

THE UNIVERSITY OF WISCONSIN-MILWAUKEE
ENVIRONMENT AND THE GLOBAL ECONOMY

Global 201 LS; Global 201 BUS

SPRING 2004

Course time: Tuesdays and Thursdays: 2:00-3:15

Classroom: School of Business, room 263S

Office: Bolton Hall, Room 850

Office hours: Tuesdays, 5:00-6:00, Wednesdays, 2:00-3:30 and by appointment

Office phone: 229-5334, email: mohtadi@uwm.edu

Principal Professor and Course Coordinator:

- Professor Hamid Mohtadi, Economics, UWM

Collaborating Professor:

- Professor David Petering, UWM, Professor of Chemistry and Director, Marine and Freshwater Biomedical Sciences Center, National Institute of Environmental Health Sciences

Other Speakers:

- Professor Matt McGinty, Assistant Professor of Environmental Economics.
- A Legal expert (to be named) to speak on law and environmental economics.

Note: Information on Economics Department policies on participation by students with disabilities, accommodation for religious observations, academic conduct, complaint procedure, grade appeal procedures and other standing policies (e.g., sexual harassment, incomplete) is available in the main office of Economics Department, Bolton 868.

"The art of making your dream a reality is simply remaining committed long enough for reality to catch up to your dream."

Background:

Concern about the environment throughout the world has risen to alarming levels. Deforestation, depletion of ozone, global warming, air and water pollution, acid rain, loss of fish population and the loss of animal species, are but a few of the increasing number of environmental problems that we face. The need to address these problems has become increasingly urgent, as countries grow and populations increase.

The study of the environment is truly interdisciplinary. Many environmental problems have behavioral and economic components as well as components in natural sciences such as biology and chemistry. Finally, environmental policies and their enforcement have a strong component in Law.

To address these diverse perspectives this course is developed with an underlying economic theme but with prominent speakers from diverse disciplines.

This course surveys major themes in the study of the environment with an emphasis on three aspects; general evidence, analysis, and case studies. Knowledge of introductory microeconomics is required.

Requirements:

Requirements are a take-home midterm exam, a final term paper and a few assignments during the semester.

Sources:

The reference material will consist of the following two textbooks. The first one is required and the second one will be consulted only occasionally and need not be purchased. This book will be available on reserve at the library. In addition, there will be other material that will be available on **electronic reserve** at the library. Finally, there will be a number of case studies. These will be presented based on sources in the text book and on the elsewhere. Wherever appropriate **the web will be used on sight to present the relevant environmental news of the day and analysis will be made accordingly.** Thus, it is imperative that the classroom has internet access.

1. Jonathan M. Harris, Environmental and Natural Resource Economics: 2002.
2. Tietenberg, Tom, Environmental Economics: Policy Fourth Edition 2004.

COURSE OUTLINE

STATE OF THE ENVIRONMENT: A DEBATE (Week 1.1) January 27

A film presentation: Environment at Issue, by Jeffrey Tuchman (Producer/Director) for the Public Agenda Foundation

Class Discussion following the film

SELECTED EVIDENCE (Week 1.2) January 29

Presentation of Global Trends: Global warming, Deforestation, Fish Depletion, Pollution, etc.

World Resources Institute website (<http://www.wri.org/wri/>): Global Environmental Trends

Relevant Material Live from the Web

VALUING THE ENVIRONMENT: ECONOMIC AND ECOLOGICAL APPROACHES

Overview

Harris, Ch. 1, pp. 3-13.

Economic Approach: Willingness to Pay and Marginal Costs (Week 2.1) Feb. 3

Tietenberg, Ch. 2, pp. 17-30.

Measuring Benefits and Costs (Week 2.2) Feb. 5

Contingent Valuation, Demand Side Methods, Supply Side Methods

Harris, Ch. 6, pp. 93-118.

Relevant Material Live from the Web

Systems Approach: Circular flow, Thermodynamics, Entropy (Week 3.1, 3.2) Feb. 10, 12

Guest Lecture by Professor David Petering, Dept. of Chemistry

Tietenberg, Ch. 2, pp. 14-17.

EXTERNALITIES (Week 4.1 and 4.2) Feb. 17, 19

Externalities, Property rights, Coase Theory, Equity Issues

Internalizing Externalities

Pigovian Taxes

Free Rider Problem

Holdout Problem

Institutional Response: Government, Courts, Legislation

Harris, Ch. 3, pp. 37-59

Tietenberg, Ch. 4, pp. 74-77.

Relevant Material Live from the Web

COMMON PROPERTY RIGHTS, OPEN ACCESS AND PUBLIC GOODS (Week 5.1 and 5.2) Feb. 24, 26

Application to the Economics of Fisheries

Why is the fish population depleting?

Policies for management of fisheries

Environment as a Public Goods and Global Commons

Harris, Ch. 5. pp. 76-88 and additional references

Relevant Material Live from the Web

GLOBAL COMMONS and GLOBAL WARMING: A systems approach (Week 6.1) March 2

Guest Lecture by Professor David Petering, Dept. of Chemistry

Harris, Ch. 18, pp. 374-402

SUSTAINABLE RESOURCE ALLOCATION OVER TIME (Week 6.2 and 7.1) March 4, 9

Allocation of non-renewable resources

Hotelling's Rule

Harris Ch. 4.

ENERGY: ECONOMIC AND ECOLOGICAL ANALYSIS AND EVIDENCE

Economic Analysis (Week 7.2) March 11

Allocation over Time Revisited
Transition to Renewable Resources
Technological Progress

**March 11 (Week 7.2): Midterm Take Home Exam is given out; due
March 18 (covers material including week 7.1)**

**March 16 (Week 8.1): Help Session on
Exam, and....**

....Relevant Material on Lecture 7.2 Live from the Web

Economic Analysis of Energy Continued (Week 8.2) March 18

Tietenberg, Ch. 7, pp. 117-126.

Global Energy Trends
Harris, Ch. 13, pp. 258-266

Alternative Energies

Harris, Ch. 13. pp. 266-268 and my own additional notes

Relevant Material Live from the Web

March 18 (Week 8.2): Midterm Exam is Due

Happy Spring Break

Energy: Systems (Ecological) Analysis (Week 9.1 and 9.2) (March 30, April 1)

Guest Lecture by Professor David Petering, Dept. of Chemistry

Harris, Ch. 7 and Ch. 8

THE IMPACT OF ENVIRONMENT (Week 10.1) April 6

Health, Amenity and Productivity Effects

World Bank (1992) World Development Report, 1992, Development and the Environment (Oxford, Oxford Univ. Press), pp. 64-97.

The Science of the Health Effects of Pollution (week 10.2) April 8

Guest Lecture by Professor David Petering, Dept. of Chemistry

ECONOMICS OF POLLUTION (weeks 11.1 and 11.2) April 13, 15

Economic Analysis
Pollution control policies
Pollution permits
Taxes versus Permits

Harris, Ch. 16

Relevant Material Live from the Web

TRADE AND ENVIRONMENT (week 12.1, 12.2) April 20, 22

Guest Lecture: Professor Matt McGinty, Dept. of Economics

Harris, Ch. 19

DEVELOPMENT AND THE ENVIRONMENT (Week 13.1, 13.2) April 27, 29

The Environment Kuznets Curve and its Causes

Other Issues on environment and development

World Bank, "Overview" World Development Report, 1992, pp. 1-24.
Harris, Ch 19

BIODIVERSITY (Week 14.1) May 4

Guest Lecture by Professor David Petering, Dept. of Chemistry (Week 14.2)
May 6

Harris, Ch. 15, pp. 302-305

ENVIRONMENT AND LAW (Week 14.2) May 11

Guest Lecture by an environmental attorney on Law and the Environment (To be confirmed)

<p>May 11 (Week 14.2) Final Term Paper is Due</p>
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"If there is light in the soul, there will be beauty in the person.
If there is beauty in the person, there will be harmony in the house.
If there is harmony in the house, there will be order in the nation.
If there is order in the nation, there will be peace in the world."

Chinese Proverb