ENVIRONMENTAL ECONOMICS

Econ 4545
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Course Description

Environmental Economics (Econ 4545) considers the efficient and equitable use of society's environmental resources, which like all resources are scarce. Environmental resources include air, water, undeveloped land, wilderness, many parks (but not Disneyland), wildlife, genetic diversity, and ecological systems.

The environment is where we get the stuff that sustains us and determines, to a large extent, the quality of our lives; the environment is also where we must dump our waste.

Environmental economicsome of these other perspectives.

Environmental economics is a course in applied welfare economics: how to increase the welfare

from a static perspective. This historical distinction is blurring.

Before we begin, I want to make a few comments about what economics is not. Economics is not about making money or how to run a firm. Economics is the study of the allocation of society's scarce resources. Economics per se is not pro-market or pro-government. The purpose of this course is not to argue that government action to protect the environment is bad or good; sometimes it is bad, sometimes it is good, often it is necessary if one wants environmental resources to be more efficiently allocated.

The purpose of this course is not to extol the virtues of the market. Markets have many virtues, but, when it comes to the environment, they also have many faults. In one respect, this course could be described as a course on market failures and government actions to correct those failures.

An important component of environmental economics is estimating the costs, in $, of decreasing pollution, cleaning up the environment and protecting scarce ecological systems such as wetlands and wilderness. (Contrary to what Al Gore (former Vice President, arguably elected President) says, there is no free lunch when it comes to cleaning up.)

I want to stress that, equally important, environmental economics is motivated to estimate the benefits of decreasing pollution, cleaning up the environment and protecting scarce ecological systems.

To increase efficiency, one must estimate both an action's costs and its benefits. Not surprisingly, polluters tend to play up the costs of cleaning up and downplay the benefits of cleaning up.

I do a lot of research, theoretical and applied, on estimating the benefits of environmental improvements. An important issue is the costs and benefits to whom. I have worked on a lot of environmental damage cases (legal cases where the government is suing polluters for the damages caused by their pollution).

Note that a lot of non-economist environmentalists reject the idea valuing the environment is $ and even the ideal that the value of the environment can be quantified. ed.a6(g)-4(80(t)-2(n)2(timaitima)2(a)6

the form of energy but, with the exception of nuclear reactions, no matter or energy is created or destroyed. The word consumption is a misnomer; when you eat a Big Mac, nothing is destroyed. Materials balance is of critical importance but it is not stressed in your other economics courses.

Details

My hope it that the end of the semester you conclude the course was difficult but worth the effort.

Web pageMy web site is located at http://www.colorado.edu/Economics/morey/index.html . From it you can link to the web page for Econ 4545, or you can go directly to the web page for the course, http://www.colorado.edu/Economics/morey/4545/4545home.html
You can always find my web page and the web page for the course by Googling "Edward Morey"

Many past and current assignments, review questions, and, hopefully, most of the readings will be made available at this site on an as-need basis.

You may also want to visit the web sites for the other natural resource and environmental courses that I teach. You will find a lot of overlap. My old undergraduate natural resources course for economics majors can be found at http://www.colorado.edu/Economics/morey/4535/4535home.html .

One might describe my role as facilitating your understanding of the review questions and helping you to write out clear and precise answers to those questions.

Writing well is a necessary condition for doing well in the course. If writing is not your strong suit, you might consider …

Final: There will be a comprehensive final

Midterms: There will be two midterms: the first is on **Thursday October 9th** and the second one is on **Tuesday Nov 11th**. Each will be comprehensive up to that point in the course. I typically do not give make-up exams; so be there. (If I have to give you a make-up it will likely be an oral midterm in my office where I ask you a few questions, and then give you a grade. Most people prefer the regular exam)

Assignments There will be N short exams assignments (quizzes, small projects, problems, debates, etc.) during the term, Use the review questions to study for these assignments.

> Note that **I do not give make-up assignments**. Please don't ask. There will be a bunch of assignments, and your 2 lowest grades on these assignments will be dropped, so you can miss or mess up, or miss, two assignments without penalty.
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> Some of the assignments will be in-class; some will be take-home. Some of the assignments will be done in groups. The group, usually three people, will work together and turn in just one assignment. Everyone in the group will get the same grade for that assignment. Group assignments are one of my ways of giving you an incentive to work and study together. Note that getting an A on a group assignment does not imply that everyone in the group understands and can explain the concepts at an A level.
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> Final: Comprehensive final which will constitute 20% of your course grade.
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> Midterm: The midterms will constitute 50% of your course grade, the one you do better on will be 30% (60% of the 50%) of your course grade, the other will be 20% (40% of the 50%)
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> Assignments best (N-2) of the

any participation points, why you were absent does not matter.

If you do better on the final than your aggregate midterm, the final will count 30% of your course grade and the aggregate midterm score will be will count 40% of your course grade.

If you get an A on the first midterm, you can make a private arrangement with me to do a course paper/project. How much the paper will count will depend on our arrangement. If you are doing well in the course and like to write and do research, this is something I highly recommend

Some papers by past student of Econ 4545 and Econ 4535 can be found on the web page for Econ 4535(http://www.colorado.edu/Economics/morey/4535/4535home.html) I look forward to including your excellent paper or web project on the page.

If you are interested in writing a paper
see http://www.colorado.edu/economics/morey/4545/4545assg.html

I grade on the following scale:

90% = A
80% = B
70% = C
60% = D
59% = F

In past semesters, some students, not many, have earned a D or an F, and have gotten that grade. I hate doing this, bu

major). I will use calculus in the course. Materials learned in 3070 will form a foundation for what we will do in 4545. I will cover the relevant micro theory in my lectures, but cover it more quickly than when it was presented to you in intermediate microeconomic theory. It is important that you have successfully completed Intermediate Micro Theory. If you an environmental studies major who has doubts about their knowledge of economics, talk to me—soon.

While this is not a micro-theory course, economics without theory is not economics. You will need micro theory to understand and explain the allocation of environmental resources. Some of the theory and terms you will need to know include: the theory of the firm, the theory of the consumer, efficiency, equity, when the market equilibrium will and won't be efficient, market failure, types of market failures, corrections for market failure, discounting and present value, materials balance, public goods, property rights, common property, externalities

A strong math background will make this course easier. Math involves rigor and a way of thinking that facilitates economic thinking. In addition, graphs and simple mathematical descriptions of economic problems provide insights that would be difficult to convey with only words.

Readings:

There is no course text book. If you want a reference text, I recommend Tom Tietenberg's Environmental and Natural Resource Economics. You could check it out by borrowing, for a day or two, one of my copies. If you are so inclined, buy a used copy online. I will not directly lecture from this book. Rather, consider Tietenberg a standard undergraduate text on the topic of environmental economics. If you bring me the book, or some other undergraduate text in environmental economics, I will try and tell you which chapters are relevant to the topics and issues we are discussing. Don't consider Tietenberg a substitute for either the course readings or class time. It is simply another way to study environmental economics.

Other possible resources are the course web pages for other environmental courses for undergraduate economics majors. This syllabus should include links to a few such courses, but for now does not. Maybe you could help me find some. Of course, I am not responsible for the mistakes of other professors.

Your required readings consist of journal articles, magazine articles and newspaper articles. They vary in length from a few newspaper columns to twenty-page journal articles. Some of these articles will be discussed it class.

I will often draw review questions from these articles. You are responsible for the material in all of the articles for each section of the outline that is covered in class, even though not all of the readings will be explicitly discussed in class.

Many of these articles were suggested by students. I encourage your comments and feedback on these readings. Bring me articles (preferably email them to me as attachments in .pdf or .html) you feel would be good class readings,

Applications/topics