

Issues in Environmental Economics

Class Times: TR 9:30-10:45

Location: Clark 358

Instructor: Dana Hoag

Email: dhoag@colostate.edu

Office: Clark B330

Office Hours: Tuesday 8:30-9:30
Or By Appointment**Course Description:**

The study of environmental economics provides a means for understanding how the incentives that underlie human decision making impact the environment and the design of environmental policy. In this course, we will apply fundamental economic theory to analyze a broad range of contemporary environmental issues. In particular, we will highlight the incentives that underlie specific environmental challenges, investigate tradeoffs in the design of environmental policy, introduce tools for measuring the benefits associated with environmental goods and assess the relationship between economic growth outcomes. We will take a closer look at issues related to the management of natural resources including water, energy, agriculture and fisheries as they each present challenges in a policy setting.

Course Objectives:

- 1) Understand how economic incentives influence individual and group behavior and how this knowledge can be used to explain and address environmental challenges.
- 2) Develop an ability to identify the range of economic costs and benefits of environmental policies and the tools that can be used to estimate these costs and benefits.
- 3) Improve critical thinking skills to assess the tradeoffs inherent to a broad range of contemporary environmental issues.
- 4) Apply economic concepts to an environmental issue with the goal of developing skills to communicate in an effective manner through writing and oral presentations.
- 5) Have fun learning!

Required Course Materials:

- The class will utilize RamCT for assignments, readings, and class communications.
- Required text: Tietenberg and Lewis: Environmental Economics and Policy, 6th Edition. Lectures will center heavily around readings from this book.
- Optional text: Scorse: What Environmentalists Need to Know about Economics, 2010. Any readings from this text will be made available electronically but it is a good introductory text particularly for non-economists.
- Additional readings will be supplied on RamCT

Course Assignments:

Problem sets (best 4 out of 5): You will be given one week to complete each problem set. Problem sets are due at the beginning of class; grades for late assignments are reduced by 10% per business day. The lowest grade of the five problem sets will be dropped.

Sustainability plan: We will be learning a lot over the semester about how to use economic principles to balance the environment with human needs. Please read the two chapters about sustainability in Tietenberg and Lewis, Chapters 5 and 21. We will conclude the class with a written description about one important way that you would make America more sustainable. Specifically, let's focus on climate change. Your ideas can support more government involvement or less, more market or less, or that climate change is caused by humans, or is not caused by humans. You will not be judged based on whether I agree with your position, but rather on how well you use concepts learned in class with facts you find in the literature and on the web to make your point. Just be sure to support your position, and to state how your position supports sustainability. Your paper will be due in the first class period in week 14 (December 2). Starting the second class period that week, we will be learning about sustainability. We will try to use this opportunity to have some meaningful discussions with everyone in class participating. Please make a copy of your paper and bring it to the last two class periods. Detailed guidelines are provided in the handout about the sustainability discussion.

Midterm exams (2): Each exam will include multiple choice, short answer and essay questions related to readings and lectures.

Final exam: A cumulative final will be given Dec. 15, 2014 from 11:50-1:50 in the same classroom as your courses.

Grades:

Course Assignments	Total Points	% of Total Grade
Problem sets (best 4 out of 5)	100 points (25 points each)	20%
Sustainability discussion paper	100 points	20%
Midterm exams (2)	200 (100 points each)	40%
Final Exam (comprehensive)	100 points	20%
Total	500 points	100%

Academic Integrity:

This course will adhere to the Academic Integrity Policy of the CSU General Catalog and the Student Conduct Code. I expect all work that you do in the course to be your own. Cases of plagiarism in written work will be taken seriously, so please familiarize yourself with different forms of plagiarism (<http://www.plagiarism.org/plagiarism-101/types-of-plagiarism>) .

Expectations and feedback:

I expect students to attend every class having done the assigned readings so that you are prepared to contribute. It is also my expectation that you will be open-minded and considerate of the thoughts and ideas of all of your fellow classmates. In-class student discussions only work if everyone contributes, and everyone will be more willing to contribute if they know they will be

treated respectfully. I will do my best to conduct organized and insightful class sessions and to treat your intellectual work with fairness and impartiality.

I would like for everyone to do well. I will do everything I can to help you earn the grade that you desire. I believe that trying to do your assignments is the best way to learn. However, if you try but can't do as well as you had hoped, or you don't understand why points were deducted, then please come see me. I will make time for you if you need it.

Resources for disabled students:

If you have a documented disability and wish to discuss academic accommodations, please contact me as soon as possible to set up the appropriate arrangements.

Course Outline

1. Core Concepts (weeks 1-5)
 - a. What is environmental economics? *Scorse, Ch. 1; T&L Ch. 1* [**Folder 1**]
 - b. Economic framework without market failures: *Market Economics handout; T&L Ch. 2* [**Folder 2**]
 - c. Environmental economics, accounting for market failures: *T&L Ch. 4* [**Folder 3**]
 - d. Valuation Methods: *T&L Ch.,3* [**Folder 4**]
2. Resource management
 - a. Introduction to natural resources: *T&L Ch. 7* [**Folder 5**]
 - b. Energy: *T&L Ch. 8* [**Folder 6**]
 - c. Agriculture: *T&L Ch. 11* [**Folder 6**]
 - d. Water: *T&L Ch. 9* [**Folder 6**]
 - e. Common pool resources: *T&L Ch. 13* [**Folder 7**]
3. Environmental economics
 - a. Introduction to environmental economics: *T&L Ch. 14* [**Folder 8**]
 - b. Climate change: *T&L Ch. 16* [**Folder 9**]
 - c. Water: *T&L Ch. 18* [**Folder 9**]
4. Building a sustainable future
 - a. Sustainability: *T&L Ch. 5, 21* [**Folder 10**]

Topic	Week	Dates	Assignment/Test dates	Lecture Material
What is Env Econ?	1	8/25-29		Score: Ch. 1 T&L Ch. 1
Economic Framework Without Failures	2	9/1-5	HW #1 assigned	Handout: Microeconomics
Env Economics with market failures	3	9/8-12		T&L: Ch. 2, Score, Ch. 2 T&L: Ch. 4
Valuation Methods	4	9/15-19	HW #2 assigned	T&L: Ch. 3
	5	9/22-26		
Intro to Res. Mgmt.	6	9/29-10/3	HW#3 assigned	T&L: Ch. 7
Energy	7	10/6-10		T&L: Ch. 8
Agriculture	8	10/13-17	EXAM 1-Thursday <i>(covers through week 6 material)</i>	T&L: Ch. 11
Water	9	10/20-24		T&L: Ch. 09
Common pool	10	10/27-31	HW#4 Assigned	T&L: Ch. 13
Intro to Env Econ	11	11/3-7		T&L: Ch. 14
Climate Change	12	11/10-14	HW #5 Assigned	T&L: Ch. 16
Water	13	11/17-21		T&L: Ch. 18
FALL BREAK	FB	FALL BREAK	FALL BREAK	FALL BREAK
Sustainability	14	12/1-5		T&L Ch. 5, 21
	15		EXAM 2-Thursday <i>(covers Agriculture to Population)</i>	
	16	Finals Week	Dec 15: 11:50-1:50	