

HSCI 3473

The History of Ecology and Environmentalism

Associate Professor Hunter Heyck

Office: PHSC 601 Office Hours: MW: 11:30-12:15

Office Phone: 325-6476 Email: hheyck@ou.edu

Course Web site: <http://learn.ou.edu>

Course Description:

The industrial transformation of the West was both a cause and a consequence of new attitudes towards nature. At the same that industry remade both the physical and the social landscapes of Western society, science rose to a new position of authority in Western culture. In this course, we will explore changing ideas and attitudes towards nature and its exploitation from the Industrial Revolution to the present, focusing on the relationships among science, industrial development, and environmental politics.

Course Mechanics:

Each week, except the first two, there will be three class meetings. You are expected to attend every class unless you have a family emergency, are ill, or have some other legitimate reason for having to miss class. If you know that you will have to miss a class, you should let me know as soon as possible. Like most professors, I am much more sympathetic to excuses presented **before** rather than **after** the fact. If you have a question or concern, **please talk to me**. Your job in this class is to learn, and my job is to help you do it. Asking questions helps both of us do our jobs better, and I only rarely bite off students' heads.

Typically, on Mondays I will present a lecture intended to provide an overview of the main topics and themes for the week. Wednesdays and Fridays will be devoted to discussion of the lecture material and the week's readings. Wednesdays **will begin with a short quiz** on the lecture **and** the week's readings. Note that this means you will need to have completed the week's readings **before class on Wednesday**.

On discussion days, you will divide into small groups. You will keep the same groups all semester unless I decide that it's best to move someone to a different group. During each discussion, your group will have a set of questions to answer. Some will be fairly straightforward, some will require a bit of interpretation and imagination to answer. You will answer the questions as a group, with one person recording your group's answers. The recorder for the group should change each week. I will circulate from group to group during the discussion, answering (and asking) questions. Your group's grade will depend not only on the quality of the answers but also on the quality of the discussion; a group where everyone chips in will get a better grade than one in which only one or two people do all the talking. You will get a chance to evaluate your group-mates' contributions three times during the

semester: just before each midterm and just before the final. These peer evaluations will be used to inform my judgment regarding your individual participation grades.

There will be two midterms and a final exam. Each midterm covers the material since the previous midterm, up to and including the lecture and readings for the week of the midterm. The quizzes are to test basic understanding of the material; the midterms and exam are to assess your ability to connect basic facts with broader themes.

You also will write a research paper of **9-10 pages, plus notes and bibliography**. A style sheet will be posted online with specific instructions regarding format for this paper. Note that there are several preliminary assignments leading up to the final paper; these preliminary assignments will not be graded, but if they do not meet an acceptable minimum standard, then the final paper grade will be lowered accordingly.

Grade Breakdown.

Group Discussion: 12%

Midterms: 12% (each)

Quizzes: 12% (total)

Individual Participation: 12%

Final Exam: 20%

Research Paper: 20%

Books to Buy

- 1) Donald Worster, *Nature's Economy*, 2nd ed. (NY: Cambridge University Press, 1994).
- 2) Roderick Nash, *Wilderness and the American Mind*, 4th ed. (NY: Yale University Press, 2001).
- 3) William Cronon, *Nature's Metropolis*. (NY: Norton, 1991).
- 4) Philip Appleman, Ed., *Darwin.*, Norton Critical Edition, 3rd ed. (NY: Norton, 1997).
- 5) Samuel Hays, *Conservation and the Gospel of Efficiency*. (Pittsburgh: University of Pittsburgh Press, 1999).
- 6) Marc Reisner, *Cadillac Desert*. (NY: Penguin, 1993).
- 7) Donald Worster, *The Dust Bowl*. (NY: Oxford University Press, 1982).
- 8) Rachel Carson, *Silent Spring*. (NY: Mariner Books, 2002).
- 9) Elizabeth Kolbert, *Field Notes from a Catastrophe: Man, Nature, and Climate Change*. (NY: Bloomsbury, 2006).

The books above are all available at the University Bookstore.

Course Schedule

Week 1: Humans and Nature Before Industrialization

Jan 14: **No Class. Fall Final Exam Reschedule Day**

Jan 16: Opening Day presentation.

Jan 18: Lecture: Arcadia, the Wild, and the Mine: Western attitudes towards nature and its exploitation in the 17th-18th centuries.

Readings:

- 1) Lynn White, Jr., "The Historical Roots of Our Ecologic Crisis," *Science*, New Series, Vol. 155, No. 3767 (Mar. 10, 1967): 1203-07. **On D2L.**
- 2) Roderick Nash, *Wilderness and the American Mind*, Prologue and Chapter 1, pp. 1-22.
- 3) Donald Worster, *Nature's Economy*, Chapters 1-2, pp. 3-55.

Week 2: Industrialization, Urbanization, and the Commodification of Nature

Jan 21: **No Class. MLK Day.**

Jan 23: The Industrial Revolution: Science, Technology, and the Control of Nature.

Jan 25: Group Discussions: first nature, second nature.

Reading:

- 1) William Cronon, *Nature's Metropolis*, Prologue, Chapters 1-3, and Chapter 5, pp. 5-147, 207-262.

Week 3: The Romantic Response to Industrialization

Jan 28: Depicting Nature: Exploration, Exploitation, and Natural History.

Jan 30: Group Discussions: depicting nature.

Readings:

- 1) Roderick Nash, *Wilderness and the American Mind*, Chapters 3-5, pp. 44-95.
- 2) Leo Marx, "The Machine in the Garden," *New England Quarterly*, vol. 29, no. 1 (Mar. 1956): 27-42. **On D2L.**
- 3) William Bartram, *Travels and Other Writings*, pp. 13-28, 63-73. (Course pack.)
- 4) William Wordsworth, "Tintern Abbey," from *Norton Anthology of English Literature*, 5th Ed., pp. 151-55. **On D2L.**
- 5) Henry David Thoreau, "The Natural History of Massachusetts," from *The Essays of Henry David Thoreau*, pp. 3-23. **On D2L.**

Feb 1: Group Reports: depicting nature.

Week 4: Evolution

Feb 4: The Origins of Darwin.

Feb 6: Group Discussions: evolution and ecology.

Readings:

- 1) Thomas Malthus, "An Essay on the Principle of Population," in *Darwin*, Philip Appleman, Ed., pp. 39-41.
- 2) Darwin, selections from *The Origin of Species* in *Darwin*, pp. 95-174.
- 3) Peter Kropotkin, "Mutual Aid," in *Darwin*, pp. 398-403.

Feb 8: Group Reports: evolution and ecology.

Week 5: The Birth of Ecology

Feb 11: *Oikonomia* and *Oecology*—The Sciences of Resource Management.

Feb 13: Group Discussions: nature's economy.

Readings:

- 1) Lynn Nyhart, "Civic and Economic Zoology in Nineteenth-Century Germany," *Isis*, Vol. 89, No. 4 (Dec. 1998): 605-30. **On D2L.**
- 2) Donald Worster, *Nature's Economy*, Chapters 10-11, pp. 189-220.

Feb 15: **Midterm #1.**

Week 6: The Conservation Movement

Feb 18: The Search for Order: conservation, the city beautiful, and the efficient control of nature.

Feb 20: Group Discussions: conservation and the gospel of efficiency.

Readings:

- 1) Samuel Hays, *Conservation and the Gospel of Efficiency*, Chapters 1-7, pp. 1-146.
- 2) John Muir, "The Wild Parks and Forest Reservations of the West," from *Our National Parks*, pp. 1-36. **On D2L.**

Feb 22: Group Reports: conservation and the gospel of efficiency.

Week 7: Water and the West

Feb 25: Taming the Floods, Making the Desert Bloom.

Feb 27: Group Discussions: water, the government, and the West.

Reading:

- 1) Marc Reisner, *Cadillac Desert*, Introduction, Chapters 1-5, Epilogue, pp. 1-168, 477-95.

Feb 29: Group Reports: water, the government, and the West.

Week 8: The Dust Bowl

Mar 3: Drought, Dust, and Disaster. **Topic statements for research papers are due!!!**

Mar 5: Group Discussions: the Dust Bowl.

Reading:

- 1) Donald Worster, *The Dust Bowl* (entire).

Mar 7: Group Reports: the Dust Bowl.

Week 9: The Ecosystem Concept

Mar 10: The Core of the Discipline: the Idea of an Ecosystem.

Mar 12: Group Discussions: the ecosystem.

Readings:

- 1) Donald Worster, *Nature's Economy*, Chapter 14, pp. 291-315.
- 2) Peter Taylor, "Technocratic Optimism, H.T. Odum, and the Partial Transformation of the Ecological Metaphor after World War II," *Journal of the History of Biology*, Vol. 21, no. 2 (Summer 1988): 213-44. **On D2L.**

Mar 14: **Midterm #2.**

Week 10: Spring Break

Mar 17: Go Home.

Mar 19: Rest.

Mar 21: Relax.

Week 11: An Environmental Ethic

Mar 24: The Ethics of Interdependence. **Bibliographies for research papers are due!!!**

Mar 26: Group Discussions: environmental ethics.

Readings:

- 1) Roderick Nash, *Wilderness and the American Mind*, Chapter 11, pp. 182-199.
- 2) Aldo Leopold, *A Sand County Almanac*, pp. 6-18, 217-42. **On D2L.**
- 3) Paul Sears, *Deserts on the March*, Chapters 1, 14, and 16, pp. 1-11, 171-184, 197-218.

On D2L.

Mar 28: Group Reports: environmental ethics.

Week 12: The Subversive Science?

Mar 31: Beauty, Health, and Permanence: The Origins of the Environmental Movement.

Apr 2: Group Discussions: *Silent Spring* and environmental politics.

Readings:

- 1) Rachel Carson, *Silent Spring* (entire).
- 2) Donald Worster, *Nature's Economy*, Chapter 16, pp. 340-87.

Apr 4: Group Reports: *Silent Spring*.

Week 13: Ecology and Economics

Apr 7: The Dismal Science? **Thesis paragraphs and outlines are due!!!**

Apr 9: Group Discussions: economics vs. ecology?

Readings:

- 1) Garrett Hardin, "The Tragedy of the Commons," *Science*, New Series, Vol. 162, No. 3859 (Dec. 13, 1968): 1243-48. **On D2L.**
- 2) E.F. Schumacher, *Small is Beautiful*, pp. 108-124, 173-180. **On D2L.**
- 3) Herman Daly, "Economics in a Full World," *Scientific American*, September 2005, pp. 100-107. **On D2L.**
- 4) Bjorn Lomborg, *The Skeptical Environmentalist*, Chapter 1, pp. 3-33. **On D2L.**

Apr 11: Group Reports: economics vs. ecology?

Week 14: The Politics of Environmental Science

Apr 14: Risk and Reaction: from Earth Day to the Sagebrush Rebellion.

Apr 16: Group Discussions: risk and reaction.

Readings:

- 1) Donald Worster, *Nature's Economy*, Chapter 17, pp. 388-433.
- 2) Dorothy Nelkin, "Scientists and Professional Responsibility," *Social Studies of Science*, Vol. 7, No. 1 (Feb. 1977): 75-95. **On D2L.**
- 3) Sagebrush Rebellion documents from *Major Problems in the History of the American West*, pp. 490-517. **On D2L.**

Apr 18: Group Reports: risk and reaction.

Week 15: Environmental Science and Politics Today: Popular Ecology

Apr 21: Hazardous Places, Politicized Lives.

Apr 23: Group Discussions: popular ecology

Readings (choose **one** of the following):

- 1) Watch *Erin Brockovitch*.
- 2) Watch *A Civil Action*.
- 3) Watch *An Inconvenient Truth*.
- 4) Visit the Museum of Natural History *Natural Wonders* exhibit.

Apr 25: Group Reports: act locally?

Research Papers Are Due!!!

Week 16: Environmental Science and Politics Today: the Global Change

Apr 28: Greenhouse Politics: the West vs. the Rest?

Apr 30: Group Discussions: think globally?

Reading:

- 1) Elizabeth Kolbert, *Field Notes from a Catastrophe*.

May 2: Group Reports: think globally?

Final Exam: Friday, May 9, 8-10 a.m.