

Syllabus: ECO 450 – International environmental economics and policy - FALL 2010

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Office hours: 8:00-9:00 Tuesday or by appointment

Course meetings: MWF 11-11:50 – Merrill Hall 330

Description: The class will begin by presenting the basics of environmental economics and policy. We then discuss the economics behind international trade, and its effects on economic growth and development. We will then examine alternative causes of international environmental problems and explore solutions through the application of international environmental economics and policy. The class finishes by exploring the processes of international policy development: identifying problems, designing and negotiating solutions, and implementing policies to change national behavior. 3 Credit Hours.

Prerequisites: MAT 115 and ECO420 or permission

Course objectives: Students, using economic theory, graphs and math, will be able to:

- understand the basics of environmental economics and management
- identify the benefits (economic growth) and costs (environmental quality) of international trade
- explain the economic basis of international environmental problems and the objectives of international environmental policy
- illustrate the constraints faced in developing and applying environmental policy in an international context
- analyze and evaluate the tradeoffs inherent in designing environmental policy

More generally, students should increase their proficiency in critical analysis of economic and environmental problems, and developing logical economic arguments. Students will demonstrate the above on exams, writing assignments and in oral responses in class.

Learning activities: The course uses lecture and discussion to demonstrate the economic interpretation of environmental problems. Exams will be used to test student understanding of key economic concepts and arguments, and their ability to use graphical and mathematical tools. Writing assignments will allow students to demonstrate their ability to use economic theory and tools to analyze environmental problems and design appropriate policy responses.

Text(s): Pearson, C.S. *Economics and the Global Environment* Cambridge Univ. Press.

Given the nature of the course, no one book satisfies as a textbook. In fact, I will be pulling readings from many different sources. Whenever possible I will provide you electronic copies of readings (most of these will be free from sources like the WTO, World Bank etc.). Other readings will be placed within binders placed outside my office.

The class will have a First Class conference (it should already be on your desktop) where lecture notes, readings, announcements and assignments will be posted (hard copies of these materials will also be available outside my office). If you have any problems with access please let me know ASAP.

Requirements:

Analyses of readings. Occasionally, I will assign policy-relevant readings for which you should comment on. For each reading, (1) type a narrative or outlined summary of the major argument(s) made by the authors. Answer these sorts of questions: *What are the central arguments and key assumptions, strengths or weaknesses?, How do the author(s) build their*

argument(s)?, and What evidence do they cite? If you use outline form you must use complete sentences; cryptic phrases are unacceptable. Show you are making connections between the readings and other things you are learning in the course. Due dates will be given when assigned; they must be turned in at the beginning of the class and late ones will not be accepted.

Homework assignments: Homework assignments will focus on using your economic, graphical and mathematical skills to analyze policy problems. Unless you have made prior arrangements with me, homework is due by the beginning of class on the assigned due date. Homework may be worked on in groups; if you work as a group you need to only turn in one set of answers (include the names of the people in the group!). The date when homework is to be turned in will be given when assigned; late homework will not be accepted.

Class Participation: Many of our classes will consist of discussions of issues raised in the readings. It is important that all assigned readings be done before the classes for which they are assigned. Class participation is important and you are expected to be able to comment intelligently on the assigned readings. There will be lecture times, particularly in the beginning stages of the class.

Writing/Oral Assignments: You will be required to do one writing/research assignments. You are to work on the research paper as individuals, not as a class. You will then present your research paper to the class using a lighting format (Plan on each presentation being 7 minutes and 3 minutes for questions).

Exams. There will be two midterms and one final exam. Both mid-term exams will consist of two parts: in-class (short questions, math and economic problems) and take-home (longer essay questions). In the essay questions you should demonstrate your understanding of how international environmental problems are evaluated, developed and implemented. Essays must be typed. The take home portion of the exam will be due one-week after the time it is made available. You are to work on the exam as individuals, not as a class. Exam dates are:

Exam 1: Oct. 8

Exam 2: Nov. 12

Grading: Assignments not handed in by the due date will receive a grade of 0 unless you have made prior arrangements with me. Illness or family emergencies are usually the only acceptable reasons for missing an exam or a problem set deadline. If such a problem arises, you need to call or e-mail me before the deadline and provide a written justification for missing the exam (e.g., medical note) ASAP. Then we can discuss alternatives. If you call and I am not in, leave a message with a phone number where I can reach you.

Except for very *extraordinary* circumstances, failing to follow these rules will lead to a grade of zero for the missed exam/homework. Any exam from which one student is excused will be replaced by a make-up exam and I will schedule a make-up at only one time for each exam. Except for very exceptional reasons, no exams will be delayed or postponed.

Numerical grades will be used for all exams and homework. Letter grades will be assigned only for the overall course grade given at the end of the semester. Your final grade will be determined as:

Analysis of readings	10%
Homework Assignments:	10%
Paper	15%

Reading List & Outline	1	Due:	9/15
First Draft	5		10/22
Second Draft (optional)	0		11/29
Final Draft	9		12/10
Research Presentation:		5%	week of 12/6
Exam I		20%	
Exam II		20%	
Exam III		20%	

Academic Integrity: Academic dishonesty includes cheating, plagiarism and all forms of misrepresentation in academic work, and is unacceptable. UMaine's Student Handbook notes these activities are violations of the Student Conduct Code and should be reported for appropriate action.

Disabilities Statement: Students with disabilities who may need services or accommodations to fully participate in this class should contact Ann Smith, Director of Disability Services in 121 East Annex, (voice) 581-2319, (TTY) 581-2325 as early as possible in the semester.

Unanticipated disruption: In the event of an extended disruption of normal classroom activities (e.g., H1N1 virus), the format for this course may be modified to enable its completion within its programmed time frame. In that event, you will be provided an addendum to the syllabus that will supersede this version.

General Calendar

- Preliminaries: Materials balance, externalities, social welfare, market and government failure, Coase theorem/property rights, time dimensions, optimal pollution, environmental policies
- Growth and the environment, environmental Kuznets curve, international resource management
- Trade theory, comparative advantage, Heckscher-Ohlin model, factor mobility and trade, benefits/costs of trade, trade history and law, policy tools
- Trade liberalization and the environment, pollution haven hypothesis
- Environmental security
- Finance-related: FDI and international environmental protection, environmental micro-lending, debt-for-nature swaps
- Global Environmental Politics: History, actors in the environmental arena, the rise of non-state actors, international political economy, game theory of international negotiations
- Conflicts: more vs lesser developed, global vs local, democracy vs dictatorship

Special Dates:

No class on 9/8, 10 and 13; 10/22; 11/12

Attendance required at the Elinor Ostrum lecture 10/21

Attendance required at some portion of the Environmental Security Conference 10/25-26

Attendance required for all guest speakers:

10/22 – Luncheon with Elinor Ostrum, Nobel Prize Winner in Economics

10/25 – Ken Hillas - State Dept.

11/8 – Randy Curtis – International negotiator, The Nature Conservancy

Calendar:

- Sept: week 1: Lecture - Basics
Readings –*Pearson*: Chap 1 – SKIM; Chap 2 (appendix optional); Chap 3 up to bottom of page 61, plus section 4.5 and 5 (appendix optional);

Located in the ECO 450 readings folder/environmental folder:
Preliminaries (**this is a basic review of micro - assume you all know this**)
- Sept: week 2: Lecture – Externality theory; Begin environmental toolkit - liability rules
Readings – *Pearson*: Chap 5 page 114 to middle of 119; Chap 6

Located in the ECO 450 readings folder/environmental folder:
Damages and Abatement (Figure 4 is a simpler MARGINAL translation of the information in quadrant 1, Figure 5.1, page 116 in *Pearson* - we will use this translation in class)
Economic instruments - notes (mostly parallels Chap 6 in *Pearson*)
- Sept: week 3/4: Lecture – Coase, Standards; Taxes/Subsidies; Permits markets
Readings – in ECO450 readings\Environmental\
pages 17-30 in Economic Instruments-biodiversity.pdf
pages 17-32 and Annex A in Economic Instruments.pdf
Russell-choice of instruments.pdf
- Sept: week 5: Lecture – Multiple damage curves; Policy design with uncertainty in damages, costs; International policy design; Environmental Kuznets curve
Readings –
Public/common property.pdf;
Ostrum readings.pdf
Read: 33-73 in Economic_Instruments.pdf
EKC.pdf
- Oct: week 1: Lecture – Ricardo trade model
Readings –
Binder 1.pdf

EXAM: on all environmental policy material
- Oct: week 2: OCT BREAK
Lecture – Intro to the H-O trade model
Readings –
Intro to environmental security.pdf
Conflict_peacebuilding.pdf
CMM_forests and conflict.pdf
- Oct: week 3: Lecture – H-O trade model (fixed proportions); Rybcynski theorem; Stolper-Samualson theorem; factor price equalization; H-O trade model (variable proportions)
Readings –
Intro to environmental security.pdf
Conflict_peacebuilding.pdf
CMM_forests and conflict.pdf

Oct: week 4: Attend Environmental security conference

Lecture – International trade and the environment; intro and theory

Readings –

Pearson – Chapter 7 & 8

In ECO450/readings/trade and the environment/

Environment and trade handbook.pdf

Nov: week 1: Lecture – International trade and the environment policy;

Readings –

Pearson – Chapter 9, 10, 11

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WTO study.pdf

Tuna_dolphin & shrimp_turtles.doc

Nov: week 2: Lecture – International trade and the environment policy – empirical results;

Readings –

Pearson – Chapter 12

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WTO study.pdf

Tuna_dolphin & shrimp_turtles.doc