

University of Colorado Boulder

**Econ 3535 – Natural Resource Economics
Spring 2016**

Professor: Daniel Kaffine
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Lectures: Monday, Wednesday, Friday 12:00-12:50 MCOL W100

Office hours: Monday and Wednesday 1:00-2:00

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 nonrenewable 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.

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 this 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.

Textbooks: The required textbook is:

Tom Tietenberg and Lynne Lewis, *Environmental and Natural Resource Economics* 9th ed, Prentice Hall, 2011. (10th edition is also acceptable – alternative pages for the new edition are provided on the reading list)

Grading:

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

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. 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 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. This summary can be worked on in a group of up to 3 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. I will provide more details when the first summary is assigned.

Exams: The exams will be short answer essay plus one numerical problem. I will provide example questions from past exams as study aides prior to the test date. The Midterm Exam will be in class (roughly early March) and cover material from Units I-III. The Final Exam is scheduled for Sunday May 1st 4:30-7:00.

Tentative Schedule

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.

I. Extraction of non-renewable resources

- Mineral products
- Oil and gas
- Groundwater

II. Extraction of renewable resources

- Fisheries
- Forestry
- Agriculture

III. Property rights and institutions

- Open access
- Common property
- The Resource Curse

Midterm Exam (early March)

IV. Natural resource policy

- Regulating externalities
- Property rights approaches

V. Climate change

- Costs of climate change
- Climate policies
- Technological innovation

VI. Renewable energy
Power sector
Transportation sector

Final Exam (May 1st 4:30-7:00)

Important Stuff

1) If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu.

If you have a temporary medical condition or injury, see Temporary Injuries under Quick Links at Disability Services website (<http://disabilityservices.colorado.edu/>) and discuss your needs with your professor.

2) 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 full details at http://www.colorado.edu/policies/fac_relig.html

3) Students and faculty each have responsibility for maintaining an appropriate learning environment. 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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, 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. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code

4) The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/8/2001). CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race,

color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Student Conduct (OSC) at 303-492-5550. Information about the ODH, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://hr.colorado.edu/dh/>

5) 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; 303-735-2273). 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). Other information on the Honor Code can be found at

<http://www.colorado.edu/policies/honor.html> and at <http://honorcode.colorado.edu>