

Sustainability Focused Courses:

ANTH 307 [10] Ecological Anthropology (3) Spring: On Demand An anthropological examination of cultural adaptation to the environment. Detailed analysis of the major human subsistence strategies in diverse ecological settings worldwide.

ANTH 308 [8] Migration and Human Adaptation (3) Fall: On Demand An examination of migration as an adaptive strategy used by people in adjusting to changing conditions in their environment. Explores types of migration as well as motivations and consequences of human movement in both the past and present and around the world.

ANTH 311 [10] American Indians and the Environment (3) Fall: On Demand To what degree does the image of the “ecological Indian” faithfully reflect American Indian ideas about the environment through time? This course will examine the idea of the “ecological Indian,” the idea of American Indians were/are model ecologists and conservationists. We will explore the concept of sustainability among American Indians and the relationship between American Indian communities and the environment through an examination of their unique adaptations that they have made within the 10 major geo-cultural regions of native North America: Arctic, Subarctic, Great Basin, Plateau, Northwest Coast, California, Great Plains, Northeast and Southeast.

ANTH 317 [10] Collapse (3) Fall: Odd Years **Spring:** Even Years This course explores the notion of societal collapse using ancient societies and archaeological data. A variety of case studies, drawn from diverse cultural and environmental settings, are examined to identify the processes and causes of collapse. Of critical importance is the interplay between society and environment in achieving or failing to attain long-term sustainability. Present day contexts are examined using perspectives gained from the study of the past.

BIOL 308 [10] Pacific Northwest Ecology (3)

This three credit summer travel course allows students to study general ecological principles and regional natural history within the context of a variety of ecosystems in the Pacific Northwest, including coastal, alpine, freshwater stream, lake, and river, and temperate rainforest systems. The ecological consequences and the science behind specific environmental and conservation issues are explored. The concept of local and global sustainability is a pervasive theme throughout the course.

BIOL 335 [10] Tropical Field Biology (3) Spring: Even Years Two lectures per week during the spring semester discuss general concepts of ecology applied

to tropical ecosystems. Topics covered include: global climate patterns that produce tropical conditions, evolution of biodiversity, rain forests, cloud forests, dry forests, mangrove swamps, coral reef ecology, principles and application of conservation biology to tropical flora and fauna, and balancing human resource use with habitat preservation and restoration. The “lab” component of this course is a mandatory, 10-day class trip to Costa Rica over spring break. In Costa Rica, students and faculty spend 4 days in an ecolodge in dry forest in Cabo Blanco on the Pacific Ocean, another 4 days in cloud forest near Monteverde.

BIOL 346 [10] An Ecological Perspective (3) Fall: On Demand Spring: On Demand This course seeks to help students understand basic ecological principles, and to use these principles to understand our current environmental problems. An integration of scientific, economic, political and ethical considerations will help students to appreciate the policies and practices necessary to achieving a sustainable future

CHEM 102 [3] Environmental Chemistry (3) Fall: All Years Spring: All Years Summer: On Demand A study of the fundamental applications of chemistry to environmental problems in the context of the social, political, economic, and ethical issues surrounding those problems. Students will formulate and test hypotheses by performing experiments and simulations in class and at home. They will communicate their findings and interpretations both orally and in writing.

CHEM 304 [10/W] The Environment and You (3) Fall: All Years Spring: On Demand This course explores the chemical underpinnings of a variety of environmental issues, such as pollution, energy production, and recycling, and how these issues play out in social, political, and economic arenas. Students will also have the opportunity to independently explore three topics in further detail

CM 327 [10] Sustainability in the Built Environment (3) Fall: On Demand Spring: All Years The purpose of the course is to provide an overview of living in a sustainable environment and what we can do as a society to measure our resource use. Also to encourage a change in our views regarding our limited resources and our overuse of the ecosystem by understanding our own culpability. Student awareness of energy conservation is modeled through construction principles that can be broadly applied to everyday lifestyle changes in our daily activities including where we live and where we work and the consumer choices we make in those environments. The U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) criteria are discussed. Major alternatives to LEED will also be covered.

ENGL 407 [10] Big City, Big Impact (3) Fall: Even Years Spring: Even Years This course uses a variety of texts for an exploration of the environmental

and social impacts of big city life, as shown by various writers.

ENGL 435 [10] Ecocriticism (3) Fall: All Years Ecocriticism is a fairly recent cultural and literary development, the term coined in the late 1970s. This course introduces students to representative ecocritical texts that study the relationship between humans and the environment. Significant attention will be devoted to issues of sustainability, eco-literacy, and the efficacy of literary expressions of environmental value.

GEOS 117 [3] Water, Land, and People (3) Fall: Even Years Focuses on the most recent changes in the earth and the portion of the earth with which people have the most interaction, including water, soil, air, and landforms developed by rivers, wind, and glaciers, with emphasis on how our environment influences and is influenced by human activity.

GEOS 335 [10/11] Environmental Geography and Conservation (3) Fall: Odd Years **Spring:** Odd Years This course is a description, analysis, and spatial study of environmental problems including food supplies, energy resources, pollution of all types, wildlife habitat and habitat loss, and environmental change and degradation. The course will also explore the human impacts on environment and ecosystems, and discussions of conservation and preservation issues.

GEOS 340 Economic and Environmental Geology (3) Spring: Even Years This course introduces students to aspects of geology important in understanding earth's energy and mineral resources and how human activities in extracting and using those resources affect our environment. Key topics covered include an introduction to water movements on and in the ground (hydrology), how pollutants move in that water, the geochemical interactions among earth, water, and air, ore-forming and oil-forming processes, economic considerations important in the use of natural resources, and environmental laws.

HIST 373 Monsoon Asia: People and the Environment: An introduction to the environmental history of South, East and Southeast Asia with emphasis on the modern period. Topics include the environmental factor in the fall of the Indus and Huanghe Civilizations, unsustainable development in traditional Asian societies, impacts of imperialism on the Asian environment, consequences of industrialization, and contemporary environmental issues.

HIST 379 [10] Environmental History (3) Fall: On Demand **Spring:** On Demand This course surveys the history of political ecology throughout the world during the last 500 years. Topics include global interconnectedness and the spread of disease, the relationship between trade, modern economics, and sustainable development, natural disasters, and the rise of the ecological movement.

PSCI 378 [10] Energy and the Environment (3) **Fall:** On Demand **Spring:** On Demand This course will examine the relationships between civilization, society and energy use. This will be accomplished by examining current and possible future energy sources as developed through the sciences of physics and chemistry and their applied technologies. It will then examine the applications of current sources and their effects on society and world ecosystems. Finally the course will examine how societies change and adapt, and look at possible steps to a sustainable energy and environmental future.

PHYS 140 Introduction to Sustainability (3) **Fall:** All Years This course introduces the concept of environmental sustainability using energy as a theme. We will examine how a variety of cultures utilize energy and how these cultures approach sustainability. Using a systems approach we will explore current energy trends and discuss future energy scenarios. Relevant topics from physics, chemistry, biosciences and earth science will be covered as they relate to sustainability. The tradeoffs (environmental as well as economic) associated with generating and using energy for different cultures will be examined. Finally we will explore what actions are needed to work towards a sustainable energy future.

PHYS 302 Sustainable Energy (3) **Fall:** All Years This course provides an overview of the science involved in renewable energy and the applications of that science. The student will gain an understanding of the science involved in energy production, energy storage, and energy conservation. They will complete a group project in developing their own design in one of the sustainable technologies.

POL 316 War and the Environment

POL 345 [10] Environmental Politics (3) **Fall:** On Demand **Spring:** On Demand The course examines how national and international politics affects the success (and failure) of environmental policies. Since environmental policy is shaped in political arenas by a myriad of social and economic forces combined with observations of the natural world, the course content examine environmental issues with more of an inter-disciplinary approach. Students will gain an intellectually more mature understanding of how environmental policy is made, modified and implemented (or not) in response to political demands that often ignore the scientific realities of the environment.

PSY 324 [10] Environmental Psychology (3) **Fall:** All Years **Spring:** All Years The scientific study of the relationship between humans and their social and physical environment from a psychological perspective and other related fields. Topics include: environmental perception and cognition, crowding, noise, privacy, urban environments, the psychology of sustainability and designing more habitable environments.

SOC 319 [10] Society and the Environment (3) Spring: All

Years Throughout time societies have struggled to maintain an appropriate balance between human groups and the physical environment. This course analyzes the social causes of environmental problems in an interdisciplinary fashion. Ecology, policy, politics, culture, ethics and history are all viewed through a sociological lens to explain the relationship between humans and the physical environment. The main goal of this course is to demonstrate the complexities of relationships between people and the environment. It also focuses heavily on the processes of social change.

SOC 355 Society and the Ecosystem (3) Fall: All Years Focuses on relationships between social systems and ecosystems. Examines how human systems of agriculture, transportation, housing and energy are related to environmental pollution, depletion, and sustainability. Will also examine the development of the environmental movement and global environmental issues.

WS 330 Gender, Justice and the Environment [10] (3) Fall: On Demand Spring: All Years Summer: On Demand This course focuses on understanding and identifying solutions to local and global environmental issues in the context of feminist critique. The course will draw from feminist literature, core ecological principles, activist strategies, and other critical writings