Environmental Economics

Class Time: TTh 1-2:20pm in Seelye 106
Office Hours: T 2:30-3:30pm and W 3-4pm in my office (Seelye 305)

Course Description

This course uses the tools of economics to analyze environmental and natural resource issues. The goal of the course is to create informed consumers and producers of information regarding the economics of environmental issues and the role economics can play in explaining and crafting solutions to environmental challenges. Throughout the course, an equal emphasis will be placed on learning key results and learning to explain the fundamental ideas. We will also emphasize the role of economic models in helping us answer questions about environmental issues. At the end of the course, students should understand the fundamental elements of an economic model and be able to construct a narrative and/or graphical model of an environmental issue.

We will spend considerable time exploring the economic notion of efficiency, including discussions of what economists mean by efficiency and how this concept relates to other notions of good or desirable outcomes. We will rely heavily on marginal analysis and will see that many of the key results in environmental economics are examples of one of the fundamental rules of microeconomics: net benefits are maximized where marginal benefit equals marginal cost. During the course, you will learn to use supply and demand diagrams, as well as diagrams of pollution and clean up to predict the outcomes of various policies. Moreover, we will pay considerable attention to both the aggregate outcomes and the disparate impacts policies can have on different groups.

Text

The one required text for the class is Markets and the Environment by Keohane and Olmstead. It is available in the bookstore and on Amazon and is relatively inexpensive. I highly encourage you to purchase a copy. You also have electronic access through the library. I will also be placing a textbook that I used in a previous version of the course (The Economics of the Environment by Berck and Helfand) on reserve in the library. If you would like access to a more traditional textbook treatement of the material, this is a useful supplement.

Grading

Your grade will have 4 components:

- 30% Problem Sets
- 25% Midterm
- 15% Policy Analysis Paper
- 30% Cummulative Final Exam

Problem Sets

There are five problem sets in the course and I will drop the lowest score. Assignments are due at the beginning of class on the date indicated on the problem set. Late assignments will not receive credit, but will be graded for your own reference upon request.

Working in groups on the assignments is encouraged, but you must prepare and submit your own answers in your own words. Copying your answers from anyone or allowing a classmate to copy your problem set is a violation of the Honor Code. If you have any concerns about what constitutes independent work, please discuss them with me prior to the due date of the problem set.

Problem set answers should be neatly written and ***stapled***. Please make any graphs large enough to be easily seen. Some of your problem sets will involve working with computer models and you may be required to submit your electronic files. In these cases, you will upload your electronic files to Moodle.

Exams

There are two exams in this course: an in-class midterm on October 24 and a self-scheduled ***cummulative*** final exam during the regular exam period. Both exams will contain a mix of problems and short-answer questions.

Policy Analysis Paper

The paper will apply the tools of economic analysis learned in the course to a current environmental policy issue. I will provide a list of suggested topics. Other topics are allowed with prior approval from me, but I encourage you to pick one of the suggested topics. In the paper, you will create a narrative economic model of the policy problem and use that model to either propose a specific solution to the policy problem or argue that no policy change is needed. An initial draft of your paper is due on November 9 and the final paper is due on November 30. The draft is required and must meet specific requirements. Additional information and guidelines will be provided as the deadlines approach. A late penalty of 1/2 a letter grade will be assessed for each 24 hours or portion thereof past the deadline.

Course Policies

Email

I encourage you to email me at ssayre@smith.edu with ***brief*** questions. I will make every effort to respond to your emails within one business day (i.e. within 24 hours during the week and by the end of the day Monday for emails received over the weekend). If an answer will take more than 1-3 sentences, please come to office hours or make an appointment to see me.

Office Hours

I enjoy talking with students and I am happy to talk through anything related to the course in more detail. Feel free to stop by anytime during office hours and to email me to make an appointment for another time if you cannot come to my office hours. Please come see me early if you need help with the course material.

Class Attendance

I do not explicitly take attendance and will not lower your grade for missed classes. That said, it is virtually impossible to succeed in this course without regularly attending class. We will cover material in class that is not in your textbooks and you are responsible for everything discussed during class. If you must miss class for any reason, it is your responsibility to get the notes from that day from a classmate.

Technology in class

Please make sure that all mobile devices are silenced before class. If you have an emergency, quietly leave the classroom and take your call in the hallway. I find that students using laptop computers in class is distracting to me and other students, in part because the temptation to take "just a second" to check email or web updates is hard to resist. Moreover, research demonstrates that students using a laptop to take notes typically retain less information than those taking notes by hand. If you feel that your learning will be hampered by not having access to your laptop for note-taking or other legitimate purposes, please speak to me. Otherwise, keep your laptop turned off and stowed away during class.

Error Checking Policy

Throughout the course of the class, I will post a number of handouts on Moodle, including problem set answer keys and additional explanatory handouts. I make every effort to have these handouts be fully correct but occasionally I miss an error on editing. If I notice a substantive error myself, I will update the handout and email the class. To maximize the probability of everyone having access to error free materials, I will offer a small amount of extra credit on a problem set for finding and notifying me of errors in any handout.

I will award 2 percentage points of extra credit on the next problem set to the first person emailing me about a substantive error. I will award points to only one person per error and each student can earn extra points only once during the semester. While I appreciate you pointing out smaller errors like typos that do not change the meaning of the handout, I will only award points for errors that I deem *substantive* and likely to cause confusion or mistakes if they remain unfixed.

Academic Honesty

As in any other course at Smith, you are required to adhere to the provisions of the Honor Code. I take academic honesty very seriously and will report any suspected violations of the Honor Code to the Honor Board.

Due Dates of Major Assignments

Sept 21 PS 1 Due
Oct 5 PS 2 Due
19 PS 3 Due
24 In-class Midterm
Nov 9 Policy Analysis Draft Due
21 PS 4 Due

30 Policy Analysis Final Paper Due
Dec 14 PS 5 Due

Tentative Schedule

Specific readings will be posted on Moodle.

Sept 7 Introduction
12 Economic Efficiency and the Environment
14 Measuring Costs and Benefits
19 Efficiency of Markets
21 Market Failures
26 Is there actually a problem? The Coase Theorem
28 Pollution taxes
Oct 3 Comparing environmental policies – tax or regulate?
5 Tradeable permits
10 *No class - Fall Break*
12 Challenges and pitfalls of market based incentives
17 Habitat protection game
19 Mountain Day contigency/loose ends
24 ***In-class midterm***
26 Interconnected markets
31 Environmental Justice
Nov 2 No class Otelia Cromwell Day
7 Environmental Justice
9 Trade & the Environment
14 Trade & the Environment
16 Net present value and exhaustible resources
21 Exhaustible resources II
23 *No class - Thanksgiving Break*
28 Renewable resources – fisheries
30 Fisheries
Dec 5 The economics of Easter Island/Rapa Nui
7 Sustainability
12 Putting it all together – climate change
14 Course review