

Environmental Studies

Philip D. Brick, *Co-Director (Semester in the West, Fall 2008; on Sabbatical, Spring 2009)*

Robert J. Carson, *Co-Director*

Amy Molitor, *Internships*

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Tim Parker

Donald Snow

Environmental studies courses deal with a wide range of contemporary problems associated with the interactions between humans and nature. Coursework is designed to meet the needs of two groups of students: those who choose to major in environmental studies and those who desire knowledge in this area as part of their general education. A primary objective of the program is to aid the student in understanding that environmental problems are multicausal phenomena, and to develop skills necessary for effective environmental citizenship and leadership.

The environmental studies major develops a common core of knowledge through extensive interdepartmental course work, complemented by a concentration in a specific area in either the environmental humanities, sciences, or social sciences. The student may elect one of eight areas of concentration — biology, chemistry, economics, geology, humanities, physics, politics, sociology, or an individually planned major (psychology, for example) in the environmental studies major.

Courses taken P-D-F after the major has been declared may not be used to satisfy requirements for the environmental studies major.

The following courses are required of all environmental studies majors:

Environmental Studies courses: Take the following: Environmental Studies 120 *Introduction to Environmental Studies*; Environmental Studies 220 *Internship*; Environmental Studies 479 *Environmental Citizenship and Leadership*; Environmental Studies 488 *Senior Project* or 498 *Honors Project*.

The credits for Environmental Studies 488 or 498 will be adjusted to make the total credits for research courses equal three to six, depending on the discipline, and whether or not the

thesis is for honors.

Humanities courses: Take a minimum of two of the following: Environmental Studies 247 *The Literature of Nature*; Environmental Studies 340 *Environmental Radicals in Literature*; Environmental Studies 347 *The Nature Essay*; Environmental Studies 349 *Regional Literatures of Place: The West and the South*; Philosophy 241 *Environmental Aesthetics*; Philosophy 250 *Environmental Thinking*; Philosophy 255 *Environmental Ethics*; Philosophy 345 *Animals and Philosophy*, Spanish 437/ World Literature 339 *Eco-Literature in the Americas*.

Natural/Physical Science courses: Take a minimum of three of the following courses from three different departments, including two with a laboratory: Biology 115 *Regional Natural History*; Biology 130 *Conservation Biology* (or Biology 111 and 112); Chemistry 100 *Introduction to Environmental Chemistry* (most science majors substitute Chemistry 125 or 126; or 140); Geology 210 *Environmental Geology* (or Geology 110 or 120); Physics 105 *Energy and the Environment* (or Physics 155, 156, 165, or 166).

Social Science courses: Take a minimum of two of the following courses from two different departments: Economics 177 *Principles of Microeconomics and the Environment* (or Economics 101); Politics 124 *Introduction to Politics and the Environment* (or Politics 287, 309, or 339); Sociology 309 *Environmental Sociology* (or Sociology 349 or 353).

Environmental Humanities

Rebecca Hanrahan, *Assistant Professor of Philosophy*

Donald Snow, *Senior Lecturer in Environmental Humanities*

Inquiry in environmental humanities is guided by two questions: What is the relation between nature and culture? What should this relation be? These questions have become ever more important in the face of growing environmental problems. The environmental humanities major uses the traditions of nature writing and environmental philosophy, most especially the ongoing American Nature Writing tradition,

to give direction and focus to inquiry into the values and concepts that an appropriate relation to nature calls for.

The environmental humanities major is governed by a subcommittee of the Environmental Studies Committee. In order to insure an intellectually cohesive program, the Environmental Humanities Steering Committee will review and approve each major's plan for coursework leading to a senior thesis.

The senior-year assessment will include a written comprehensive examination administered by the Environmental Humanities Steering Committee and an hour-long oral examination of the senior thesis.

In addition to the courses required of all environmental studies majors, the following are required for the environmental humanities major:

A. Take two foundation courses from the following list (courses satisfying this requirement cannot also satisfy the elective requirement): English 347 *American Literature to 1865*; Environmental Studies 247 *The Literature of Nature*; Environmental Studies 349 *Regional Literatures of Place: The West and the South*; Environmental Studies 358 *Ecocriticism*; Philosophy 250 *Environmental Thinking*; Philosophy 408A *Studies in American Philosophy: Emerson*; Philosophy 408B *Studies in American Philosophy: Thoreau*.

B. To fulfill the writing requirement take Environmental Studies 347: *The Nature Essay*.

C. To fulfill the critical thinking requirement take one course from: Philosophy 107 *Critical Reasoning*; Philosophy 117 *Problems in Philosophy*; Philosophy 119 *The Examined Life*; Philosophy 127 *Ethics*; Philosophy 128 *Social and Political Philosophy*; Philosophy 230 *History and Philosophy of Science*.

D. Take three elective courses, two of which must be 300 or above, from: Art History/Philosophy 241 *Environmental Aesthetics*; Art History 248 *Ways of Seeing: Japanese Art and Aesthetics*; English 347 *American Literature to 1865*; Environmental Studies 247 *The Literature of Nature*; Philosophy 250 *Environmental Thinking*; Philosophy 255 *Environmental Ethics*; Environmental Studies 349 *Regional Literatures of Place: The West and the South*;

Environmental Studies 340 *Environmental Radicals in Literature*; Philosophy 345 *Animals and Philosophy*; Philosophy 408A *Studies in American Philosophy: Emerson*; Philosophy 408B *Studies in American Philosophy: Thoreau*; Spanish 437/World Literature 339 *Eco-Literature in the Americas*.

Environmental Sciences

Mark Beck, *Associate Professor of Physics*

Robert J. Carson, *Professor of Geology*

Frank Dunnivant, *Associate Professor of Chemistry*

Delbert Hutchison, *Associate Professor of Biology*

Tim Parker, *Assistant Professor of Biology*

The natural and physical sciences provide foundational theories for understanding environmental phenomena in the physical world and support environmental studies by gathering and analyzing baseline data to inform policy decisions. Issues ranging from the effects of pollution, optimal land- or water-use practices, protections of biodiversity, and effective energy consumption all benefit from insights provided by the natural and physical sciences. Available majors and required courses appear below.

These requirements are in addition to courses required of all environmental studies majors.

Biology-Environmental Studies:

Biology 111 *Biological Principles*; Biology 112 *The Biological World*; Biology 205 *Genetics*; Biology 215 *Plant Ecology* or Biology 277 *Ecology*; Biology 309 *Cell Biology* or Biology 308 *Cellular Physiology and Signaling*; Biology 310 *Physiology* or Biology 330 *Pathophysiology*; Biology 350 *Evolutionary Biology*; Biology 488 *Research Preparation*; Biology 489 *Senior Research*; Biology 490 *Senior Research* or Biology 498 *Honors Thesis*; Chemistry 125, 126, 135, 136, (or 140), 245; Mathematics 125 or higher calculus course, or Mathematics 128 or higher statistics course. Courses in physics are recommended.

Chemistry-Environmental Studies:

Chemistry 125, 126 *General Chemistry*; Chemistry 135, 136 *General Chemistry Lab*

I, II (Note: Chemistry 140 is equivalent to Chemistry 125, 126, 135 and 136); Chemistry 240 *Quantitative Analysis and Chemical Equilibrium*; Chemistry 245 *Organic Chemistry I*; Chemistry 246 *Organic Chemistry II*; Chemistry 251 *Organic Laboratory Techniques I* and Chemistry 252 *Organic Laboratory Techniques II*; Chemistry 346 *Physical Chemistry II*; Chemistry 388 *Environmental Chemistry* or Chemistry 320 *Instrumental Methods of Analysis*. Also required are Mathematics 125, 126, and Physics 155 or 165, 156 or 166.

Geology-Environmental Studies:

Geology 210 *Environmental Geology* (or Geology 110 *The Physical Earth*, or Geology 120 *Geologic History of the Pacific Northwest*); Geology 220, *History of the Earth*; Geology 358 *Field Geology of the Northwest*; Geology 320 *Sedimentology and Stratigraphy*; Geology 345 *Mineralogy*; Geology 346 *Igneous and Metamorphic Petrology*; Geology 350 *Geomorphology*; Geology 420 *Structural Geology*; Geology 470 *Senior Seminar*. Also required are Chemistry 125, 126, 135. Strongly recommended are courses in meteorology, physics, calculus, and statistics, and additional courses in biology and chemistry.

Physics-Environmental Studies:

Physics 155, 156 *General Physics I, II* (or 165, 166 *Advanced General Physics I,II*); Physics 245, 246 *Twentieth Century Physics*; Physics 255, 256 *Twentieth Century Physics Laboratory*; Physics 335, 336 *Advanced Laboratory*; Physics 357 *Thermal Physics*. Also required are Mathematics 125, 126, 225, 235, 236, and 244.

Environmental Social Sciences

Philip D. Brick, *Professor of Politics*
(*Semester in the West, Fall 2008*;
on Sabbatical, Spring 2009)

Jan P. Crouter, *Associate Professor of*
Economics (on Sabbatical, Spring 2009)

Kari Norgaard, *Assistant Professor of*
Sociology

Human activities are at the root of most aspects of environmental degradation from

global climate change to toxic waste to habitat loss. Applying social science theories and methods, environmental social science majors explore how human systems affect the natural environment, how decisions to utilize natural resources are made, and how various political strategies might address environmental concerns. Available majors and required courses appear below.

These requirements are in addition to courses required of all environmental studies majors.

Economics-Environmental Studies:

Economics 177 *Principles of Microeconomics and the Environment* (or Economics 101 *Principles of Microeconomics*); Economics 102 *Principles of Macroeconomics*; Economics 227 *Statistics for Economics* (or Mathematics 128 *Elementary Statistics and Statistics*); Economics 307 *Intermediate Microeconomics*; Economics 308 *Intermediate Macroeconomics*; Economics 477 *Environmental and Natural Resource Economics*; and one additional course in economics. A minimum requirement of 'C' (2.0) is required in Economics 307 and 308.

Politics-Environmental Studies:

one of the following: Politics 124 *Introduction to Politics and the Environment*; Politics 287 *Natural Resource Policy and Management*; Politics 309 *Environment and Politics in the "New West"*; and Politics 339 *Nature, Culture, Politics*; 490 *Senior Seminar*; plus 20 additional credits in politics, at least eight of which must be in 100- and 200-level courses, and at least eight in 300- and 400-level courses. No more than four credits at the 100/200 or 300/400 levels can be earned in off-campus programs or transfer credits.

Sociology-Environmental Studies:

Sociology 117 *Principles of Sociology*; Sociology 207 *Social Research Methods*; Sociology 309 *Environmental Sociology*; Sociology 367 *History of Sociological Theory*; one course chosen from either Sociology 307 *Human Communities*, or Sociology 317 *Population*, or Sociology 348 *Technology and Society*, or Sociology 349 *Environmental Social Movements*, or Sociology 350 *Sociology of Hazards and Disasters*, or Sociology 353 *Environmental Justice*; one additional four credit course in

sociology; Sociology 490 *Current Issues in Sociology*; and Sociology 492 *Directed Research*, or Sociology 498 *Honors Thesis*.

Environmental studies majors are encouraged to study for a semester or a year in a program with strong environmental relevance. Particularly appropriate are Whitman College's field program in environmental studies, Semester in the West; and the School for Field Studies. See *Special Programs* section in this catalog.

120 Introduction to Environmental Studies

4, 4 Fall: Carson; Norgaard and Parker
Spring: Carson

An introduction to interdisciplinary themes in environmental studies, including perspectives from the sciences, social sciences, and humanities. Emphasis is placed on understanding local and regional environmental problems as well as issues of global environmental concern. Students enrolling in this course also will be required to enroll in Environmental Studies 120 *Environmental Studies Excursions*. The weekly afternoon excursions cover the length of the Walla Walla drainage basin, from the Umatilla National Forest to the Columbia River. Excursions may include the watershed, the water and wastewater treatment plants, energy producing facilities, a farm, a paper mill, different ecosystems, and the Johnston Wilderness Campus. This course is required of all environmental studies majors. All environmental studies majors must pass this course with a minimum grade of C (2.0). First-year students and sophomores only (or consent of instructor).

220 Internship

1, 1 Molitor

Either an internship with a college, local, regional, national, or international environmental organization, or an independent project devoted to an appropriate topic or problem, for example, developing a green residence hall at Whitman. Interns must write a final report. Required of environmental studies majors during their sophomore or junior year. Students are encouraged to pursue an internship or independent project for the entire academic year and earn two credits. May be repeated for a maximum of four credits. *Prerequisite*: consent of instructor.

247 The Literature of Nature

4, x Snow

Students will examine the tradition of nature-writing and literary natural history. Readings will be drawn from classics in the field (Gilbert White, Darwin, Emerson and Thoreau, Burroughs and Muir, Leopold, Rachel Carson, Loren Eiseley, Mary Hunter Austin), and from the best contemporary nature-writers (Terry Tempest Williams, Ed Abbey, Annie Dillard, Ellen

Meloy, Wendell Berry, David Quammen). Lectures and discussions will trace how nature-writing has mirrored the evolution of social, cultural, political and scientific perspectives on nature. Distribution area: humanities.

260 Regional Studies

1-3

A study of a specific geographical region using a multidisciplinary approach. Regions covered may include Alaska, western Canada, the northwest or southwest U.S., Hawaii, or Latin America. Lectures, readings, and discussions in various disciplines, concentrating mainly in the natural and social sciences, will precede a one- to three-week field trip. One or more examinations or papers will be required. May be repeated for credit with focus on a different region. *Fee*: variable. *Prerequisite*: consent of instructor. The current offering follows.

260C The Southern Cordillera

1, x

Carson

The Cordillera are the mountains that stretch from Alaska to Tierra del Fuego. This seminar and field trip are to study Patagonia and the southern Andes on the Argentina-Chile border. The emphasis will be on natural history (Los Glaciares and Torres del Paine National Parks and Aconagua), environmental problems (dams, aquaculture, tourists), and culture (especially in Buenos Aires, Santiago, and Mendoza). Field trip in January 2009. *Corequisite*: Geology 158C. *Fee*.

260W Northwestern Wyoming

x, 1

Carson

A seminar on and field trip to the greater Yellowstone ecosystem in northwestern Wyoming and adjacent Montana. Focus on forests, wildlife, and the geologic record from Precambrian through the Cenozoic, including glaciation and volcanism. Field trip in late May/early June. *Corequisite*: Geology 158W. *Fee*.

340 Environmental Radicals in Literature

x, 4

Snow

Much contemporary environmental thought provides a radical critique of industrial and post-industrial society, but in earlier times the first true environmental thinkers challenged systems of agriculture, market economics, land ownership, and urbanism. What was once radical moved toward the center. In this course, students will examine the radical tradition of environmental thought as it has been expressed in literary and other texts. Bioregionalism, ecofeminism, agrarian communalism, Luddism, Deep Ecology, eco-centrism, and other radical environmental expressions will be examined critically. Works by Hawthorne, Thoreau, Ed Abbey, Kirk Sale, Gary Snyder, Susan Griffin, Barbara Kingsolver, Paul Shepard, David Abram and others may be included. Offered in alternate years. Distribution area: humanities

347 The Nature Essay**x, 4****Snow**

The class will be conducted as a nonfiction prose writing workshop in which students read and comment on each others' writing. After examining published works chosen as models, students will write essays in the nature-writing tradition, selecting approaches from a broad menu. Nature-writing includes literary natural history; "science translation writing"; essays on current environmental issues; personal essays based on engagement with land, water, wildlife, wilderness; travel or excursion writing with a focus on nature; "the ramble"; and other approaches. Students will learn how contemporary nature-writers combine elements of fiction, scientific descriptions, personal experience, reporting and exposition into satisfying compositions. Distribution area: humanities or fine arts. *Prerequisite*: consent of instructor.

349 Regional Literatures of Place: The West and the South**4; not offered 2008-09**

The literatures of both the American West and the American South often reflect political struggles. Issues of federalism and states rights, economic dependency on the land, the rapid and radical transformation of an indigenous economy and ecology, and the stain of history stand in the foreground. This seminar will examine literary regionalism by focusing on southern and western writers whose works emanate from and reinforce the ethic and spirit of place. Several of the "Southern Agrarians" may be included along with William Faulkner, Eudora Welty and Flannery O'Connor. Western writers may include Bernard DeVoto, Wallace Stegner, Mary Clearman Blew, John Nichols, Larry Watson and William Kittredge. In addition, films will be used to illustrate the peculiar burden of the contemporary western writer. Offered in alternate years. Distribution area: humanities.

358 Ecocriticism**4, x****Snow**

This course explores the emergence of ecocriticism in the 1990s and its subsequent evolution as a recognizable school of literary and social criticism. Students will analyze foundational texts underpinning ecocritical theory, beginning with Joseph Meeker's *The Comedy of Survival*, then move on to more recent texts that seek to expand ecocriticism beyond the boundaries of nature-writing. Students will discuss, present, and write ecocritical analyses of various literary works. Offered in alternate years. Distribution area: humanities.

360 Environmental Writing and the American West**4, x****Hornbeek and Walka**

This course explores how writers and others conceptualize and portray various aspects of the American West. Emphasis is placed on the analysis of a variety of genres, including nature writing, political journalism, creative writing, poetry, and writing for interdisciplin-

ary journals in environmental studies. We will write daily and we will often read aloud to one another from our work. Goals include developing a voice adaptable to multiple audiences and objectives, understanding modes of argument and effectiveness of style, learning to meet deadlines, sending dispatches, reading aloud, and moving writing from the classroom to public venues. The course will be sequentially team-taught in the eastern Sierra Nevada region of California and southeastern Utah. Required of, and open only to, students accepted to Semester in the West. This course can be used by environmental studies majors to satisfy environmental studies-humanities credits within the major. *Prerequisites*: acceptance into the Semester in the West Program. Distribution area: humanities.

367, 368 Special Topics**1-4**

An investigation of environmentally significant issues centered on a common theme. The course may include lectures by off-campus professionals, discussions, student presentations, and field trips.

367A ST: Introduction to Geographic Information Systems**x, 3****Molitor**

This introductory course provides students with an overview of the general principles of GIS and practical experiences with environmental applications. Specifically, this course seeks to provide students with 1) an overview of the uses of GIS in the environmental arena, 2) a basic understanding of the concepts central to GIS, 3) knowledge of the basics of ArcGIS 9.2 through hands-on experience, and 4) practical experience in design and implementation of a simple GIS project. Students are not expected to have prior experience with GIS, however an understanding of basic computer applications is required. One lecture and one three-hour meeting per week.

390 Independent Study**1-4, 1-4****Staff**

A series of readings or a program of individual research of approved environmental topics. *Prerequisite*: consent of instructor.

408 SW Western Epiphanies: Integrated Project**4, x****Brick**

In this course students will be responsible for developing a final project based Semester in the West experiences with the objective of integrating knowledge from courses in politics, ecology, and writing. Each student will produce a final project that sheds light on a substantive issue addressed on Semester in the West. Students must also present their project in a public forum and publish it as an audiovisual podcast on the Semester in the West Web site. Required of, and open only to students accepted to Semester in the West. *Prerequisites*: Acceptance into the Semester in the West Program.

479 Environmental Citizenship and Leadership

2, 2 Snow, Norgaard, and Molitor

An intensive course in environmental problem-solving, with an emphasis on developing skills necessary for effective environmental citizenship and leadership. Students will first engage in readings and discussions to enhance their understanding of environmental decision-making processes and institutions. Then they will work individually and in teams to study active environmental disputes, with the ultimate aim of recommending formal solutions. This course is required of, and open only to, environmental studies majors in their senior year. Field trips and guest presentations may be included.

488 Senior Project**1-3, 1-3****Staff**

The student will investigate an environmental issue of his or her own choice and prepare a major paper. The topic shall be related to the student's major field of study and must be approved by both major advisers. Required of all senior environmental studies majors, with the exception of those completing an honors project.

498 Honors Project**1-3, 1-3****Staff**

An opportunity for qualified environmental studies senior majors to complete a senior project of honors quality. Requires the student to follow application procedures following the guidelines for honors in major study. Students enrolled in this course must also participate in and meet all requirements of the Environmental Studies 488 course.

The following are abbreviated descriptions of required and/or recommended environmental studies courses. See detailed descriptions under relevant departmental heading in this catalog.

Biology 115 Regional Natural History 4

The natural history of environments near Walla Walla. The course will emphasize applying basic ecological principles to the interpretation of the processes shaping biological communities. The core of the class will be weekly trips in which we develop and apply skills in observing and interpreting local environments from the Columbia River to the Blue Mountains. Through this process, students will become familiar with common plants, animals, and ecological communities of the region.

Biology 122 Plant Biology 3

A predominantly field-oriented course for the nonmajor that covers basics of plant biology, ecological adaptations to different habitats, current plant issues, and the identification of local plants to family; a plant collection is required.

Biology 125 Genes and Genetic Engineering 3

An introduction to the principles of genetics, and to how genetics is applied in medicine, agriculture, forensics, and biotechnology. Social, ethical, political, and economic issues related to genetics and genetic engineering will be discussed.

Biology 127 Nutrition 3

An introduction to the required nutrients and their food sources, their metabolism and eventual functions and fates

in the body. Principles will then be applied to specific life stages and circumstances. Psychological, cultural, agricultural, economic, local and global issues surrounding food will be discussed.

Biology 130 Conservation Biology 4

Designed for nonmajors, this course introduces basic concepts in ecology, genetics, and evolution and applies them to the conservation of diversity. We also read a number of classic writings in conservation and discuss the ethical, and logistical implications of conservation.

Biology 215 Plant Ecology 4

The diverse adaptations of plants to their abiotic and biotic environments from ecological and evolutionary perspectives. Topics will include the effects of climatic factors (water, light, temperature) and soils on plant morphology, physiology, growth, and reproduction, and the complex relationships of plants with other forms of life.

Biology 277 Ecology 4

The interdependent relationships of organisms to one another and to their environment. The concepts and principles of the following subjects are dealt with in the course: the ecosystem, energy in the ecosystem, biogeochemical cycles, abiotic factors, communities, biomes, population dynamics, behavior, conservation, and pollution.

Biology 350 Evolutionary Biology 4

This course addresses the mechanisms and patterns of evolution to give students an appreciation for the applicability of the field to current issues involving biology.

Chemistry 100 Introduction to Environmental Chemistry 3

Application of chemistry to the understanding of radioactivity, air and water quality, drugs and toxins, and energy production and use. No chemistry background presumed.

Chemistry 388 Environmental Chemistry and Science 4

This course will examine the reactions and transport of chemical species in aquatic, terrestrial and atmospheric environments. The laboratory portion will concentrate on sampling design, field sampling methods, and data analysis.

Economics 177 Principles of Microeconomics and the Environment 4

This course provides the same coverage of topics as Economics 101 *Principles of Microeconomics*, but special emphasis is placed on applying concepts to environmental and natural resource issues. Students pursuing an environmental studies combined major and others interested in the environment are encouraged to take this course. Students who receive credit for Economics 101 cannot receive credit for this course.

Economics 277 Global Environmental and Resource Issues 4

The tools of economic analysis are applied to global environmental and natural resource issues such as global pollution, the relationship of trade and the environment, sustainable economic growth and resource scarcity, economic growth and the environment, and natural resource conflicts.

Economics 347 Transportation and the Environment 4

The transportation sector has experienced extraordinary growth in the last 50 years. After reviewing measures and estimates of the environmental and other costs not reflected in the prices of transport services, we consider the efficiency

of policies to contain these costs and some important side effects of the policies.

Economics 477 Environmental and Natural Resource Economics 4

A course providing a general framework for understanding how market failure contributes to pollution and inefficient resource use, and how policies might remedy these problems. The framework is then applied to domestic environmental and natural resource issues.

Geology 130 Weather and Climate 3

An introductory course in meteorology that emphasizes interactions between Earth's atmosphere and humans. Subjects include: global atmospheric circulation patterns, weather analysis and forecasting, origins of destructive weather phenomena, world climates, and human alteration of the atmosphere.

Geology 180 Oceanography 3

An introduction to the geological, physical, and chemical characteristics of the world ocean. Subjects include: plate tectonics, bathymetry, sea floor sedimentation, ocean currents and weather, waves, tides, and coastal processes.

Geology 210 Environmental Geology 4

Geologic aspects of the environment: man's effect upon and interaction with such phenomena as landslides, erosion and deposition of sediments, surface waters, groundwater, volcanism, earthquakes, and permafrost.

Geology 250 Late Cenozoic Geology and Climate Change 3

The geology of the last few million years of earth history, including changes in flora and fauna. What are the causes of ice ages and the alternating glaciations and interglaciations within them? What are the roles of nature and humans in the current global climate change?

Geology 301 Hydrology 3

A study of water resources, including surface and ground water. Emphasis on the hydrologic cycle, ground water depletion, and water pollution.

History 262 Environmental History of the U.S. 4

A course on land and the ways Americans have interacted with it from the colonial era through the 20th century. Themes to be explored include attitudes toward natural resources from trees to minerals; the environmental impacts of settlement, industrialization, urban growth, mining, agriculture, and water use; the emergence of scientific and public health professions dealing with environmental issues; the role of legal, political, and social structures in environmental issues; and movements to preserve "natural" environments or curtail the exploitation of natural resources.

Philosophy 127 Ethics 4

This course consists of the careful reading and discussion of several classical texts of moral philosophy. The aim is to introduce students to moral philosophy, rather than to solve practical problems in ethics as important as these are. Nonetheless, this philosophical study should, as a by-product, enhance the students' ability to deal intelligently with ethical issues in their personal and social lives.

Philosophy 128 Social and Political Philosophy 4

An introductory examination of social and political problems from a philosophical perspective. The course deals with themes such as the nature and foundation of the state, law, justice, liberty, conscience, alienation, and rights.

Philosophy 241 Environmental Aesthetics 4

An attempt to overcome the traditional Western opposition between nature and culture by exploring the question: What is a garden? Special attention will be given to Japanese gardens with a final project of designing your own garden.

Philosophy 250 Environmental Thinking 4

This course will explore different ways of conceiving our relation to nature using paradigms from ancient, medieval, and modern philosophy as well as readings from contemporary sources.

Philosophy 255 Environmental Ethics 4

Are plants and animals or even the environment as a whole worthy of our moral consideration? If they are worthy of such consideration, on what basis are they so deserving? In answering these questions, we will consider the works of such authors as Aldo Leopold, Peter Singer, and Arne Naess.

Philosophy 345 Animals and Philosophy 4

Exploration of the moral and metaphysical status of animals. Are animals merely organic machines or are they conscious beings? Can they think or feel pain? Do they possess beliefs? More importantly, do animals have rights that oblige us to protect them from harm?

Physics 105 Energy and the Environment 3

This course examines the physical principles that govern energy transformations. It will focus on the use of energy in the world, specifically its production, transportation, consumption, and the implications this use has for the environment.

Politics 119 Whitman in the Global Food System 4

This community-based course moves between the historical and theoretical study of the global food system and engaged research projects in the Walla Walla region. Topics range from debates over U.S. farm subsidies to the gender, class, and ecological dynamics of export agriculture in the Third World; from the causes of famine to the politics of obesity.

Politics 124 Introduction to Politics and the Environment 4

An introduction to key concepts in the study of politics, using environmental issues as illustrations. Designed for first- and second-year students, this course encourages critical thinking and writing about key political concepts, such as power, equality, liberty, and community.

Politics 147 International Politics 4

An introduction to a variety of approaches useful in understanding international politics and international political problems, including war, global environmental degradation, poverty, and ethnic conflict.

Politics 287 Natural Resource Policy and Management 4

An introduction to basic problems in natural resource policy-making in the American West. We focus on forests, public rangelands, national parks, biodiversity, energy, water, and recreation. We also review a variety of conservation strategies, including land trusts, incentive-based approaches, and collaborative conservation.

Politics 309 Environment and Politics in the "New West" 4

This seminar explores the changing political landscape of the American West, with emphasis on changing environmental values and on conflicts over natural resource policy. What are the causes of these conflicts, and what kinds of approaches will be necessary to address them? A field trip is required. One meeting per week.

Politics 339 Nature, Culture, Politics 4

This seminar explores changing understandings of nature in American culture, the role of social power in constructing these understandings, and the implications these understandings have for the environmental movement.

Politics 373 Political Ecology of Latin America 4

This course examines the environmental politics of Latin America. It focuses on struggles over different natural resources — water, land, minerals, forests, and genetic material — with an eye toward understanding the complex relations between nature and society.

Religion 227 Christian Ethics 4

This course explores the nature of Christian ethical judgment (ethical norms, the nature of ethical reasoning and argument) and a number of contemporary ethical issues, such as medical ethics (including abortion and genetic research), war, and pacifism.

Sociology 293A Animals in Society 4

Animals have been part of human society since its inception. This course examines a variety of animal-human interactions in contemporary western societies, including those in which animals function as house pets, livestock, hunters' quarry, work animals, and wildlife. We will discuss animals' roles as social actors, social movements aimed at improving animals' treatment in society and their critics, and the specific ways in which humans define themselves in relation to animals.

Sociology 294A Sustainable Food and Agriculture Systems 4

This class will explore the current state of food and agriculture systems, with special attention paid to the local and regional food system. We will study the relatively new notion of "sustainability", and how it applies to the management of agri-ecosystems, rural communities, human nutrition, and the cultural meaning of food.

Sociology 307 Human Communities 4

An investigation of the relationship between nature and community by raising questions such as: which forms of community best support the resolution of environmental problems? The course draws from sociological theories of community and the city, case studies taken from the developed and developing worlds, and contacts with local community organizations.

Sociology 309 Environmental Sociology 4

This course will review sociological theory on the causes and consequences of ecological degradation and resource scarcity. Topics will include: specific local and global ecological problems, theories on political economy of the environment, the treadmill of production, environment and risk, the sociology of environmental science, globalization and environmental movements.

Sociology 317 Population 4

An introduction to population theories and to sociological research on population growth, distribution, and composition within a world context. Problems of food production and distribution, agricultural development, and the environmental consequences of different farming systems will be analyzed in relation to population changes and the larger processes of social change.

Sociology 348 Technology and Society 4

A critical approach to the social culture and history of technology. Topics vary from war and mass communications technologies to the impacts of bio-research and power generation. A number of interdisciplinary materials will be used, ranging from technical, ethnographic, and historical studies, to literature, science fiction, and philosophy.

Sociology 349 Environmental Social Movements 4

Why do social movements happen? Why do some social movements succeed in producing change while others fail? How do different experiences across gender, race and class inform the emergence, goals and dynamics of environmental social movements? This course will use micro and macro sociological theory to study social change, reform and collective behavior using environmental movements and environmental backlash movements as case studies.

Sociology 350 Sociology of Hazards & Disasters 4

This course analyzes the ways in which human communities prepare for, respond to, and bring about calamitous environmental change. Topics include the social/natural interface, risk analysis, environmental justice issues, and myths about human behavior in emergencies.

Sociology 353 Environmental Justice 4

Local and worldwide ecological degradation including deforestation, declining salmon runs, and global warming has human consequences: people lose jobs, face toxic exposure and are caught in the midst of conflicts over scarce resources. The concepts of environmental racism and environment justice represent the disproportionate exposure to environmental degradation faced by the poor, women, people of color and citizens of the South.

Spanish 437/WLIT 339 Eco-Literature in the Americas 4

This seminar addresses different aspects of nature and the environment as represented in fictional and nonfictional texts from different regions of the hemisphere.