

AEC/ECON 352: ENVIRONMENTAL ECONOMICS & POLICY

Spring 2017 TR 2:00 – 3:20 302 Learning Innovation Center

Professor

Steven J. Dundas

Department of Applied Economics

Office: 212A Ballard Extension Hall

Phone: (541) 737-1402

Email: Steven.Dundas@oregonstate.edu

Website: <http://www.science.oregonstate.edu/~dundas/>

Office Hours: MW 2:00 – 3:30

Teaching Assistant

Tu Nguyen (Ph.D. Student)

Department of Applied Economics

Office: 316 Ballard Extension Hall

Email: nguyetu2@oregonstate.edu

Office Hours: TR 12:00 – 1:00

Course Catalog Description

This course provides an overview of the interrelationships between economic activity, the environment, and public policy. Through case studies, discussion groups, readings, and group activities, students learn how economists define and analyze environmental problems and the types of policies they advocate for managing environmental quality.

Prerequisites: AEC 250 or ECON 201 or ECON 201H (Bacc. Core Course)

Course Objectives

The focus of this course is the application of basic economic tools to understand and evaluate environmental issues and policies. The course will introduce concepts such as externalities, property rights, non-market goods and public goods. We will use the economic foundation developed in this course to discuss current policy issues including global climate change, reducing the costs of regulations, and dealing with non-point source pollution.

My objectives for this course are to:

- Provide students with a clear understanding of how to apply economic theory to issues of the environment.
- Introduce students to the theory, empirical findings, and important policy implications of environmental economics and policy at a level appropriate for advanced undergraduate students.
- Increase students' ability to define environmental problems and analyze information.

Learning Outcomes

Upon successful completion of this course, a student will be able to:

- Recognize how economics can inform and improve environmental policy.
- Apply principles of economics to the environment.
- Understand the concepts of market equilibrium, market failure, and externalities.
- Analyze environmental issues within a graphical economic modeling framework.
- Compare and evaluate the effectiveness of alternative policy solutions to environmental problems.
- Increase their ability to define environmental problems and analyze information.

Successful completion of this course partially fulfills OSU's Baccalaureate Core course requirements in the Synthesis category under Contemporary Global Issues. Upon completion of the course, participants will be able to:

- Analyze the origins, historical contexts, and implications of contemporary global issues.
- Explain the complex nature and interdependence of contemporary global issues using a multi-disciplinary approach.
- Articulate in writing a critical perspective on contemporary global issues using evidence as support.

Learning Resources

Required Text:

Markets and the Environment, Second Edition (2016)

Authors: Nathaniel Keohane and Sheila Olmstead (Island Press, Washington, DC).

New copies are available at the bookstore and Amazon for under \$30. Lectures and discussion in class use this textbook as a foundation; however, the book does not contain ALL the material needed to master this course. Lecture notes and additional readings will contain more information than the textbook and you are responsible for this material as well. All additional required readings are posted as PDF files on the course's Canvas site.

Other Resources:

Environmental Economics (5th, 6th, or 7th Editions)

Authors: Barry C. Field and Martha K. Field (McGraw Hill, New York)

This book is a good supplementary resource for learning the material covered in this course.

Additional course content is available via Canvas. The course Canvas site contains the syllabus, lecture notes, additional readings, and problem sets. The course Canvas site is also where course participants may communicate with other course participants to discuss course topics and assignments.

Please note: Assigned readings are essential to your success in this course.

Evaluation

Your final grade will depend on the following:

Mid-term Exam	30%
Final Exam (Cumulative)	35%
Problem sets (5 @ 5% each)	25%
In-class assignments/quizzes	10%

The following scale will be used in assigning final grades:

A: 93-100%	C: 73-76%
A-: 90-92%	C-: 70-72%
B+: 87-89%	D+: 67-69%
B: 83-86%	D: 63-66%
B-: 80-82%	D-: 60-62%
C+: 77-79%	F: below 60%

I reserve the right to adjust/curve the final grades if this is deemed necessary.

Exam Dates

Mid-term Exam	Tuesday, May 9th, 2017
Final Exam	Tuesday, June 13th, 2017 @ 12 Noon

You should not miss any exams. No programmable calculators or cell phones will be allowed during exams. **Makeup exams are given only under extraordinary circumstances.** The following must occur in order for a makeup exam to be administered: (1) you must contact me **prior** to the exam to let me know you will not be attending and the reason why; (2) the makeup exam must be taken **before** the in-class exam is returned to students (i.e., within 48 hours); and

(3) a written excuse from a doctor or Student Health Services must be presented (and this will be verified by a follow-up phone call). **You may not miss or reschedule the final exam under any circumstances.**

Problem Set Due Dates (Tentative)

Problem Set #1: Markets & Externalities	Tuesday, April 18th
Problem Set #2: Public Goods & Open Access Resources	Tuesday, April 25th
Problem Set #3: Public Solutions to Market Failures	Tuesday, May 2nd
Problem Set #4: Coase Theorem & Benefit-Cost Analysis	Tuesday, May 23rd
Problem Set #5: Non-Market Valuation	Tuesday, June 6th

Problem sets are **due at the beginning of class** on the dates specified above.

Late Assignments will NOT be accepted. In other words, please do not try to hand in assignments late expecting partial credit.

I encourage you to work with your fellow classmates on these assignments, but **you must turn in your own work.** It is in your best interest to show all of your work on these assignments. For example, if the answer is 5 and all you write down is 4, you lose all points for that problem. But if you show your work and I can see that you understood the problem but made a simple math mistake, you will still receive credit. All problem sets are required to be **stapled** together. This prevents the possibility of losing pages and makes grading much easier. **Two points** will be deducted if an assignment is unstapled.

In-Class Assignments/Quizzes

Six to ten (6-10) in-class assignments/quizzes will be given at random throughout the quarter. Some will be individual efforts while others will be done in groups of 2-5 people. No makeups for in-class assignments will be given.

Please note: I DO NOT offer extra credit opportunities on an individual basis, so please do not ask. If you are struggling with the course material, make the effort to come see me during office hours or make an appointment sooner rather than later.

Course Policies

The University's academic regulations are located here:
<http://catalog.oregonstate.edu/ChapterDetail.aspx?key=75>

I have scheduled open office hours each week and I am also available by appointment subject to my availability. **Individual office visits may be one of the most productive parts of the course for you if you are struggling with the material.** Don't forget...I am here to help.

Class attendance is not required; however, you are responsible for all material covered in class, regardless of whether you decide to attend. I **do not** provide copies of my lecture notes other than what is on the Canvas site. If you miss a class, you will need to get the notes from a classmate. Additionally, unscheduled in-class assignments/quizzes will be given throughout the quarter so unexcused absences have the potential to harm your final grade.

In terms of classroom etiquette, I have a couple very simple rules: Please turn your cell phones, iPads, and all other electronic devices off and keep them off of your desk. You will not need any of these devices during class. If you physically need to use a laptop for taking notes, please see me to discuss this. I expect you to engage in class – or at the very least, you should not be a distraction by being rude. If you cannot follow these two basic rules, you will be asked to leave.

Statement Regarding Students with Disabilities:

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at <http://ds.oregonstate.edu>. DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

Expectations for Student Conduct:

Participants are expected to conduct themselves in compliance with the [university's regulations regarding civility](#). Disrespectful behavior to others (e.g., harassment, personal insults, and inappropriate language) is unacceptable and can result in sanctions as defined by Oregon Administrative Rules [Division 015 Student Conduct Regulations](#). <http://oregonstate.edu/studentconduct/regulations/index.php>

General Course Outline

This is a general course outline and subject to additions and subtractions. “KO” in the outline below refers to the required text. All other reading are available as PDF files on the Canvas site.

Section 1: What is Environmental Economics?

- KO: Preface and Chapter 1
- Fullerton, D. and R. Stavins. 1998. How Economists see the Environment. *Nature*, 395: 433-434.
- Rescuing Environmentalism. Commentary, *The Economist*. April 23rd, 2005.

Section 2: How Markets Work

- KO: Chapter 4
- Tietenberg. T. *Property Rights, Externalities, and Environmental Problem*, p. 62-67.

Section 3: Externalities

- KO: Chapter 5, pp 80 – 85.
- Harris, J.M. *The Theory of Environmental Externalities*, p. 39-49
- Parry, I.W.H. 2002. Is Gasoline Under-Taxed in the United States? *Resources*, 148: 83-87.
- Dubner, S. and S. Levitt. *The Trouble with Negative Externalities*, New York Times, April 20, 2008.

Section 4: Public Goods & Open Access Resources

- KO: Chapter 5, pages 85 – 98.

Section 5: Pollution Control Model

- KO: Chapter 2, pages 11 – 30

Section 6: Public Solutions to Externalities: Standards, Taxes and Permits

- KO: Chapter 8, pages 143 – 167, Chapter 9, and Chapter 10
- Cap-and-Trade Program Summary for California (Feb. 2017)
- Parry, I.W.H. 2007. Should we abandon Cap and Trade in Favor of a CO2 Tax? *Resources*, p. 6-10.
- Stavins, R.N. 2005. Lessons Learned from SO2 Allowance Trading. *Choices*, 20(1): 53-57.
- Jaffe, E. *Is a VMT Tax a Good Idea?* August 24, 2012.

Section 7: Special Topic - Climate Change

Section 8: Private Solutions to Externalities: The Coase Theorem

- KO: Chapter 8, pp. 139 – 143

Section 9: Benefit-Cost Analysis

- KO: Chapter 2, pp. 30 – 34, Chapter 3, pp. 55 – 68
- Boardman, A.E. et al. *Introduction to Cost-Benefit Analysis*, p. 1-17.
- Goulder, L.H. and R.N. Stavins. 2002. An Eye on the Future. *Nature*, 419: 673-674.

Section 10: Non-Market Valuation

- KO: Chapter 3 pp. 35 – 55
- Carson, R. et al. 2003. Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez Oil Spill. *Environmental and Resource Economics*, 25: 257-286.
- Portney, P.R. 1994. The Contingent Valuation Debate: Why Economists Should Care. *Journal of Economic Perspectives*, 8(4): 3-17.
- Arrow, K. et al. 1993. Report of the NOAA Panel on Contingent Valuation.
- Brannon, I. 2005. What is a Life Worth? *Regulation*, p. 60-63.