

## ENVIRONMENTAL ECONOMICS

Econ 4545

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### Course Description

Environmental Economics (Econ 4545) considers the efficient and equitable use of society's scarce environmental resources. Environmental resources include air, water, land, wilderness areas, parks, wildlife and genetic diversity, and other ecological systems.

Use of these resources will be considered from four perspectives: the market allocation (how the market would allocate them if it were left to its own devices, efficient allocations, equitable allocations, and government attempts to achieve more efficient and more equitable allocations.

Environmental economics is a course in applied welfare economics (how to increase the welfare of society). The direct goal is to make society better off, this might mean preserving more of an environmental resource; it might mean preserving less of it. The course will consider market failures (particularly externalities and common property resources), and the economic valuation of environmental amenities such as clean air, wilderness and ecological systems.

Courses in environmental economics and natural resource economics both consider natural resources but differ in that natural resource courses have historically dealt with the inter-temporal utilization of conventional renewable and nonrenewable natural resources such as energy, minerals, trees and fish; whereas environmental courses have considered pollution and other environmental issues, historically 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.

The purpose of this course is not to extol the virtues of the market. Markets have many virtues

Society's production of goods and services and the distribution of those goods and services should not be considered as separate from the environment; put simply, what we take from the environment to produce our goods and services ultimately ends up emitted back into the environment in terms of emissions, pollution and wastes. Very simply, the total weight of what is taken from the environment to produce goods and services must eventually equal to weight of what we put back into the environment ("what goes in must come out"). This fact is often referred to as "materials balance". The same balance holds for energy. Production and consumption change the form of matter and 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

*Web page:* My 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>

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 will 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 undergraduate natural resources course for economics majors can be found at <http://www.colorado.edu/Economics/morey/4535/4535home.html> . I have not taught it for a while.

My natural resource and environment course for M.A. students (the M.A. program is now extinct) is at <http://www.colorado.edu/Economics/morey/6535/6535home.html> , and my PhD level environmental course at <http://www.colorado.edu/Economics/morey/8545/8545home.html>

I also teach a course called *Economics, Ethics and the Environment*. I am teaching it this term. It questions many of the assumptions we make in Econ 4545, and that are made other economics courses. The web page for that course is [http://www.colorado.edu/economics/morey/4999EthicsT%79e-h\(snom\)8.dex.html](http://www.colorado.edu/economics/morey/4999EthicsT%79e-h(snom)8.dex.html)

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*Final:* There will be a comprehensive final

*Midterm:* It will be comprehensive up to that point in the course.

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

Note that **I do not give make-up quizzes**. Please don't ask. There will be a bunch of quizzes, and your 2 lowest grades on these quizzes will be dropped, so you can miss or mess up two quizzes without penalty.

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.

*Final:* Comprehensive final which will constitute 35% of your course grade.

*Midterm:* The midterm will constitute 25% of your course grade

*Assignments:* best (N-2) of these assignments will constitute 40% of your course grade.

*Class participation:* If at the end of the term I recognize you as someone who has contributed positively I will increase your final grade by some appropriate amount. Ways to contribute include asking or answering questions, attendance, participating in class discussions, and helping other students to learn the material.

If you get an A on the 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, but will if that is the grade earned.

I try to grade on the basis of standards rather than on the basis of a curve. Everyone, in theory, can get an A. That is, the Department has grading guidelines and I would get in trouble if every semester I gave mostly A's

*Office hours:* My office hours will on Tuesday from 8:30 to 9:00, Thursday from 1:15 to 2:45, and by appointment. If you can't make it to the office hours, catch me before or after class to schedule a time. My office is Econ 122. Please feel free to contact me by email [Edward.Morey@Colorado.edu](mailto:Edward.Morey@Colorado.edu) about setting up an appointment. Sometimes it will take a day or so for me to get back to you.

I will often communicate important information (e.g. announce a quiz) to you by email sent to your CU email account. I have learned from years of experience to not send emails to addresses like



