

University of Colorado, Boulder
Natural Resource Economics: ECON 3535
Fall 2024

Instructor: Rimjhim Saxena

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Lectures: Monday, Wednesday, Friday; 1:25 - 2:15 PM; MUEN E431

Office Hours: Wednesday 2:30 - 4:30 PM; ECON 414

Course Description: This course in natural resource economics will introduce students to the interlinkages between natural resources and the economic system. Classic allocation problems for renewable and non-renewable resources will be examined. This course will also consider the fundamental role of institutions in shaping natural resource use. Understanding the incentives faced by users of natural resources will allow us to consider market failures and the important question of whether or not market interventions are justified on economic grounds. Because natural resources play a central role in many current energy and environmental policy debates, this course will also address policy issues related to climate change, renewable energy, transportation, and sustainability. The aim of this course is to teach you to think about incentives and trade-offs like an economist.

Course Organization: This course will be a mix of lecture and discussion. The first half of the class will focus on the theory of natural resource economics, with the midterm covering the material midway through the course. The second half of the class will focus on application to natural resource, energy and environmental policy, with the Final covering the material for the last half of the semester.

Textbook: The required textbook is: Tom Tietenberg and Lynne Lewis, *Environmental and Natural Resource Economics* 9th edition, Prentice Hall, 2011. A pdf of the book is posted on Canvas. You are not required to purchase the textbook.

Grading:

Table 1: Grading Breakdown

Class Participation	10%
Unit Summaries	30%
Midterm Exam	30%
Final Exam	30%

Class Participation: Discussion will comprise a large component of our in-class time, and students are expected to attend class and contribute.

Unit Summaries: At the end of each of the six units, a two page review of the material covered in the class will be required. The document is expected to summarize the unit material covered and the discuss open and unresolved questions or debates related to the unit. In addition, Each unit will also include a mathematical problem to be solved, similar to the one discussed in the lecture. The summaries will be graded for in-time completion and correctness of the math question. Submissions not relevant to unit material will be penalized. Students are encouraged to work in groups of two, however each student should submit their unit summary individually. Submissions will be made on Canvas and I will only accept pdf files. Late unit summaries will be accepted 1 day late for a 30% penalty. "Late" applies to any submission that is even one minute past the deadline, up to 23 hours late.

Midterm Exam: Midterm exam will cover units 1-3. The exam will have multiple choice questions and short questions. Expect to solve mathematical questions similar to the ones covered in lectures. The midterm exam will be in-class, closed book exam. The tentative date for midterm is mid-October (~ October 14). Finalized date will be announced two weeks before the exam.

Final Exam: Final exam will cover units 4-6.¹ The exam will have multiple choice questions and short questions. Expect to solve mathematical questions similar to the ones covered in lectures. The final exam will be in-person, closed book exam. The final exam date allocated by the university is ***Tuesday, December 17 2024, 4:30 - 7pm***

¹Final exam is not cumulative.

Course Material:

The course will cover six units as listed below. For each unit, tentative topics are also listed:

1. Extraction of non-renewable resources

- Mineral Products
- Oil and Gas
- Groundwater

2. Extraction of renewable resources

- Fisheries
- Forestry
- Agriculture

3. Property rights and institutions

- Open access
- Common property
- The resource curse

Midterm Exam (mid October)

4. Natural resource policy

- Regulating externalities
- Property rights approaches

5. Climate Change

- Costs of climate change
- Climate policies
- Technological innovation

6. Renewable energy

- Power sector
- Transportation sector

Final Exam (December 17, 4:30-7pm)

Grading Scale:

Grade	Percentage	Grade	Percentage
A	≥ 93	C	73-76
A-	90-92	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	0-59

I will *round* to the nearest digit. For example, 89.5 will be rounded up to 90 and will be A- and 89.4 will be rounded to 89 and will be B+.

Course Policies

Attendance: I will not be taking attendance in lectures. Lecture slides will be posted on Canvas after each class. Please note that these slides are intended to be a resource to support your learning after attending the lecture. They will not include all the details and explanations discussed in class. While the slides are a helpful study tool, they are not a complete representation of the course material. Regular attendance is strongly recommended, as it will be difficult to succeed in this course without actively participating in lectures.

Makeups: There will be no makeup tests, even if your reason for missing the test is very good. If a test conflicts with a mandatory CU event, arrangements can be made for you to take the test before the scheduled test day, but not afterward.

Email: If you need to contact me via email, please use your official school email address. I will not respond to emails sent from personal accounts. Please include *ECON3535* in the subject line of all your emails. Be sure to include your full name in the email, so I know who I'm corresponding with. Please allow up to 24 hours for a response. If you haven't heard back from me after a day, feel free to send a follow-up email. Note that I do not check emails over the weekend, so any emails sent then will be answered on Monday. Additionally, please start a new email instead of replying to a class-wide email. This ensures I see all individual emails and avoids the issue of anyone accidentally hitting "reply-all."

Technology: The use of ChatGPT or other generative text models is not permitted. Assignments will be checked for plagiarism and evaluated using AI detection tools. If your work raises concerns, I will schedule a meeting with you to review it. To prevent any issues, I strongly recommend tracking all edits in your text processor (e.g., Word or Sheets) to maintain a clear record of your work.

- Use of technology in class is allowed and encouraged.
- However, if your use of technology becomes disruptive to others, I reserve the right to restrict it.

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; this updates instructor's and TA's class rosters.

Please feel free to email me your preferred pronouns and names or any information you find important regarding this matter

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.

If you are facing challenges with your mental health, please don't hesitate to reach out to me. I will do my best to support you and work with your situation. It's important to let me know as early as possible, as it becomes harder to provide fair accommodations for everyone in the class if you wait until later in the semester.

Cheating: Cheating of any kind will not be tolerated in this course. This includes cheating on an exam and/or in recitation. If you are caught cheating, I will assign you F grade in the course. I will also meet with the Associate Chair of Undergraduate Studies for the Economics Department, and we will report this incident to both the University and the Honor Council which could result in further discipline including up to expulsion from the University.

Honor Code: All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code academic integrity policy. Violations of the Honor Code may include, but are not limited to: plagiarism, 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 the Honor Code (honor@colorado.edu; 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found on the [Honor Code Website](#).

Classroom Behavior: Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail 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 policies on [classroom behavior](#) and the [Student Conduct & Conflict Resolution policies](#).

Accommodation for Disabilities: If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely member so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation: The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or harassment by or against members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or email cureport@colorado.edu. Information university policies, [reporting options](#), and support resources can be found on the [OIEC website](#).

Please be aware that faculty and graduate instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about their rights,

support resources, and reporting options.

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.