

Econ 415- Environmental Economics

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

Course Information

- **Course Title and Number:** Econ 415 Section A3 and A4: Environmental Economics
- **Term:** Fall 2025
- **Instructor:** Dr. Bryan Buckley
- **Office:** David Kinley Hall Room 21
- **Class Days, Time & Location:** TTH 11:00 AM to 12:20 PM in 119 DKH

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

Communication

Email: Dr. Bryan Buckley (bbuckley@illinois.edu)

For any general issues in this course, use the online Q & A Forum. If I do not respond to your email within 2 business days, please resend the email.

Office Hours:

Office hours will be posted on the Learning Management System website (canvas.illinois.edu).

Instructional Materials

Online Textbook:

- Anderson and Libecap. (2014) Environmental Markets. *Cambridge University Press*.
- Link: [UIUC Online Library](#)

Course Learning Outcomes

By the end of the course, students will be expected to

- 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.
- Analyze markets with externalities and efficiency issues created by externalities.
- Identify incentive issues in policy formation using public choice.

Student Assessment

Assignments, and extra credit will be available on the course website. Midterm exams and the final exam are taken in person.

Once calculated, course scores are rounded to the nearest integer. There is no curve in this class.

Grade Weights:

- Lesson Assignment Average (15%)
- Reading Assignment Average (15%)
- Data Project or COIL Project (15%)
- Highest-Scoring Midterm Exam (20%)
- Lowest-Scoring Midterm Exam (10%)
- 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

Lesson Assignments:

- Lesson Assignments must be submitted by 11:00 PM on their due dates. No exceptions will be made for technological problems. Start assignments with enough time before the deadline to accommodate potential issues.
- Lesson Assignments can be repeated until the due date. The highest scoring attempt will be kept for grading.
- Lesson assignments will be available for practice after their due dates. The scores on these assignments will be worth 70% of the credit of the original assignment. The practice score will replace the original assignment score if and only if 70% of the practice score is greater than the original score.

- The lowest Lesson Assignment score will be dropped when calculating the average for the Lesson Assignments Average.

Reading Assignments:

- There are six total reading assignments for the course.
- Reading assignments will be due at the start of class on the day they are discussed (11:00 AM).
- Each reading assignment will be a summary of the article or portion of the Anderson and Libecap 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 Canvas by their due date and time to receive full credit.
- Reading Assignments turned in after their due dates have a reduced score.
- The lowest Reading Assignment score will be dropped when calculating the average for the Reading Assignments Average.

Extra Credit Tutorials:

- Many lectures have formative tutorials associated with them. These tutorials will walk you through solving a common type of problem in the course. You will have multiple attempts to solve each question. Each question will come with feedback to assist you if you answer incorrectly.
- The average score of all tutorials will be calculated. The percentage completed of tutorials will be multiplied by 2.5 points. For example, 83% completion will add 1.66 points to the score in the course.

Extra Credit Participation:

- Participation in reading discussions, review sessions and class will earn extra credit points. The full participation points will be worth 1 point added to the course.

Data/COIL Project

Students are able to choose between completing a data project or creating video with a group of international students.

Data Project

At the end of the semester, students are required to turn in a Data Project. The data project is an approximately 10-page paper which describes what has been happening to a measure of environmental quality over time.

Master's students will have additional requirements for their paper. Master's students will create a time-series regression which estimates the change over time of the environmental measure, reports the regression statistics and comments on those results.

Optional COIL Project

Undergraduate students can choose to join the collaborative, online, international learning (COIL) project which will be due before the end of the semester. Students will choose a preferred topic and be sorted into groups which include economics students from universities in Europe.

Groups will create 20-minute video presentations on a specific subject of the group's choosing. These presentations will be graded by instructors from all participating universities. The grade of the video project will replace Data Project score. To be eligible, students must have scored at least 83 on the first midterm exam. Participants that receive good peer evaluations will also earn 1 point of extra credit added to their score in the course.

Midterm Exam Policy

- There are no make-up exams for missed midterms. The only exception is the Religious Conflict Policy outlined below.
- If a midterm exam is taken, then the grade will count towards the student's grade.
- If a student misses one of the two midterm exams, the weight of the final exam will be adjusted using the following system:
 - One missed midterm exam: Final Exam Weight 35%
 - Two missed midterm exams: Final Exam Weight 55%
- For each midterm taken, 0.25 points will be added to your score in the course.
- All requests for grading corrections must be submitted before the following exam.

Final Exam Policy

- Students must take the final exam.
- The [UIUC Student Code on § 3-201 Final Examinations Section 6](#) prohibits students from taking exams outside the final examination week.
- The UIUC Student Code on § 3-201 Final Examinations Section 8 and 9 allows for students in certain circumstances to take a [Conflict Exam](#).
- Do not schedule trips or leave campus before the end of the examination period. See Course Schedule below for details.
- Undergraduate students who must miss a final examination should report this fact to the dean of their college as soon as possible. With college approval, students may be "excused" and take a deferred exam. The date of the deferred exam will be scheduled by the Department of Economics and will fall within the first two weeks of the next semester. (<http://www.las.illinois.edu/faculty/advising/incompletes/>).

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.

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.”

Accommodations

Disability Accommodations Policy:

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.

Religious Accommodations Policy:

- Students requesting a religious observance accommodation must fill out the request form found at <https://odos.illinois.edu/community-of-care/resources/students/religious-observances/> and submit the form to the instructor and to the Office of the Dean of Students (helpdean@illinois.edu) by the end of the third week of classes.
- All exam dates are listed in the syllabus; it is the student's responsibility to read the syllabus thoroughly and make all requests before the deadline.
- In the case of exams or assignments first announced the first week of the semester, students must submit the form to the instructor and to the Office of the Dean of Students as soon as possible but no later than three days after the assignment or exam is initially announced.

Semester Schedule

Part 1

Week 1- August 26 and 28

- Tues: Class Overview and Lesson 1.1- Positive and Normative
- Thurs: Lesson 2.1 to 2.3- Markets

Week 2- September 2 and 4

- Tues: Lesson 2.4 and 2.5- Taxes and Subsidies
- Thurs: Hayek Summary Reading Assignment due at 11:00 AM

Week 3-September 9 and 11

- Tues: Lesson 3.1 to 3.3- Present Discounted Value
- Thurs: Lesson 3.4- Dynamic Optimization and Lesson 3.5- Renewable Resource Use

Week 4- September 16 and 18

- Tues: Lesson 4.1 and 4.2- Positive Externalities
- Thurs: Lesson 4.3 to 4.5- Negative Externalities and Pecuniary Externalities

Week 5- September 23 and 25

- Tues: Review Lesson 1.1 to 4.5
- Thurs: Midterm Exam 1 and Part 1 Lesson Assignments Due by 11:00 PM

Part 2

Week 6- September 30 and October 2

- Tues: Lesson 5.1 and 5.2- Pigou and Taxes
- Thurs: Mankiw Summary Reading Assignment due at 11:00 AM and Lesson 5.3- Missing Markets

Week 7- October 7 and 9

- Tues: Lesson 5.4 and 5.5- Pigovian Subsidies and Pigovian Tax Complications and Lesson 6.1- Social Systems
- Thurs: Lesson 6.2 to 6.3- Property Rights and Open Access

Week 8- October 14 and 16

- Tues: Coase Summary Reading Assignment Due at 11:00 AM and Lesson 6.4 to 6.6- Coase, Ostrom, and the Commons
- Thurs: Lesson 7.1- Interactive Resources

Week 9- October 21 and 23

- Tues: Lesson 7.2 to Lesson 7.3- Total Allowable Catch and Pollution Permits
- Thurs: A&L 1-4 Summary Reading Assignment due 11:00 and Data Project Discussion

Week 10- October 28 and 30

- Tues: Lesson 5.1 to 7.3
- Thurs: Midterm Exam 2 and Part 2 Assignments due at 11:00 PM

Part 3

Week 11- November 4 and 6

- Tues: Lesson 8.1 and 8.2- Pollution Control
- Thurs: Lesson 8.3 and 8.4- Policy Assessment

Week 12- November 11 and 13

- Tues: Yandle Summary Reading Assignment Due at 11:00 AM and Lesson 9.1 to 9.3- Public Choice
- Thurs: Lesson 10.1 and 10.2- Pollution Trends and Environmental Kuznets Curve

Week 13- December 18 and 20

- Tues: A&L 5-8 Summary Reading Assignment Due at 11:00 AM.
- Thurs: Catch up on material if necessary.

Fall Break

Week 14- December 2 and 4

- Tues: Lesson 10.3- Property Rights and Environmental Improvements
- Thurs: Lesson 10.4 and 10.5- Entrepreneurship and the Future

Week 15- December 9

- Tues: Review Lesson 1 to 10 and Data Project Due by 11:00 PM
- No Thursday lecture for Reading Day.

Week 16- Examination Period

- Friday, December 12 through December 18, weekdays only
- Exam dates and times will be announced on Canvas and on the UIUC Course Explorer.
- See the Final Exam Scheduling Guidelines provided by the Registrar's Office.
- Lesson 08 Assignment, Lesson 09 Assignment, Lesson 10 Assignment, credit tutorials and all optional Practice (After Due Date) Assignments due by 11:00 PM on the last Friday of the examination period.