

University of Colorado Boulder

**Econ 8535 – Environmental Economics I
Spring 2024**

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Lectures: Tuesday and Thursday, 9:30-10:45am Econ 5

Office hours: Tuesday and Thursday 10:45-11:45am (and as need be – just ask!)

Course Description: This course provides a Ph.D. level survey of environmental economics. We will examine the literature and methods used in analyzing environmental and related resource economics problems from an economic perspective. As this is the first course in a two-course sequence, the focus will be primarily on theoretical concepts and a broad overview of key ideas, with empirical methods covered in the second course.

Course Organization: This course will be a mix of lecture and discussion. There will be six major units, and you will be expected to write four ~8-page papers on units of your choice. For one of the units that you choose to write on, you will be required to lead discussion for one class. The paper and presentation are discussed in more detail below.

Textbooks: There are no required textbooks, but there are two “standards” in environmental and resource economics that are worth acquiring

Environmental: William J. Baumol and Wallace E. Oates, *The Theory of Environmental Policy*, 2nd edition (Cambridge University Press, 1988).

Resource: Jon M. Conrad and Colin W. Clark, *Natural Resource Economics: Notes and Problems*, Cambridge University Press, 1987.

In addition, Robert N. Stavins, *Economics of the Environment: Selected Readings*, 7th Ed, is an excellent collection of important articles in environmental economics.

For a more intuitive but still rigorous treatment of many of the topics we’ll discuss, you should also consider: Nick Hanley, Jason F. Shogren, and Ben White; *Environmental Economics: In Theory and Practice*, 2nd Ed, 2007

The reading list, drawn primarily from academic journals, will be provided in a separate document on Canvas. I AM UPDATING THIS LIST. Readings should be available electronically. Students are expected to have read all materials prior to class and should be prepared to discuss and answer questions regarding the readings.

Grading:

Papers and Presentation	60%
Assignments	20%
Class Participation	20%

Papers and Presentation: You will be required to write four papers (out of the six total units), each roughly 8 pages in length. They should be professional (organized and typo-free) and include a complete list of citations. You should view the paper as a literature analysis on a relatively narrow topic within each unit – that is to say, you should focus on a specific topic that interests you within each unit, rather than review the entire unit. The reading list should be viewed as a “gateway” to the literature, and I expect a majority of citations to be papers that you find on your own. For the presentation, I expect you to be able to lead the class discussion based on your paper for that unit (e.g. prepare slides). The presentation will counted as “equivalent” to a paper, and I will take your top four scores (out of the four papers plus presentation) in computing your grade.

Assignments: There will be four assignments that will enhance your abilities to develop economic models. As opposed to typical “problem sets,” the assignments will be modeling exercises where the emphasis will be on developing simple economic models of economic phenomena based on environmental and resource topics that I provide. Think of it as a “flipped” problem set where you will come up with the model and problem.

Class Participation: Students are expected to have read all materials prior to class and should be prepared to discuss and answer questions regarding the readings. Attendance is of course expected.

Tentative Schedule

Introduction – Foundations of Environmental and Resource Economics (Week 1)

I. Market Failure and Environmental Goods (Week 2-3)

- A. Market success
- B. Externalities and Welfare

II. Environmental Valuation (Week 4-6)

- A. WTA and WTP
- B. Revealed Preference methods
- C. Stated Preference methods

III. Policy Choice I (Week 7-8)

- A. Market-based vs command and control
- B. Taxes and permits
- C. Standards

IV. Policy Choice II (Week 9-10)

- A. Uncertainty and selection
 - B. Multiple market failures and second-best policy
- V. Resource Economics (Week 11-12)
- A. Non-renewable Resources
 - B. Renewable Resources
 - C. Property Rights and Institutions
- VI. Additional Topics (Week 13-15)
- A. Waste and recycling
 - B. Uncertainty, dynamics and discounting
 - C. Transboundary pollution and international agreements

Important Stuff

CLASSROOM BEHAVIOR

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy. For more information, see the [classroom behavior policy](#), the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

Requirements for Infectious Diseases

Members of the CU Boulder community and visitors to campus must follow university, department, and building health and safety requirements and all public health orders to reduce the risk of spreading infectious diseases.

The CU Boulder campus is currently mask optional. However, if masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class. Students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct & Conflict Resolution. Students who require accommodation because a disability prevents them from fulfilling safety measures related to infectious disease will be asked to follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

For those who feel ill and think you might have COVID-19 or if you have tested positive for COVID-19, please stay home and follow the [further guidance of the Public Health Office](#). For those who have been in close contact with someone who has COVID-19 but do not have any symptoms and have not tested positive for COVID-19, you do not need

to stay home. In this class, if you are sick or quarantined, a simple email to me will suffice.

ACCOMMODATION FOR DISABILITIES, TEMPORARY MEDICAL CONDITIONS, AND MEDICAL ISOLATION

[Disability Services](#) determines accommodations based on documented disabilities in the academic environment. If you qualify for accommodations because of a disability, submit your accommodation letter from Disability Services to your faculty member in a timely manner so your needs can be addressed. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance.

If you have a temporary medical condition or required medical isolation for which you require accommodation, a simple email to me will suffice. Also see [Temporary Medical Conditions](#) on the Disability Services website.

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: honor@colorado.edu, 303-492-5550. Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

SEXUAL MISCONDUCT, DISCRIMINATION, HARASSMENT AND/OR RELATED RETALIATION

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and

our community. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email cureport@colorado.edu. Information about university policies, [reporting options](#), and support resources can be found on the [OIEC website](#).

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive an outreach from OIEC about their options for addressing a concern and the support resources available. To learn more about reporting and support resources for a variety of issues, visit [Don't Ignore It](#).

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. See the [campus policy regarding religious observances](#) for full details.

Mental Health and Wellness

The University of Colorado Boulder is committed to the well-being of all students. If you are struggling with personal stressors, mental health or substance use concerns that are impacting academic or daily life, please contact [Counseling and Psychiatric Services \(CAPS\)](#) located in C4C or call (303) 492-2277, 24/7.

Free and unlimited telehealth is also available through [Academic Live Care](#). The Academic Live Care site also provides information about additional wellness services on campus that are available to students.