Course Description and Requirements

This is an advanced undergraduate course in Environmental Economics. Intermediate Microeconomics (100AB, 10AB) and Calculus are prerequisites. Students without the necessary preparation should enroll in EnvSt 174: Environmental Economics and Policy.

The course uses economic concepts, such as market efficiency and market failure, to analyze issues related to the environment and natural resources. The course focuses on developing the relevant economic methodologies and uses issues in environmental economics to discuss their application.

Objectives

By the end of the course, you should be able to:

1. Describe the role of economics in environmental policy
2. Understand and compare the implications of different social choice rules for environmental outcomes
3. Identify the source of inefficiency, if any, in environmental outcomes
4. Use cost benefit analysis to evaluate an environmental policy
5. Explain and compare the methodologies that economics offers to measure social demand for environmental goods
6. Explain and compare the different policy instruments available to achieve environmental goals

Reading Assignments and Class Participation

Reading assignments will include specific Sections in Chapters from the textbook and supplemental readings. All readings will be listed in GauchoSpace and the supplemental readings will have links to them. Students are required to read before lecture the assigned Sections from the textbook (see above for reference) and the additional readings posted each week. We will not necessarily discuss all readings in class or section. But you should be prepared to discuss readings, either in class or in section. And whether or not they are discussed, there may be questions on the readings on exams. Optional readings will also be posted on GauchoSpace and will allow you to expand your knowledge on topics you are particularly interested in.
Attendance to every Lecture is expected. Participation in class and section will constitute an important part of your grade. Questions during lecture and section are highly encouraged.

Lecture Slides

I highly recommend taking notes during Lecture. Lecture slides will be posted after class in case you missed some of the details. However, Lecture slides do not contain all the class material, and, hence, are a bad substitute for class attendance and notes. Additional material will be communicated verbally during Lecture.

Problems Sets, Problem Set Grading, and Late Policy

There will be seven problem sets based on material covered in class and in section. Problem sets will be posted on GauchoSpace on most Tuesdays at class time. Each problem set requires written work (on paper) as well as online answers. Electronic answers should be submitted to GauchoSpace by the following Monday at 2 pm. Students should submit their written work to the TA at class time the following Tuesday. All work should be YOUR OWN.

Answers to the problem sets will be posted on Tuesday at class time. A maximum of two problem sets may be turned in late and will be graded normally as long as they are turned in by 12pm (noon) the Tuesday following the due date. All other late problem sets will be recorded as missing regardless of the reason. The student does not need to communicate the reasons for lateness or missing problem sets.

Problem sets will be graded in the following way: the TA will assign a grade based on your answers posted on GauchoSpace. The TA will also check whether the work submitted leads to the answers submitted. Questions that show discrepancies between the answer posted and the work submitted will be given zero points.

The lowest problem set grade will be dropped from the final grade.

Joint Work

Problem sets should reflect individual effort and understanding. Identical or nearly identical written answers may be taken to the Student-Faculty Committee on Student Conduct and investigated by the Office of Judicial Affairs (see policy on Academic Dishonesty below).

Office Hours

Students are highly encouraged to attend office hours. Some times a one on one explanation can really improve your understanding of the material. See top of the syllabus for the schedule. Outside of this schedule, students may not show up without an appointment. If your activities conflict with scheduled office hours, you may schedule an appointment by email (see email policy below).

Email Policy

I will respond to your email within 48 hours after you send it; so if the matter is urgent, please approach me at the end of class or during office hours. Very importantly, questions about homework or class material will not be answered by email.

Grading Policy

The final grade will have the following parts

- Homework 15%
- 1st Midterm 20%
- 2nd Midterm 20%
- Final 30%
Participation 15%

Grade Appeal Policy

Students that disagree with their exam grade may submit a written request of a full exam grade review within the first 48 hours of receiving their graded exam. This request should consist of a written letter and should be given to Mr. Robbins or to me in person (see office location and office hours schedule). The grade review will consist of a careful reassessment of all graded questions and may result in no change, or an overall higher or lower grade than the original contested grade.

DSP

Students that need disability-related accommodations in this class need to inform me immediately. Please see me privately after class or during office hours. You should also contact the DSP office (http://dsp.sa.ucsb.edu/).

Exam Taking

All students must bring a photo ID (either a driver's license or a UCSB issued ID) to the midterm and the final. Students that do not bring an ID may not be allowed to take the exam.

Academic Dishonesty

In fairness to all my students, I have no tolerance for academic dishonesty. Therefore, all instances of cheating and plagiarizing will be taken to the Student-Faculty Committee on Student Conduct and investigated by the Office of Judicial Affairs. For more information on UCSB policies regarding academic dishonesty please refer to UCSB Policies and Campus Regulations Applying to Campus Activities, Organizations and Students. http://judicialaffairs.sa.ucsb.edu/PDF/academicintegflyer.pdf

Classroom Etiquette

Eating, drinking is okay as long as it doesn't become distracting for your classmates.

Cell phones should be turned off during lecture.

I reserve the ability of requiring you to put away any electronic device that could be distracting during lectures.

Attendance, missed exams and incomplete grades.

Attendance to lecture is required. Unexcused repeated absences may affect grade's participation component.

Unexcused absences on exam day will result in a failing grade for the exam in question. Students should notify the TA or me in person at the end of class or during office hours if an exam will be missed due to a valid excuse (see below for valid excuses). If an emergency or illness prevents the student from coming to my office hours or to class to notify me in person, the notification can be emailed in advance.

Valid excuses include illness, family emergency, and university-related travel. In all these cases, students should provide some form of proof: a note from the doctor, coach or supervisor or a copy of a prescription. The note or prescription copy should be provided in person before or shortly after the missed exam or repeated absence during office hours schedule.

No makeup midterms or finals will be given for any reason. If a student misses a midterm exam and submits a valid excuse, then the midterm's grade will constitute 0% of her/his grade and the it's weight will be distributed equally between the other midterm and the
final. If a student misses the final exam and submits a valid excuse, the share of the grade assigned to the final will be redistributed across the two midterms and the homework assignments.

**Changing Section Enrollment**

Please email Mr. Robbins regarding issues with section enrollment.

**Waitlist and Enrollment**

If you are not enrolled in the course yet, you can go to [https://waitlist.ucsb.edu/](https://waitlist.ucsb.edu/) and log in with your UCSB NetID and password and select ECON in the department list on the right hand side of the screen. The list of Econ waitlist courses will appear and you should click the green 'plus' button that corresponds to ECON115. There is also a link to waitlist site on the Econ Dept homepage.

The waitlist closes next week. After this, add codes will be distributed by email. If you do not receive an add-code by the end of next week, you will not be enrolled in the course.

**Course's Contents**

**Lecture 1 - Introduction of the Course and of Students**

Readings:
Chapter 1

**Lecture 2 - Positive vs. Normative Analysis**

Readings:
Chapter 2 (C.K.)
D. Fullerton and R. Stavins, "How Economists See the Environment"
M. Greenstone and A. Looney, "Strategy for Illuminating America's Energy Future: Illuminating Energy's", *Hamilton Project* [Read carefully Box 1 in page 13]

**Lecture 3 - Individual Preferences**

Readings:
Chapter 3 (Parts I and II)

**Lecture 4 - Social Choice**

Readings:
Chapter 3 (Parts III and IV)
Los Angeles Times, "Proposition 23: Backers were Outspent, Out-organized", 2010

Optional Readings:
Arrow et al., "Are We Consuming Too Much", *Journal of Economic Perspectives* 2003
Lecture 5 - Efficiency and Markets

Readings:
Chapter 4 Efficiency and Markets

Lecture 6 - Market Failures - Group Experiment

Reading:
Experiment Instructions

Lecture 7 - Market Failures - Public Goods

Readings:
Chapter 5 (Parts III-V)

Optional Reading:

Lecture 8 - Market Failures - Efficient Provision of Public Goods,

Readings:
Chapter 5 (Parts I and II)
John Tierney, "Where the Tuna Roam", NYT 2006

Optional Reading:
R. Stavins, "The Problem of the Commons: Still Unsettled after 100 Years",
American Economic Review 2011

Lecture 9 – 1st Midterm

Lecture 10 - Making Decisions about Environmental Programs

Readings:
Chapter 6

Lecture 11 - Demand for Environmental Goods

Readings:
B. Marsh, "Putting a Price on the Priceless: One Life", NYT
"A Price on the Priceless" Economist

Lecture 12 - Hedonic Prices and Travel Cost

Readings:
Chapter 8 (Parts I, IV)  Chapter 9 (Introduction, Part II)
Greenstone and Chay, "Does Air Quality Matter? Evidence from the Housing
Lecture 13 - Constructed Markets

Readings
Chapter 10

Lecture 14 - Political Process

Readings:
Chapter 11 (Parts I, II and III)
Greenstone, Michael “Liability and Financial Responsibility for Oil Spills Under the Oil Pollution Act Of 1990 and Related Statutes” Testimony before the House Committee on Transportation and Infrastructure, Ju 9, 2010
Lizza, Ryan “As the World Burns: How the Senate and the White House missed their best chance to deal with climate change,” New Yorker, Oct 11, 2010

Lecture 15 – 2nd Midterm

Lecture 16 - Emission prices and fees

Readings:
Chapter 12, Part I, II, III

Lecture 17 - Coase Theorem

Readings:
Chapter 13, Part I

Lecture 18 - Tradable Permits and the Role of Uncertainty

Readings:
Chapter 13, Part II
Chapter 15, Parts II

Lecture 19 - Overview of Regulatory Instruments

Reading:
Goulder and Parry, “Instrument Choice in Environmental Policy”, RFF

Review Session

Final