

# University of Colorado Boulder

## Natural Resource Economics

### ECON 3535 - Fall 2016

**Course Meeting:** MWF 1-1:50pm in CLRE 207

**Instructor:** Samara Mendez, samara.mendez@colorado.edu

**Office Location:** Econ 414 (south tower)

**Office Hours:** MT 2-3pm or by appointment

**TA:** Daniel Diebel, daniel.diebel@colorado.edu

**Office Location:** Econ 313

**Office Hours:** MR 11-12pm; T 1-2pm; W 2-3pm

**Website:** Desire2Learn - *check this site often!!*

**Course Description:** This course in natural resource economics will introduce students to the relationship between natural resources and the economic system. Classic allocation problems for renewable and nonrenewable resources will be examined. 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 institutions and policy issues related to climate change, ecosystem services, renewable energy, transportation, and sustainability.

**Prerequisite:** A basic understanding of microeconomics is required for this class. Students should have previously taken ECON 2010 (Principles of Microeconomics) or an equivalent class at another institution. This course requires students to know basic algebra at the same level as the aforementioned ECON 2010. There will not be any formal math review as part of this class.

**Text:** *Environmental and Natural Resource Economics*, Tom Tietenberg and Lynne Lewis, 10th ed, Pearson, 2014. ISBN: 0133479692 (9th edition is fine.)

## Course Policies:

### General

- We will be writing notes and graphical models on the board, but I will provide editable outlines of lectures. Therefore, you are welcome to use laptops to take notes. If you use your laptop, stay off of the internet - you're not paying tuition to sit in class and check Facebook. No phones will be tolerated in class. Texting during lecture will result in me confiscating your phone and reading your texts aloud to the class.

- Please allow 24 hours for me to respond to your emails. Grades will not be discussed over email. Emails regarding grades will receive a reply of "Office hours."
- *No makeup assignments will be given, including exams.*

## Grades

- **Your final grade comes from four components:**

25% **Midterm** - Friday Oct. 14

30% **Final Exam** - Monday Dec. 12, 4:30pm

30% **Unit Summaries** - due dates following course progress

15% **Class Participation** - roughly daily

Exam grades and the overall course grade may be curved according to departmental standards. The standard plus/minus grade cutoffs apply to final course grades:

above 93%, A; 90-92.9, A-; 87-89.9, B+; 83-86.9, B; 80-82.9, B-; 77-79.9, C+;

73-76.9, C; 70-72.9, C-; 63-66.9, D; 60-62.9, D-; below 59.9, F

I will automatically increase final course grades that are 0.5% below any grade cutoff *after any final grading curve has been applied*. After these steps are taken, no further increases to grades will occur. Individual requests for bumps or extra credit assignments will be denied.

- **Exams:** There will be one midterm and a final exam held in our regular classroom on the dates and times listed in this syllabus. If you miss the midterm, the final exam will have a weight of 55%. No make-up exam will be provided. The midterm will cover material from Units 1-3 and will be a mixture of multiple choice, short answer, and analytical problems. The final exam will be cumulative, with an emphasis on new material and a similar format to the midterm.
- **Unit Summaries:** At the end of each of the six units, a roughly 3 page review of the material covered in the readings will be required. This is the primary check-up on the readings from the textbook. You may work in groups of up to 4 students *with a single submission from the group*. The document is expected to summarize the unit material covered and discuss open and unresolved questions or debates related to the unit. Each unit will also include a mathematical problem to be solved and turned in with the summary. More detailed guidelines about Unit Summaries are posted on D2L
- **Class Participation:** We will use iClickers in addition to a variety of activities to encourage class engagement. I will begin recording iClicker participation in the second week of class, although attendance/participation credit will not always come from an iClicker question. Most iClicker questions will be graded for attendance only, but some may be graded for correctness. I will drop 4 missed lectures at the end of the semester. You should register your iClicker on [myCUinfo.colorado.edu](http://myCUinfo.colorado.edu).

## University Policies:

- **DISABILITY POLICY:** If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. For exam-specific accommodations, please notify me at least two weeks before the exam; for semester-long accommodations, please contact me as soon as possible in the semester.
- **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](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both a failing grade in my class and non-academic sanctions (including but not limited to university probation, suspension, or expulsion).
- **RELIGIOUS OBSERVATION 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 no later than the first week of the semester so we can make proper arrangements.
- **CODE OF 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 has 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 or race, culture, religion, politics, sexual orientation, gender variance and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun.
- **DISCRIMINATION AND HARASSMENT POLICY:** The University of Colorado, Boulder policy on Discrimination and Harassment can be found on the CU Boulder website. The university policy on Sexual Harassment and 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>.

## *Tentative Outline*

The six units for the class are listed below. I expect to spend approximately 2-3 weeks on each unit, depending on the volume of the material and general class interest in the unit. For each unit, tentative topics are also listed. A reading list is posted in D2L and will be updated according to our progress.

1. Extraction of non-renewable resources

Mineral products

Oil and gas

Groundwater

2. Extraction of renewable resources

Fisheries

Forestry

Agriculture

Ecosystem Services

3. Property rights and institutions

Open access

Common property

The Resource Curse

**Midterm Exam:** Friday Oct. 14

4. Natural resource policy

Market Failures and Natural Resources

Regulating externalities

Property rights approaches

5. Climate change

Costs of climate change

Climate policies

Technological innovation (focus on renewable power)

6. Renewable energy

Power sector

Transportation sector

**Final Exam:** Monday Dec. 12, 4:30pm