

Sustainability course inventory 2012-2014

Sustainability-focused courses

COMM 360: Environmental Communication. 4 semester hours.

An advanced course in which students utilize rhetorical theory to analyze public, private, and technical discourses about the environment. Includes the study of environmentalism as a social movement and contemporary environmental issues, both in the United States and within a larger global context.

ECON 350. Environmental and Natural Resource Economics. 4 semester hours.

Examines economic approaches to coping with environmental problems and natural resource scarcity. Emphasis is given to the clear definition and enforcement of property rights as a means to avoid environmental problems. Models for pricing various renewable and nonrenewable natural resources are explored. The role of population change in environmental and natural resource issues is considered. Prerequisites: Economics 190 and Mathematics 120 or its equivalent. Writing intensive. Alternate years.

ESCI 100N. Global Climate Change. 4 semester hours.

This course will examine the science of global climate change and human-introduced climate forcing. It will survey the environmental impacts of global climate change and what this means for the habitability of the earth for humans and other species. Topics will include global climate, stakeholder analysis related to energy use and global climate change, and examining the consequences of rapid climate change. Students will investigate a climate change issue of importance to them (locally, regionally, or globally). The course is designed primarily for non-science majors. Prerequisite: Math placement score 22.

GEOL 115B. Topics in Physical Geology: Sustainable Earth. 4 semester hours.

In this topics course, issues in geologic resource management are related back to the Brundtland conceptual model of sustainability (Social, Economic, and Environmental).

GEOL 170B. Geology of the Critical Zone. 5 semester hours.

A transdisciplinary examination of Earth's critical zone, the intersection between the geosphere, the biosphere, and the hydrosphere. Humans greatly alter processes in this zone of important biogeochemical interactions. This course will be of interest to students wanting to explore natural environmental processes as well as those altered by humans (e.g., pristine vs. polluted, short- and long-term controls on carbonclimate cycles). This course is for sciences majors and includes a laboratory component.

GEOL 280. Special Topics: Geology of Earth Resources and Mineral Fuels. 4 semester hours.

An integral theme in this course topic, as learning the geology of natural resources, is the economic factors in resource availability, environmental considerations in their extraction and processing, and sustainability issues (including metrics used worldwide to measure the 3 spheres of social, economic and environmental sustainability).

WittSem 100 Global Climate Change. 4 semester hours.

The examination of global climate change inherently and persistently raises the question of how to make the planet sustainable. The main focus of sustainability involves a stabilization of the planet's climate for the next few centuries and how this will be affected largely by moving towards non-fossil fuel and sustainable sources of energy. Population and water resources also need to be aligned.

Sustainability-related courses

BUSI 290C. Topics in Business: Global Leadership and Social Entrepreneurship (GLSE) in East Asia. 4 semester hours.

With the traditional lines between for-profit enterprise, nonprofit enterprise, and government beginning to blur, it is critical that students understand the opportunities and challenges presented by the new "blended" landscape of global economy. This introductory course will explore this emerging, highly interdisciplinary field of social entrepreneurship through a combination of instructor lecture, class discussion, student inquiry, case analysis, social venture business plan and global competition participation. This class highlights how social enterprises and challenges in East Asia differ from that of Western European and American. Students will work on social venture business plan in this class and selected students will travel to participate in a global social venture competition.

ENGL 290A. American Literary Traditions (Topics): Money, Debt, and American Dreaming. 4 semester hours.

The average college student leaves four years of college \$25,250 in debt.¹ The average new car purchase, on the other hand, is done today with a very slightly larger \$25,873 loan²—and that on a consumer item that loses value the minute we drive it off the lot. Those educations and new cars are both supposed to do the same thing in a way: move us to where we want to go. "Take me to freedom and happiness!" we beg them. We ask that college take us away from a nightmare vision of repetitive work and drudgery, poverty or at least of never having quite enough, to a life of middle management success, 2.5 kids (or is it 1.5?) and a picket fence. Car commercials and college brochures promise us open roads and smiling futures; they are a great, open space for American dreaming. And the dream and the debt seem to go hand in hand: a dream can make the taking on of debt feel easy and smart. It's often only when it's

time to pay that the shine comes off—and sometimes a different nightmare begins. (Google the term “Debt Stress Syndrome”). Yet we know that John Smith once promised anyone who would listen that if they would just come to America, work just a few hours a week, they would have plenty to eat and drink and be able to live a life of ease. So America has been a land of false advertisements, or at least wildly exaggerated claims, from the start. And it has been a place where, in the pursuit of dreams, debts have piled high. It’s a long way from Mary Rowlandson's Puritan ideal of passive suffering of God’s will (even as she actively negotiated with her native captors) to Thomas Jefferson's bold assertion of our right to dream of and pursue happiness. Meanwhile, from Ben Franklin's ironic frugality echoing into Thoreau's cry of "enough!" at Walden Pond, and the involuntary poverty of John Steinbeck’s migrant Okies, Americans have been buying and selling the American dream--or being sold by it, as we'll hear from Harriet Jacobs, Mark Twain, Lorraine Hansberry, and more. Includes visit to local farm to discuss simple living and limited interference with ecological systems.

ESCI 101B. Introduction to Environmental Science. 5 semester hours.

An introduction to environmental science, including concepts used by environmental scientists to frame the study of environmental problems and human impacts on the natural environment and its resources, including climate, water, soils, vegetation, and wildlife. The laboratory experience focuses on the tools and methods used by environmental scientists to study the environment, natural resources, and human impacts associated with the extraction and use of resources.

ESCI 250B. Environmental Research Methods. 5 semester hours.

Study and application of the methods environmental scientists use to investigate environmental questions, including sampling strategies, tools, sample collection and analysis, and presentation. Prerequisites: ESCI 101 and one additional course from the foundational courses approved for the environmental sciences major.

FREN 261F: L’Environnement naturel du monde francophone (The Natural Environment of the Francophone World): 2 semester hours.

This is a content-based reading and conversation course that focuses on the role of the natural environment in the lives of Francophones; it explores some of the distinctive ways in which French-speaking people around the world express their regard and concern for the natural world. Prerequisite: FREN 112 or placement. Offered every third semester. Successful completion of this course satisfies the university's general education requirement for Foreign Language.

GEOG 120S. Human Ecology. 4 semester hours.

Human population and resource use and how they impact the environment.

GEOL 160B. Environmental Geology. 5 semester hours.

Introduction to applied geology for science and non-science students. The geologic basis for natural processes that are hazardous to humans and cause environmental problems associated with use of the natural or modified environment is discussed. Topics include flooding, mass wasting, soil erosion, water supply use, and pollution and waste disposal. Every year.

GEOL 315. Watershed Hydrology. 4 semester hours.

Study of surface and subsurface hydrology of small watersheds and the dual role of water as an agent of erosion, shaping the watershed and causing flooding, and as a resource. A minimum score of 22 on the Math Placement Exam is required. Prerequisite: Geology 150, 160, or one course from the Geol 110 Series in combination with Geology 151. Alternate years.

GEOL 392. Junior Seminar. 1 semester hour.

Required of all Geology majors during the spring semester of their junior year. The purpose of this course is to prepare students in the skills necessary for them to conduct their senior research and to produce a written proposal for that research. Prerequisite: Junior standing. Every year.

GEOL 492. Senior Seminar. 1 semester hour.

Required of all Geology majors during their senior year. Each student works on a research project under the supervision of a faculty member. The project culminates in a written thesis, a public poster presentation, and public oral presentation. Each student registers for this course during both semesters, 0 credits in the fall and 1 credit in the spring. Prerequisite: Senior standing and completion of Junior Seminar. Every year.

GERM 261: Umwelt: Natur und Kultur (Environment: Nature and Culture): 2 semester hours

This is a content-based reading and conversation course that focuses on the role of the natural environment in the lives of contemporary Germans; it explores some of the distinctive ways in which those Germans express their regard and concern for the natural world. Prerequisite: successful completion of German 112 or placement. Alternate years.

PHIL 207. Science in Social Context. 4 semester hours.

The course focuses on sustainable science broadly construed to include studying environmental racism and environmental justice, as well as what it means to have sustainable science. Though this aspect of it is not an environmental focus, it includes what it means to have an epistemologically and practically sustainable scientific practice.

RELI 378R. Bioethics. 4 semester hours.

Seminar on contemporary issues and debates in bioethics. Topics may include abortion, genetic engineering, reproductive technologies, euthanasia, autonomy, paternalism, use of human subjects in research, access to health care, allocation of scarce resources and environmental ethics. Writing intensive. Every year.

SPAN 261. El mundo físico (The Physical World) 2 sem. hr.

This course serves as an introduction to the Hispanic world by highlighting the diverse nature and cultures of Spanish-speaking people focusing on climate, geography and environmental issues. The course will also develop language skills that will enhance student's ability to express themselves in Spanish. Prerequisite: Spanish 112 or Spanish 150 or placement at the 200 level. Every year.