

Natural Resource Economics
University of Colorado at Boulder

Instructor: Matthew Benton
Class Time: TR 9:30 a.m. – 10:45 a.m.
Classroom: EKLC E1B20
Email: matthew.benton@colorado.edu
Course Website: <http://webfiles.colorado.edu/bentonm/www>
Office: ECON 414
Office Hours: TR 8:30 a.m. – 9:20 a.m. and by appointment

COURSE DESCRIPTION & OBJECTIVES

This course is an applied microeconomic theory approach to resource policy analysis. Economics is the study of efficient use of scarce resources and naturally extends to the application of natural resources. We will discuss the normative criteria for decision making (for both the present and the future) when faced with resource constraints in an attempt to maximize society's well-being. We will then discuss different types of natural resource systems (i.e. energy, forests, fisheries, minerals, water) and how the theory can be applied to each in their own ways to ensure that the resource is being used in the optimal manner. Other key topics will include sustainability and the impact of population and economic growth on the environment.

TEXTBOOK & ADDITIONAL READING

Tietenberg & Lewis. *Environmental & Natural Resource Economics 8th Edition*. Prentice Hall (2009).

Required supplemental articles will be posted on the website.

COURSE PREREQUISITES

To satisfy the university's prerequisites for this course, students must have successfully completed either ECON1000 or ECON 2010.

Since we will be dealing with mathematical models, students must be comfortable with algebra, geometry, and basic summation notation. It is recommended that students refresh this material as very little class time will be devoted to reviewing these basic math tools. No knowledge of calculus is assumed and will, hence, not be used.

ECON 3535 -- FALL 2009

GRADING

Your grade for this course will be based on two midterms, homework, a term paper, and a final exam. Your grade will be determined as follows:

Midterm 1 (Thursday, October 1st): 20%

Midterm 2 (Thursday, November 12th): 20%

Homework: 15% (Three assignments throughout the semester)

Term Paper: 15% (Due Thursday, December 3rd)

Final (Monday, December 15th from 4:30-7:00pm): 30%

HOMEWORK

There will be three applied problems throughout the semester (5% each) where you will be expected to apply the theory learned in class to specific current issues.

TERM PAPER

This will be a 3-5 page paper in which you will analyze the efficient use of a resource of your choice (approved by me). You will be expected to find articles related to the scarcity of this resource and then propose your own solution applying the theory learned in class. More details about this paper will be discussed in class.

EXAMS

Exams will be short answer format.

The final exam will be cumulative and will be held in the usual classroom on Monday, December 14th from 7:30 p.m. to 10:00 p.m.

If you have three or more final exams scheduled on the same day, you are entitled to arrange an alternative exam time for the last exam or exams scheduled on that day. To qualify for rescheduling final exam times, you must provide evidence that you have three or more exams on the same day, and arrangements must be made with me no later than the end of the sixth week of the semester.

Grading Scale

A	92-100	B-	80-81	D+	68-69
A-	90-91	C+	78-79	D	62-67
B+	88-89	C	72-77	D-	60-61
B	82-87	C-	70-71	F	Below 60

COURSE OUTLINE

Part I: Economic Approach to Natural Resources - Theoretical Framework

- A. How Economists See the Environment
- B. Property Rights, Externalities, and Environmental Problems
- C. Normative Criteria for Decision Making
 - 1. Static Efficiency
 - 2. Dynamic Efficiency
- D. Benefit-Cost Analysis
- E. Non-market valuation

Part II: The Population Problem

Part III: Land Allocation

Part IV: Applications to Specific Types of Natural Resources

- A. The Allocation of Depletable and Renewable Resources: An Overview
- B. Energy: Transitioning from Depletable to Renewable Resources
- C. Replenishable, But Depletable Resources: *Water*
- D. Reproducible Private-Property Resources: *Agriculture*
- E. Renewable Common-Property Resources: *Fisheries and Other Species*
- F. Storable, Renewable Resources: *Forests*
- G. Recyclable Resources: *Minerals, Paper, Glass, etc*

Part V: Additional Topics (Time Permitting)

- A. Development, Poverty, and the Environment
- B. The Quest For Sustainable Development

OTHER INFORMATION

ECON 3535 -- FALL 2009

Disability Policy:

If you qualify for accommodations because of a disability, please submit a letter from Disability Services to me in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and <http://www.Colorado.EDU/disabilityservices>.

Religious Observance Policy:

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance. If you have a conflict, please contact me at the beginning of the semester so we can make proper arrangements.

Classroom Behavior Policy:

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty members have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.

Honor Code:

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). See <http://www.colorado.edu/policies/honor.html> and <http://www.colorado.edu/academics/honorcode/>.

Discrimination & Harassment Policy:

The University of Colorado at Boulder policy on Discrimination and Harassment (<http://www.colorado.edu/policies/discrimination.html>), the University of Colorado policy on Sexual Harassment and the University of Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.