

THE GEORGE WASHINGTON UNIVERSITY
Department of Economics
Natural Resource and Environmental Economics, ECON 136
Spring 2007
T TH 8:00-9:15am, Philips 110

Professor: Benjamin Simon
Office Hours: by appointment
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COURSE DESCRIPTION. The course will apply the tools of microeconomics to analyze a variety of environmental and natural resource problems and policies. Economic reasoning will be used to examine the causes of environmental/resource problems, the consequences of these problems, and the measures for dealing with them.

PREREQUISITES. Econ 11 and 12 are prerequisites for the course. Students must be familiar with the material in Econ 11 on the theory of the firm and the functioning of competitive markets.

REQUIREMENTS AND GRADING. Approximately four homework sets will be assigned over the course of the semester. Homework will not be collected, however, answer sheets will be provided. Feel free to ask me about problems you have trouble with. Depending on circumstances, I will go over them in class.

Four quizzes based on the homeworks, readings, and lecture notes will be given over the course of the semester. Each quiz will be announced one week before it is given. There will be **no make-up quizzes**, however, the lowest quiz grade will be dropped.

In addition to the quizzes, a **midterm exam** and a **final exam** will be given. The midterm exam is tentatively scheduled for March 9. ***Make-up exams will be given only in extraordinary circumstances, and only if arranged at least one week in advance.***

The course grade will be calculated using the following weights:

midterm exam - 35%
quizzes - 30%
final exam - 35%.

For extra credit, you may write a seven to ten page paper analyzing an environmental/natural resource issue from an economic perspective. A list of possible topics will be handed out, but you may choose your own topic, subject to my approval. The paper will be due on May 1, 2007; **papers will not be accepted after this date.** Up to four percentage points will be added to your overall course score for writing a paper. ***Papers should be formatted with 1 inch margins and 12 point font.***

TEXTBOOKS. (1) James Kahn, *The Economic Approach to Environmental and Natural*

Resources, 3rd ed., Dryden Press, 1998. (2) Eban Goodstein, *Economics and the Environment*, 4th ed., Prentice-Hall, 1999. The abbreviations JK and EG, respectively, are used when referring to these texts below.

TOPICS AND READINGS. A tentative list of topics to be covered and accompanying readings are presented below. Readings are divided into two categories -- required and optional.

Optional readings are marked with an asterisk. Readings outside the texts will be available via Blackboard or handed out in class.

Topic 1: Background

JK, Chap. 1

EG, Chaps. 1 and 2

Robert Dorfman, "Some Concepts from Welfare Economics," in *Economics of the Environment: Selected Readings*, 3rd ed., ed. by R. Dorfman and N.S. Dorfman, Norton, 1993, pp. 86-96.

Bjorn Lomborg, "The Truth About the Environment," *The Economist*, August 2, 2001.

Only available online at:

http://www.economist.com/opinion/displayStory.cfm?Story_ID=718860

Union of Concerned Scientists, "UCS examines The Skeptical Environmentalist by Bjørn Lomborg." Only available online at:

http://www.ucsusa.org/global_environment/archive/page.cfm?pageID=533

Be sure to read the report by Peter Gleick that appears as a link on this page under "Related Links." You can read more about the book and the controversy surrounding it at: <http://www.lomborg.com/books.htm>

*David Pearce and Kerry Turner, "The Circular Economy," Chapter 2 in *Economics of Natural Resources and the Environment*, Johns Hopkins University Press, 1990.

Topic 2: Property Rights and Market Failures

EG, Chap. 3 including Appendix 3A

JK, Chap. 2 (only to p. 33)

John H. Dales, "The Property Interface," Chapter V in *Pollution, Property, and Prices*, University of Toronto Press, 1968.

George Monbiot, "The Tragedy of Enclosure," *Scientific American*, January 1994. Only available online at:

<http://www.monbiot.com/archives/1994/01/01/the-tragedy-of-enclosure/>

Matt Ridley and Bobbi S. Low, "Can Selfishness Save the Environment?" *The Atlantic Monthly*, September 1993, pp. 76-86. Available online at:
<http://www.chem.brown.edu/chem12/readings/atlantic/china/selfish.htm>

Thomas Dietz, et al. "The Struggle to Govern the Commons," *Science*, Vol 302, December 12, 2003.

Topic 3: Biodiversity

JK, Chap. 14

*Gowdy, John M. "The Value of Biodiversity: Markets, Society, and Ecosystems," *Land Economics*, Vol. 73, No. 1, 1997.

*Conservation International, "Encouraging Private Sector Support for Biodiversity Conservation: The Use of Economic Incentives and Legal Tools," 1996.

Topic 4: Government Failures

Gareth Porter, "Natural Resource Subsidies, Trade and Environment: The Cases of Forests and Fisheries," *Journal of Environment and Development*, vol. 6, no. 3, September 1997. **Only Parts I and II of the article are required reading.**

Frances Cairncross, "Government Failures," Chapter 3 in *Costing the Earth*, Harvard Business School Press, 1992.

*Theodore Panayotou, "The Economics of Environmental Degradation: Problems, Causes and Responses," in *Environmental Economics: A Reader*, ed. by Anil Markandya and Julie Anderson, St. Martin's Press, 1992.

*A.P.G. de Moor, "Perverse Incentives—Subsidies and Sustainable Development," Institute for Research on Public Expenditure, 1997.

Topic 5: Benefit-Cost Analysis

JK, Chap. 4

EG, Chaps. 9 and 10

Steven Rhoads, "Kind Hearts and Opportunity Costs," *Across the Board*, December 1985, pp. 40-47.

Steven Kelman, "Cost-Benefit Analysis: An Ethical Critique," *Regulation*, Vol. 10, Jan./Feb 1981, pp. 33-40, along with the replies to this article that appeared in the March/April, 1981 issue of *Regulation*.

Herman Leonard and Richard Zeckhauser, "Cost-Benefit Analysis Defended," *QQ: Report from the Center for Philosophy and Public Policy*, University of Maryland at College Park, Vol. 3, No. 3 (Summer 1983), pp. 6-9. Reprinted in *The Environmental Ethics and Policy Book*, 3rd ed. (D. VanDeVeer and C. Pierce, eds.), Wadsworth, 2003.

Topic 6: Economics of Pollution Control

JK, Chap. 3

EG, Chaps. 4, 16 including Appendix 16A, 17

David Lapp, "Inside Pollution Trading," *Environmental Action*, Winter 1994, pp. 17-24 only.

Richard Walker, "The Illusion of Effluent Charges, or Regulatory Dilution is No Solution to Pollution," *Antipode*, Vol. 14, No. 2, 1982, pp. 12-20.

Topic 7: Overview of U.S. Environmental Policy

EG, Chaps. 12, 13 and 14

*Paul Portney Robert Stavins, *Public Policies for Environmental Protection*, 2nd ed, Resources for the Future, 2000.

*J. Clarence Davies and Jan Mazurek, *Pollution Control in the United States: Evaluating the System*, Resources for the Future, 1999.

Topic 8: Global Environmental Problems

JK, Chap. 7

EG, Chap. 23

Mark Sagoff, "Controlling Global Climate: The Debate over Pollution Trading", Institute for Philosophy and Public Policy, University of Maryland, *The Report*, Vol. 19, No. 1, Winter 1999.

Thomas Lyon, "Voluntary versus Mandatory Approaches To Climate Change Mitigation," Resources for the Future Issue Brief 03-01, February 2003. Only available online at:
www.rff.org/rff/Documents/RFF-IB-03-01.pdf

Larry Karp, "Why we should be willing to devote more resources to avoid climate change," Gianini Foundation fo Agricultural Economics, University of California. 2006.

John W. Anderson, *Why the Climate Change Conference Failed: An Analysis*, Weathervane Note, December 2000. Only available online at:
www.weathervane.rff.org/negtable/COP6/analysis_anderson.htm

*Raymond Kopp and Jennifer Thatcher, *The Weathervane Guide to Climate Policy—An RFF Reader*, Nov. 2000. Only available online at:
www.weathervane.rff.org/misc/weathervaneguide/index.htm

*Todd Sandler, *Global Challenges: An Approach to Environmental, Political, and Economic Problems*, Cambridge University Press, 1997.

Topic 9: Exhaustible Resources

JK, Chap. 2 (pp. 32-37), Appendices 2A and 2B, Chap. 18

*John M. Hartwick and Nancy D. Olewiler, *The Economics of Natural Resource Use*, 2nd ed., Addison-Wesley, 1998, Chapters 8 and 9.

*Joseph E. Stiglitz, "A Neoclassical Analysis of the Economics of Natural Resources," in *Scarcity and Growth Reconsidered*, ed. by V.K. Smith, Johns Hopkins University Press, 1979.

Topic 10: Renewable Resources— Forests

JK, Chap. 12 and 13

*Robert T. Deacon, "The Simple Analytics of Forest Economics," in *Forestlands: Public and Private*, ed. by R.T. Deacon and M.B. Johnson, Ballinger Publishing Co., 1985.

*Theodore Panayatou and Peter Ashton, *Not by Timber Alone: Economics and Ecology for Sustaining Tropical Forests*, Island Press, 1992.

*United Nations Food and Agriculture Organization, "Forest Development and Policy Dilemmas, in *The State of Food and Agriculture—1994*, FAO Agriculture Series, No. 27, Rome, 1994. Available online at: www.fao.org/docrep/T4450E/T4450E00.htm#Contents

Topic 11: Sustainable Development

EG, Chaps. 6 and 7

Mark Sagoff, "Do We Consume too Much," *The Atlantic Monthly*, June 1997. Only available online at: www.theatlantic.com/issues/97jun/consume.htm

Paul Ehrlich, *et al.*, "No Middle Way on the Environment," *The Atlantic Monthly*, December 1997. Only available online at: www.theatlantic.com/issues/97dec/enviro.htm#Ehrlich

*Roger Perman, Yue Ma, and James McGilvray, "Sustainability and Sustainable Development," Chapter 3 in *Natural Resource and Environmental Economics*, Longman, 1996.

*David Pearce and Jeremy Warford, *World Without End: Economics, Environment, and Sustainable Development*, Oxford University Press, 1993.

*Norman Myers with Jennifer Kent, *Perverse Subsidies: Tax \$s Undercutting our Economies and Environments Alike*, International Institute for Sustainable Development, Winnipeg, Canada, 1998. Only available online at: <http://iisd1.iisd.ca/about/prodcat/govern.htm#perverse>