

AECN/NREE 265

Website: <http://agecon.unl.edu>

Blackboard website: <http://my.unl.edu>

Instructor: Bruce Johnson

Office: 314B Filley Hall

Telephone: Office: 472-1794
Home: 782-2117

Office Hours: 8-10 a.m.
MWF or by appointment

E-Mail: bjohnson2@unl.edu

Course Description:

Introduction to resource and environmental economics and the role of economic tools and concepts in natural resource management. Focus on the interface of economics and ecology in the context of both private and societal decision making.

Purpose of the Course:

This course is structured to give the student understanding of economic concepts and skills of economic analysis that are critical in addressing environmental and natural resource issues.

Specific Objective:

1. Apply systems thinking to the challenges associated with natural resource use and management.
2. Equip the student with basic understanding of economic concepts and tools of analysis for applying to environmental and natural resource issues.
3. Provide a positive learning opportunity for applying the concepts and tools to specific environmental issues of interest to the student.

Performance Objectives:

Upon successful completion of the course, the student will:

1. Have a working knowledge of key economic concepts as they pertain to the natural environment and resource use including the intellectual biases and controversies that are present in the subject matter.
2. Be able to relate physical, biological, economic and institutional factors in a systems context to individual and societal resource management issues.
3. Understand and be able to apply present value analysis and other analytical tools to environmental issues.
4. Appreciate the role of property rights/responsibilities and policy in environmental issues.
5. Be familiar with the valuation and measurement of non-market goods and their roles in policy formation.
6. Be more articulate and effective in pursuing his/her environmental passions(s), using appropriate analysis and effective oral and written communication skills.

Materials:

Harris, Jonathon. Environmental and Natural Resource Economics: A Contemporary Approach, II Edition. 2006. Hughton Mifflin Co.

The text is required and will be used extensively throughout the semester. Also, a supplemental readings packet with class notes will be used, and can be purchased in Room 314 Filley Hall.

Comment on Reading Assignments:

The assigned readings will be critical to the educational process. The student is expected to be current on the readings, having read the assignments for both understanding and application. Students will be accountable in class to discuss the assigned topic (both orally and in writing). This will facilitate an interactive class dynamic.

Course Methods:

An interactive format will be emphasized, based on the belief that all course participants have a contribution to make to the collective learning process. Te knowledge and understanding, both fomal and experiential, which each person brings to this class is a valuable and respected asset. Moreover, we all bring unique deep seated value sets regarding the environment. Be prepared to discuss, debate, and defend in a spirited and collegial manner.

The above implies that class attendance and active student participation is expected. See or e-mail me if you know ahead of time that you must be absent for a class session.

Grading Policy:

Course grade will be determined as follows:

	Option A	Option B
Three Hour Exams	60% (20% each)	45% (15% each)
Assignments	10%	10%
Team Project	10%	10%
Final Exam	15%	15%
Class Participation	5%	5%
Book Review	0%	15%
TOTAL	100%	100%

Book Review Option:

Read one of the following books and prepare a five to seven page book review and critique Address its relevance, its accuracy, and its application (or lack thereof) to your own lifestyle and perspective for the future.

Brown, Lester B., Plan B 3.0: Rescuing a Planet Under stress and a Civilization in Trouble.

Kunstler, James H., The Long Emergency: Surviving the End of Oil, Climate Change, and Other Converging Catastrophes of the 21st Century, Grove Press. 2005.

McKibben, Bill; Deep Economy: The Wealth of Communities and Durable Futures, Times Books, 2007.

McDorough, William and Michael Braungart, Cradle to Cradle: Remaking the Way We Make Things. North Point Press, 2002

The grading scheme for the course will be:

Grade	% of Total Points	Grade	% of Total Points
A	92-100	C	72-75
A-	90-91	C-	70-71
B+	86-89	D+	66-69
B	82-85	D	62-65
B-	80-81	D-	60-61
C+	76-79	F	<60

The course can be taken Pass/No Pass, with a passing grade considered C or above. Students may switch to the Pass/No Pass basis through the eighth week of the semester.

A variety of question formats will be used in exams in an attempt to measure student understanding and competence as accurately as possible. Exams will be weighted toward the problem-solving format focusing on understanding and application of concepts. Short-answer and essay questions will be used liberally. The intent will be to measure one's ability to analyze, synthesize, evaluate and articulate much more than memorizing facts and definitions.

Useful Websites:

Resources for the Future – Economic research on the environment and natural resources. Particularly good section on methods, tools and techniques. <http://www.rff.org>

Envirolink Home page – Environmental news and information. <http://www.envirolink.org/>

Sierra Club Homepage – current resource issues and policy information. <http://www.sierraclub.org>

USDA Forest Service <http://www.fs.fed.us/>

Winrock International: Henry A. Wallace Center for Agricultural and Environmental Policy http://www.winrock.org/what/wallace_center.cfm

World Resources Institute – Excellent source of global information on the state of the world's resources. <http://www.wri.org/wri/>

Virtual Library on Common Property – Good resources and links to common property issues <http://www.indiana.edu/~iascp/library.html>

U.S. Environmental Protection Agency – much information accessible via this link <http://www.epa.gov/>

American Wind Energy Asso. <http://www.awea.org>

U.S. Department of Energy: Energy Efficiency and Renewable Energy network (EREN) – comprehensive links and resources <http://www.eere.energy.gov/>

Natural Resources Defense Council – Comprehensive site <http://www.nrdc.org>

Natural Resources and Environmental Science Information – good internet resources
<http://www4.ncsu.edu/~leung/forlit.html>

Virtual Library: Environment <http://www.ldb.org/envIRON.htm>

Natural Resources Conservation Service, USDA – good source for resource programs in agriculture
<http://www.nrcs.usda.gov/>

World Bank Environmental Economics and Indicators – information on environmental: valuation, indicators, policy, initiatives, etc. <http://www.worldbank.org/environmentaleconomics>

Nature Conservancy - a liberal environmental group which really accomplishes its objectives
<http://www.tnc.org/>

Competitive Enterprise Institute – conservative organization with considerable antagonism towards governmental involvement <http://www.cei.org/>

Union of Concerned Scientists – several valuable studies can be accessed here including a study of expanding wind power in Nebraska. <http://www.ucsusa.org/>

Global Climate – Information based on global climatic change with a wide range of views and links.
www.globalclimate.org

Environmental Protection Agency (EPA) Economic Analysis Section – some reports can be downloaded. <http://www.epa.gov/ttn/ecas/reports.html>

U.S. Department of Agriculture (USDA) Go to Natural Resources and Environment.
<http://www.usda.gov/wps/portal/usdahome>

World Resources Institute. <http://www.wri.org/>

Worldwatch Institute – Depth research on sustainable futures <http://www.worldwatch.org>

Economic Data Source – an excellent site for linking to a variety of economic data series including environmental indicators www.econdata.net

Intergovernmental Panel on Climate Change (IPCC) Information on impacts, adaptation, and vulnerability. www.ipcc.ch/pb

Food and Agriculture Organization (FAO) reports on food production worldwide.
www.fao.org/

Earth Policy Institute – Focus on an eco-economy with current updates and news items.
<http://www.earth-policy.org/>

Natural Capitalism: Creating the next Industrial Revolution – Bold look at interfacing the economy and the environment. <http://www.natcap.org>

Nebraska Energy Quarterly – current development in energy use <http://www.neo.ne.gov/neq>

Pew Center for Global Climatic Change Current Information and analysis of climatic change <http://www.pewclimate.org/>

National Renewable Energy Laboratory (NREL) – conducts research on renewable energy technologies. <http://www.nrel.gov/>

Rocky Mountain Institute – Fosters efficient use of resources, particularly energy in industry and households. <http://www.rmi.org/>

Yale Environment 360 – A valuable on-line commentary of current thinking. <http://e360.yale.edu/>

AECN/NREE 265
Semester Schedule

Week	Discussion Topic/Activity	Assignment
Week 1		
August 24	Introduction & Discussion of Environmental Issues of Interest	Course Syllabus
August 26	Review and Discussion of “Natural Capitalism: Creating the Next Industrial Revolution. Download From: http://www.nacap.org (Click to Beyond the Book to Other National Capitalism articles to roadmap for national capitalism)	
August 28	Environment Economics using Systems thinking: An Introduction to <u>Fifth Discipline</u> by Peter Senge. Download from: http://home.nycap.rr.com/RLavsen/learningorg/senge.html	
Week 2		
Aug 31-Sept 4	The Economy and the Environment	Harris Chp. 1 pp. 63-72 Readings 3-10
Week 3		
Sept. 7	Labor Day	
Sept. 9-11	Resources, Environment and Economic Development	Harris Chp. 2
Week 4		
Sept. 14-16	Environmental Externalities	Harris Chp. 3 Readings 12-35
Sept. 18	Common Property and Public Goods	Harris Chp. 4 Readings 36-53
Week 5		
Sept. 21	Review an Team Project Work	
Sept 23	1 st Hour Exam	
Sept 25	Dynamic Efficiency, Discounting, and Present Value	Harris Chp. 5 Readings 54-80
Week 6		
Sept. 28-30	Dynamic Efficiency, Discounting, and Present Value Cont.	
Oct 2	Valuing the Environment and Cost-Benefit Analysis. Download from: http://ase.tufts.edu/gdae/publicaions/c-b%20amp Pricing the Priceless: Cost Benefit Analysis of Environmental Protection	Harris Chp. 6
Week 7		
Oct 5	Valuing the Environment and Cost-Benefit Analysis Cont.	
Oct 7-9	Ecological Economics and Sustainability	Harris Chp. 7 Readings 82-102
Week 8		
Oct. 12-14	National Income and Environmental Accounting	Harris Chp. 8 Readings 103-106
Oct. 16	Review and Team Project Work	
Week 9		
Oct. 19	Fall break	

Week	Discussion Topic/Activity	Assignment
Oct 21	2 nd hour exam	
Oct 23	Economics of Consumption. Download from: http://ase.tufts.edu/gdae	
Week 10		
Oct. 26	Economics of Consumption Cont.	
Oct. 28-30	Energy Economics	Harris Chp. 13 Readings 107-147
Week 11		
Nov. 2	Energy Economics Cont.	
Nov. 4	Ecosystem Management: The Case of Water	Harris Chp. 15
Nov. 6	Global Climate Change. Download: http://www.energybulletin.net/nsde/2770 (stabilization wedges)	Harris Chp. 18 Readings 148-172
Week 12		
Nov. 9-11	Global Climate Change Cont.	
Nov. 13	The Role of Agriculture, download: http://www.usda.gov/AmberWares/September08/Features/creatingMarkets.htm	Harris Chp. 11 Readings 173-188
Week 13		
Nov. 16	The Role of Agriculture Cont.	
Nov. 18	Pollution Analysis and Policy	Harris Chp. 16 Readings 189-214
Nov. 20	Review and Team Project Work	
Week 14		
Nov. 23	Third Hour Exam	
Nov. 25-27	Thanksgiving Break	
Week 15		
Nov. 30	Pollution Analysis and Policy Cont.	
Dec. 2-4	Green Business and Industrial Ecology	Harris Chp. 17 Readings 215-234
Week 16		
Dec. 7-9	Team Project Presentations	
Dec 11	Wrap-up day	
Week 17		
Dec. 18	Final Exam 10:00-12:00 Noon	