listed with ENSC 206.

Sustainability Related Grad

CEE 251 Microbial Engineering and Environmental Biotech

Discusses the recent development of novel biocatalysts and biological materials for degrading toxic pollutants or synthesizing environmentally friendly chemicals.

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.

CEE 269 Aerosols and the Climate

Introduces research at the interface of particle air quality and climate. Focuses on the effects of particle formation and composition on climate.

CHEM 246 Fate and Transport of Environmental Contaminants

Covers the identification of toxicants and their sources in the environment; equilibrium partitioning of chemicals in the environment (between air, water, soil, sediment, and biota) using physico-chemical properties; and the transport and chemical transformations of chemical compounds in air, water, and soil media. Includes case studies of fate and transport of selected toxic chemicals.

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. Includes work on a research paper.

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. Students discuss and critique each other's research.

MGT 229 Accounting Ethics and Professional Responsibility

Examines the ethical and professional responsibilities of accountants and auditors. Focuses on ethics, the American Institute of Certified Public Accountants (AICPA)'s Code of Professional Conduct, Circular 230, the Sarbanes-Oxley Act (SOX), Securities and Exchange Commission (SEC) laws and regulations, Public Company Accounting Oversight Board (PCAOB) standards, state and federal laws relevant to accountants, auditors, and Certified Public Accountants.