

ECON 6535: RESOURCE AND ENVIRONMENTAL ECONOMICS

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COURSE DESCRIPTION

Resource and Environmental Economics (6535) considers the efficient and equitable use of society's scarce natural and environmental resources. These include minerals, trees, fish, water, environmental systems, wildlife, parks, wilderness areas, etc.

The use of these resource will be considered from three perspectives: the market allocation, efficient and equitable allocations, and government attempts to achieve a more efficient and equitable allocation.

This is a course in applied welfare economics. Welfare economics is concerned with the "welfare" of society and how economics can be used to improve society's welfare. The course will study in detail when the market is, and is not, capable of efficiently allocating natural and environmental resources.

The course is designed for M.A. students in economics who have had micro theory, calculus, and math econ. My hope is that you will finish the course with a sound understanding of the economic theories of natural resource use and how these theories explain, in part, what does, and should, happen in the "real world".

Courses in environmental economics and natural resource economics both consider natural resources but differ in that natural resource courses have historically dealt with the intertemporal utilization of conventional renewable and nonrenewable natural resources such as fish, trees and minerals, whereas environmental courses have considered pollution and other environmental issues from a static perspective. This historical distinction is starting to blur.

This course will consider both traditional natural resource topics and traditional environmental topics.

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; sometimes its bad, and sometimes it is good. 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 some ways this course could be described as a course on market failure and government actions to correct those failures.

As you will quickly discover, this course combines parts of my undergraduate courses in natural resource economics (4535) and environmental economics (4545), along with parts of my PhD course in environmental economics (8545). While I will often present to you the same material that I present to the undergraduates, I will do it more quickly, you will ask more insightful questions, and you will understand it on a more theoretical level. When I present stuff from the PhD environmental course, I will not require that you understand as much as the PhD students.

At the end of the semester, you will either view this course as the best parts, or worse parts - hopefully the best parts - of these three courses.

Administrative Details

Web page: My web site is located at <http://spot.Colorado.EDU/~morey/index.html> . From it you can link to the web page for Econ 6535, or you can go directly to the web page for the course at <http://spot.colorado.edu/~morey/6535/6535home.html>

All and current assignments and review questions will be available on the course web page on an as-need basis. Some of the readings will be available on the web page.

The web page for my undergraduate course in natural resource economics (4535) is <http://spot.Colorado.EDU/~morey/4535/4535home.html> .

The web page for my undergraduate course in environmental economics (4545) is <http://spot.colorado.edu/~morey/4545/4545home.html>

The web page for my PhD course in environmental economics (8545) is <http://spot.colorado.edu/~morey/8545/8545home.html>

Review questions and problems will be handed out for each section of the course. I strongly encourage you to write out answers to these questions and discuss them with your classmates. You will want to form study groups. Your grade will be **highly correlated** with you knowledge of the review questions. It is important, for life, to be able to write well. Improvement comes with practice and I will give you ample opportunity to practice.

Final: There will be a comprehensive final which will constitute 35% of your course grade.

Assignments: There will be N short exams assignments (quizzes, small projects, problems, debates, etc.) during the term, and your grades on your best (N-1) of these assignments will constitute 30% of your course grade. Use the review questions to study for the quizzes. Each in-class exam will take approximately ½ hour and likely consist of either one essay question or a few short-answer questions. Some of these exams will be group efforts and some will be take home.

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 just turn in one assignment. Everyone in the group will get the same grade for that assignments. Group assignments are one of my ways of giving you an incentive to work and study together.

Class participation: 5% of your course grade will be based on class participation, so make sure to come to class prepared to participate.

Paper or project: There will be a paper (5-10 pages - no more) which will constitute 30% of your course grade. Choose some natural resource or environmental problem and evaluate it in economic terms. Please discuss your paper topic with me. Once you have settled on a topic, do a rough outline and come see me again. The final copy of your paper will be due in my office on the day of the final. If you get a preliminary version to me two weeks before the end of the term, I will get it back to you within a week with comments. There will be assignments having to do with your paper topic.

I am fairly flexible about what constitutes a paper, with the provision that it has economic and environmental content. It could be a project of some sort, and it could be a group endeavor. A project might be the development of a web page that looks at some natural resource or environmental issue from an economic perspective. What is important to me is to see that you have taken the theory you have learned in class and can apply it to gain insight into some environmental problem or issue that is of interest to you. For example, choose a natural resource or environmental market failure that interests you, explain why the market failed, and suggest policies for improving the situation. I want to see you thinking like an economist. A profusion of footnotes and references is not necessary, but it is important to properly reference your sources, including web pages. .

I am particularly fond of papers/projects on local issues. Thousands of papers will be written on global warming, maybe only one, yours, will be about the impact of the parking fees in Boulder Mountain parks. With a local issue you are the only one investigating it from an economic perspective, and you have the opportunity to talk to the people involved. With local issues, the details often jump out, forcing you to be more relevant to real world considerations.

Some interesting papers in the past have been on such topics as: "Do We Really Need Bighorn Sheep," "The Economics of Whaling," "The Economics of Outer Space," "Recycling," "The Love Canal," "The Harp Seal Hunt," "Wilderness Management," "Boulder Mountain Parks," "Deforestation," "Regulating Mountain Biking," "Ski Area Development," "Two Forks Dam," "Management in the Holy Cross Wilderness area," "Vasquez: The Proposed Expansion of Winter Park," "Oxygenated Fuels and the Front Range," "Rafting on the Arkansas," Boulder Open space," "Wood-burning Stoves," hunting and fishing in Colorado, etc.

Keep in mind that you will likely not have the resources or time to do a complete study. For example, you will not be able to estimate the benefits and costs of some ski area development. Rather a good paper on this topic would discuss how one might measure such benefits and costs if one had the time and resources. It might, for example, develop a survey instrument.

I grade on the following scale

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

I grade on the basis on standards rather than on the basis of a curve. Everyone can get an A.

My office hours will be Monday and Wednesday from 3:30 - 5:00, and by appointment. My office is Econ 122. To make an appointment, catch me after class or contact me by email (Edward.Morey@Colorado.edu) . It might take me a day or two to return your email.

PREREQUISITES

M.A. level micro and math econ, or my permission.

READINGS

Note that there is no text for the course.

Over the years I have brought together a number of journal articles, magazine articles and newspaper articles. These articles are the required reading for the course. Some of these articles are quite old, others very recent. They vary in length from a few newspaper columns to twenty-page journal articles. Some of these articles will be discussed in 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 you feel would be good class readings, and tell me which of the current readings have the greatest value and which have the least value.

At the beginning of each section of the course, I will bring to class a file of the articles for that section. You, as a group, can collectively keep copies on file on the third floor, make and distribute copies, or whatever. I'll need my originals back. If you wish or need to read ahead, you can borrow them from me. I have been experimenting with putting readings on the web. (See the home page for Econ 6535). They are in .pdf or .html format. Note that some of these files are large. See the course web page for details.

Note that much of the material I will present in class does **not** appear in any of the readings.

I will be revising the list of articles during the semester.

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CLASS FORMAT

View the readings and my lectures as complements rather than substitutes. A lot of the basic material that you will be responsible for will be presented in lecture and is material that is not explicitly in the readings, so class attendance is imperative. Class time will be devoted to lectures, problem solving and discussions. It is important that you do the appropriate readings before each lecture. Some class time will be devoted to working on the review questions. Prepare for these review sessions by answering the questions to the best of your ability. I will ask a lot of questions and will sometimes offer extra credit for correct answers. Expect to be called on.

COURSE TOPICS

I have chosen the following topics to cover: an introduction to nr and env economics (efficiency, equity, market failure, government intervention, etc), the impact of natural resource scarcity on

longrun growth, fishery economics and the common property problem, nonmarket valuation, and environmental policy in theory and practice. See the [course outline](#) on the web page for more details.