

# ECON 415: Environmental Economics

University of Illinois at Urbana-Champaign  
College of Liberal Arts & Sciences  
Department of Economics

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Online

## Communication:

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## Catalog Description:

This course covers advanced undergraduate environmental economics with an emphasis on policy design and analysis. This course will focus on the economics of environmental issues and will start with establishing how property rights and environment quality interact. The course will then explore different methods of reducing inefficiency by using markets, incentive-based regulation and command and control regulation. The course will also explore trends in environmental data. (3 Hours) Prerequisite: ECON 302

## Course Outcomes:

- Discuss the development of property rights and the effects of different property rights regimes on environmental quality.
- Graphically and mathematically analyze competitive markets with externalities.
- Graphically and mathematically analyze competitive markets for natural resources for dynamic efficiency.
- Discuss regulatory and non-regulatory methods of pollution control and the costs and benefits of each.
- Become familiar with trends in the data for environmental degradation and improvements.

## Course Format:

This course will be pre-recorded lecture videos which will discuss elements from the reading and go into examples and deeper analysis. There will be readings from the required text as well as articles which will be provided online.

## Course Website:

Moodle: <https://learn.illinois.edu/>

## Required Items:

### Textbooks:

Anderson and Libecap. (2014) Environmental Markets. *Cambridge University Press*.

### Supplemental:

TI-89 Graphing Calculator

## Student Assessment:

Final grades will be rounded to the nearest integer. There is no curve in this class.

### Grade Weights

- Assignments (30%)
- Data Project (15%)
- Midterm Exam I (15%)
- Midterm Exam II (15%)
- Final Exam (25%)

*Plus/Minus Grade Cutoffs*

A+ ≥ 97	90 > B+ ≥ 87	80 > C+ ≥ 77	70 > D+ ≥ 67	60 > F
97 > A ≥ 93	87 > B ≥ 83	77 > C ≥ 73	67 > D ≥ 63	
93 > A- ≥ 90	83 > B- ≥ 80	73 > C- ≥ 70	63 > D- ≥ 60	

**Assessment Policies**

*Assignments:*

Assignments are administered through Moodle. There are two types of Assignments: Math and Graph Assignments and Reading Assignments. Both types of assignments must be submitted by 11:00 PM Central Time on their due dates to receive full credit. No exceptions will be made for technological problems. Start assignments with enough time before the deadline to accommodate potential issues. The lowest online assignment grade will be dropped when calculating the average for the homework portion of your grade.

Math and Graph Assignments may be completed multiple times before their due date. The highest scored attempt will be kept of the Assignment Average. Once the due date for a Math and Graph Assignment has passed, the same assignment can be accessed as Practice (After Due Date). Practice (After Due Date) versions of the assignments are worth 60% of the points of the original assignment. If the partial credit score of a Practice (After Due Date) version is greater than the score on the original, then the original grade will be replaced.

There are four reading assignments for economics article that are provided as PDFs. The textbook is divided into two additional reading assignments. Each reading assignment will be a summary of the article or portion of the text. Each assignment will be accompanied by instructions which will give additional guidance to that assignment. Save your summaries as Word Documents or PDF documents and submit them through Moodle by their due date and time to receive full credit.

Reading Assignments turned in after their due dates will be worth 0.5 points less per hour late.\* Assignments in formats that cannot be opened will count as late based on the time the readable assignment is turned in. This period will include the time it takes to tell the student that the file is unreadable. \*This penalty will be approximately 10 points per day late.

*Extra Credit:*

There are two forms of extra credit available. Many lectures have extra credit tutorials associated with them. These tutorials will walk you through solving a common type of problem in the course. Completing all tutorials will score 3 points added to your Assignment Average.

There are also extra credit discussion forums about the readings. Posting in these forums will earn 0.5 points of per post with a maximum of 1 point per forum. These points will be added to your Assignments Average.

## **Exams:**

### *Exam Proctoring:*

- **On UIUC Campus:** Students who can access the UIUC campus can take a free, in-person exam proctored by the TA for the course. Details on the time and location will be provided on the course website.
  - Free to students.
  - Only one available time per exam. See Course Schedule for time, date, and location.
  - Allows the use of paper, pencil, and physical calculator.
- **ProctorU:** ProctorU is an online proctoring service that uses live, human proctors while students to take exams online while ensuring the integrity of the exam for the institution. The service authenticates your identity and monitors both your computer screen and webcam to ensure academic integrity:
  - Fee based exam (\$14.75 /1-hour exam, \$21.50 /90-min. and 2-hour exam, \$30.25 /3-hour exam) billed when you schedule the exam. Refunds are given only if the exam is canceled within 48 hours before the scheduled exam time.
  - All appointments should be made at least 3 days in advance, since reservations made within 72 hours of your exam are subject to a \$5 late reservation fee.
  - Allows the use of paper, pen and physical calculator.
  - Web cam, microphone, and computer with internet connection are required.
- **Proctorio:** Proctorio is an online proctoring service that uses an artificial intelligence (AI) system to monitor students during exams online while ensuring the integrity of the exam for the institution. The service authenticates your identity and monitors both your computer screen and webcam to ensure academic integrity:
  - Requires the use of Google Chrome browser and the installation of the Proctorio Extension.
  - Uses a virtual whiteboard and calculator app. No paper, pens or physical calculators are allowed.
  - Web cam, microphone, and computer with internet connection are required.

### *Midterm Exam Policy:*

- There are no make-ups for missed exams. If a student misses one of the first two exams, the weight from the missed exam will be redistributed to the final exam. Students cannot take an exam and then drop the exam score.
- In the event of a documentable technical error, students will have an option. Either they retake a new, randomized version of the midterm exam or they may drop the midterm exam grade and shift the weight to the final exam.
- No outside materials are permitted which includes, notes, textbooks and online resources. Cell phones are not permitted in the exam room. Contacting other individuals during an exam is prohibited.
- All requests for grading corrections must be submitted before the following exam.

*Final Exam Policy:*

The Provost prohibits students from taking final exams before the final exam week. Students that miss their scheduled final exam will receive a grade of "Absent from Exam" (ABS). This grade becomes a failure on student transcripts.

In the event that a student cannot take the final on the assigned date, undergraduate students must obtain the approval of the dean of their college to defer a final examination without receiving a grade of ABS. Undergraduate students who must miss a final examination should report this fact to the dean of their college as soon as possible. For satisfactory reasons, students may be "excused" by the dean of their college and be examined later by their instructor (<http://www.las.illinois.edu/faculty/advising/incompletes/>). The date of the deferred exam will be the first Friday of the Fall semester.

Students who miss their scheduled exam time will receive an ABS grade. Students in this situation may take the deferred final if and only if they have taken at least 1 of the 2 midterm exams. The ABS grade will be replaced by the grade earned with the deferred final.

**Statement on Accommodations:**

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak Street, Champaign, call 333-4603 (V/TTY), or email a message to [disability@uiuc.edu](mailto:disability@uiuc.edu).

**Academic Integrity:**

"The University has the responsibility for maintaining academic integrity so as to protect the quality of education and research on our campus and to protect those who depend upon our integrity.

*Expectations of Students:*

It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Students have been given notice of this Part by virtue of its publication. Regardless of whether a student has actually read this Part, a student is charged with knowledge of it. Ignorance is not a defense."

**Readings:**

Anderson and Libecap. (2014) *Environmental Markets*. Cambridge University Press.

Coase, R. (1960) The Problem of Social Cost. *Journal of Law and Economics*.

Hayek, H. A. (1945) The Use of Knowledge in Society. *American Economic Review*.

Mankiw, N. G. (2009). Smart Taxes: An Open Invitation to Join the Pigou Club. *Eastern Economic Journal*.

Yandle, B. (1999) Baptists and Bootleggers in Retrospect. *Regulation*.

### **Course Schedule:**

- Monday, May 17- Course Officially Starts
- Thursday, May 20- Hayek Submission due via Moodle by 11:00 PM CST
- Saturday, May 22- Online Exam 1 Window Opens at 12:15 AM
- Monday, May 24:
  - Static Efficiency Homework due via Moodle by 11:00 PM CST
  - Present Value Homework due via Moodle by 11:00 PM CST
  - Externalities Homework due via Moodle by 11:00 PM CST
  - Online Exam 1 Window Closes at 11:00 PM CST
  - In-Person Exam Option: Oregon Building Computer Lab 9:00 AM CST.
- Wednesday, May 26- Mankiw Submission due via Moodle by 10:00 PM CST
- Friday, May 28
  - Coase Submission due via Moodle by 11:00 PM CST
  - Deadline to Drop POT 1 Summer Course
- Tuesday, June 1- Online Exam 2 Window Opens at 12:15 AM
- Thursday, June 3:
  - Pigovian Tax Homework due via Moodle by 11:00 PM CST
  - Cap and Trade Homework due via Moodle by 11:00 PM CST
  - Online Exam 2 Window Closes at 11:00 PM CST
  - In-Person Exam Option: Oregon Building Computer Lab 9:00 AM CST.
- Saturday, June 5- Anderson and Libecap CH 1-4 Submission due via Moodle by 11:00 PM CST
- Monday, June 7- Yandle Submission due via Moodle by 11:00 PM CST
- Wednesday, June 9- Anderson and Libecap CH 5-8 Submission due via Moodle by 11:00 PM CST
- Thursday, June 10:
  - Data Project Submission due via Moodle by 11:00 PM CST
  - Online Final Exam Window Opens at 12:15 AM
- Friday, June 11
  - In-Person Exam Option: Oregon Building Computer Lab 9:00 AM CST.
- Saturday, June 12- Online Final Exam Window Closes at 11:00 PM CST