

## Economics 675 (L01) (NATURAL RESOURCE ECONOMICS)

Instructor: John R Boyce  
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Lecture Location: SS403  
Lecture Days/Time: T/R 9:30-10:45

Office: SS412  
Office Hours: T/R 12:00-14:00

(WINTER 2022)

### Course Description:

This course considers issues in natural resource economics, including the theory and practice of regulation of externalities, the theory and practice of renewable resource markets and regulation, and the theory and practice of exhaustible resource markets and regulation. Topics include the economics of land-use, externality regulation, common property problems, fishery economics, forestry economics, and economics of non-renewable resources.

Students who successfully complete this course will develop their mastery and understanding of the methodology of microeconomic theory by applying it to the following topics.

- (i) Externalities, Pigouvian Taxes, and Tradeable Permit Markets
- (ii) Economic Rents: Land and Water
- (iii) Renewable Resources: Steady-State Fishery Models
- (iv) Renewable Resources: Fishery Regulation
- (v) Renewable Resources: Forestry Economics
- (vi) Non-Renewable Resources: The Mine
- (vii) Non-Renewable Resources: Markets
- (viii) Non-Renewable Resources: Market Power
- (ix) Renewable Resources: Open Access & Common Property Dynamics
- (x) Non-Renewable Resources: Economic Growth
- (xi) Non-Renewable Resources: Taxation and Regulation

**Course Outline:**

1. Introduction: Data, Questions and Methods
2. Externalities, Pigouvian Taxes, and Tradeable Permit Markets
3. Economic Rents: Land and Water
4. Renewable Resources: Steady-State Bioeconomic Models
5. Renewable Resources: Fishery Regulation
6. Renewable Resources: Forestry Economics
7. Non-Renewable Resources: The Mine
8. Non-Renewable Resources: Markets
9. Non-Renewable Resources: Market Power
10. Renewable Resources: Open Access and Common Property Dynamics
11. Non-Renewable Resources: Economic Growth
12. Non-Renewable Resources: Taxation and Regulation

**Prerequisites/corequisites:**

Econ 657 (pre-requisite)

**Required Textbook(s):**

John R. Boyce, *Lecture Notes in Natural Resource Economics* (Available on D2L)

**Books on Reserve:**

Koonin, Steven E. 2020 *Unsettled*, BenBellaBooks.

Lomborg, B. 2001. *The Skeptical environmentalist*. Cambridge: Cambridge University Press.

Lomborg, B. 2007. *Cool It!* New York: A. Knopf.

Nordhaus, W. 2013. *The Climate Casino*. New Haven: Yale University Press.

**Prerequisites/corequisites:**

Economics 357

**Desire2Learn:**

This course will make use of the Desire2Learn (D2L) platform. Students who are registered in the course can log on at <http://d2l.ucalgary.ca> through their student centre. Please note that D2L features a class e-mail list that may be used to distribute course-related information. These e-mails go to your University of Calgary e-mail addresses only.

**Lectures:**

Lectures will be delivered in person at the Registrar scheduled times. The lecture notes will be posted to D2L, but not the lecture itself, unless the University forces all courses to go on-line.

**Grade Determination and Examination Details:**

ASSIGNMENT 1 (Due 17:00 Friday, 11 February)	15%
ASSIGNMENT 2 (Due 17:00 Friday, 1 April)	15%
MIDTERM EXAMINATION (Tuesday, 1 March)	30%
FINAL EXAMINATION (Registrar scheduled)	<u>40%</u>
	100%

The official grading system will be used. See <http://www.ucalgary.ca/pubs/calendar/current/f-1-1.html>.

If a student's letter grade on the final exam exceeds their midterm letter grade, the weight of the midterm may be transferred to the final exam at the discretion of the instructor. This does not apply to assignments. The student must have written the midterm or provided supporting documentation for the absence such as a medical note or statutory declaration.

As per the Writing Across the Curriculum Statement in the Calendar, writing and grading thereof will be a factor in the evaluation of student work. See <https://www.ucalgary.ca/pubs/calendar/current/e-2.html>.

Course material dealing with a particular assignment will typically be covered in class at least 2 days before the assignment is due; thus, assignments can be completed at any time up to and including the due date. Given these factors, only situations where someone can document illness or domestic affliction for an extended period (i.e., the entire 14 days prior to the due date) would possibly warrant shifting the assignment weight to the final exam. Furthermore, technical problems can be expected to occur with computer systems (and internet availability) so it may be a good idea to not wait until the last minute to submit your assignment.

The final examination will be comprehensive, and scheduled by the Registrar. The exam will last TWO hours and is CLOSED book.

All other course components will also be accessed, submitted, and returned through D2L.

If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <https://www.ucalgary.ca/pubs/calendar/current/g-6.html>. Under no circumstance will this be accommodated by the Department.

Tests and exams WILL NOT involve multiple choice questions and / or fill-in-blank questions

THERE WILL BE NO MAKEUP OR DEFERRED ASSIGNMENTS/EXAMS under any circumstances, nor may the exams be written early. Students unable to write the exams because of documented illness, family emergency, religious observance, or university-sanctioned event will have the weight shifted to the final examination; otherwise a grade of zero will be assigned.

**Reappraisal of Grades:**

*For Reappraisal of Graded Term Work, see Calendar I.2*  
<http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

*For Reappraisal of Final Grade, see Calendar I.3*  
<http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

**Academic Misconduct:**

Academic Misconduct refers to student behavior that compromises proper assessment of students' academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

Student committing academic misconduct during the final exam will not receive a passing grade for the course.

For information on the Student Academic Misconduct Policy, Procedure and Academic Integrity, please visit: <https://www.ucalgary.ca/pubs/calendar/current/k-3.html>

**Academic Accommodations:**

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services. SAS will process the request and issue letters of accommodation to instructors. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their instructor. The full policy on Student Accommodations is available at

<https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>

**Freedom of Information and Protection of Privacy (FOIP) Act:**

Personal information is collected in accordance with FOIP. Assignments can only be returned to the student and will be accessible only to authorized faculty and staff. For more information, see <https://www.ucalgary.ca/legal-services/access-information-privacy>

**Copyright Legislation:**

See the University of Calgary policy on Acceptable Use of Material Protected by Copyright at <https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy> Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

**Recording of Lectures:**

Recording of lectures is prohibited, except for audio recordings authorized as an accommodation by SAS or an audio recording for individual private study and only with the written permission of the instructor. Any unauthorized electronic or mechanical recording of lectures, their transcription, copying, or distribution, constitutes academic misconduct. See <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>.

**Important Dates:**

Please check: <http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>

**Student Organizations:**

Faculty of Grad Studies website: <http://grad.ucalgary.ca/home>

Graduate Students Association: <http://gsa.ucalgary.ca/>

Professional Development for Grad Students

Workshops and resources can be found at <http://www.ucalgary.ca/mygradskills/>

Economics Graduate Association: <http://econ.ucalgary.ca/ega/>

**Student Support and Resources:**

- See <https://www.ucalgary.ca/registrar/registration/course-outlines> for information on campus mental health resources, the Student Ombuds Office, Student Success Centre, Safewalk, and Emergency Evacuation and Assembly.
- Online writing resources are available at <https://ucalgary.ca/student-services/student-success/writing-support>.
- For registration (add/drop/swap), paying fees and assistance with your Student Centre, contact Enrolment Services at 403-210-ROCK [7625] or visit them in the MacKimmie Tower.

JRB

14 December 2021