

**Case Western Reserve University
Department of Economics**

**Economics 368
Environmental Economics**

Contact Information

Prof. Justin Gallagher
276 Peter B. Lewis Building
jpg75@case.edu

Lecture Logistics

Mon. and Wed. 10:30 – 11:45
PBL Room 501

Office Hours

Mon. 4:30-5:30 PM
Tues. 8:30-9:30 AM

Course Description

Economic models and reasoning provide a valuable lens through which to view many of the most intractable and perplexing environmental problems. The objective of this class is to apply the tools of a typical introductory or intermediate microeconomics course to topics involving the natural environment. That is, we will view environmental topics from the perspective of an economist. Topics that will be covered in this class include:

- Market failure in the case of externalities (e.g. pollution) and public goods provision (e.g. parks)
- Management of renewable resources (e.g. Lake Erie) and non-renewable resources (e.g. oil)
- Cost-effective pollution control
- How to measure the value of the environment
- Individual and company decision-making in response to regulations and taxes
- Energy use and global climate change
- Food production and the provision of drinking water

Perhaps the most exciting part of this course is that we will take tools from the classroom and apply them to ongoing environmental questions. Lectures will include guest presentations from professionals who are actively working on environmental challenges.

Pre-requisites

Economics 102 (Principles of Microeconomics) is officially a pre-requisite for this course. That said, many students have taken the class without any previous economics (via a waiver) and have done very well. The first two weeks of the course will review material from Econ 102. We will use calculus in this course at a level equivalent to 1st semester calculus. Math is not the focus of the course, but will be used throughout. You should be able to take simple partial derivatives (of course, you will get practice doing this on the problem sets).

Email Policy

I will do my best to respond to all emails within 24 hours. Please don't send the same email 2x unless it has been more than one day. Please put: "Econ 368" in the subject line. Keep in mind that typing out a detailed response to a problem set (or lecture) question can take a long time and is generally difficult to read over email anyway. Email is best for logistical questions.

Grading

| | |
|---------------------------------------|-----|
| Test Unit 1: | 10% |
| 2 nd Test (Units 2, 3): | 15% |
| 3 rd Test (Units 4, 5, 6): | 25% |
| <u>Test subtotal:</u> | 50% |
| Problem Sets: | 30% |
| Reading Quizzes: | 10% |
| Class Participation: | 10% |

Tests

The 1st Test and 2nd Test will be done in class and will cover only the units of the course specified for each test. The 1st test will be shorter (45 minutes) and will not take up the entire class period. You will have the entire class period (75 minutes) to complete the 2nd test. The 3rd test will have two parts. The written part will be during the final class. There will also be a group presentation portion of the test during the final exam period. You are allowed 1 sheet of paper with notes for each test. If you miss the day of the test you will receive a zero for that test. The only exceptions are an illness or a death in the family (in both cases you will need documentation).

Please be sure to talk to me before/after class, or during office hours if you have a disability that may require additional testing accommodations. Don't wait until the day of the exam. We will be sure to arrange a suitable accommodation.

Test re-grading: If I have miscounted points on a test please notify me immediately and I will fix the grade. If you think that I have incorrectly scored an answer, submit a complaint in writing to

me indicating the question and your specific concern. I will re-grade the entire test. You should keep in mind that this might decrease your final grade.

Final grade test re-weighting: Sometimes we have a bad day. This goes for taking tests too. Recognizing that there may be a test that just didn't go well the final test portion of your final grade (worth 50% of final grade) will be calculated in a way that helps take this into account. After the 3rd test your test portion of your grade will be re-weighted so that the test you did best on is increased by 5 percentage points and the test you did worst on is decreased by 5 percentage points. For example, if your worst test was the 1st test and your best was the 3rd test then the first test will count for 5% of your grade (instead of 10%) and the 3rd test will count for 30% (instead of 25%).

Problem Sets

The problem sets are designed to prepare you for the tests. The problem sets will cover material covered in lecture and discussion (either by me or a guest speaker). Problem sets will be collected at the start of class on the day which they are due. I will not accept late problem sets, nor will I accept electronically submitted problem sets. If you know in advance that you must miss a class the day a problem set is due then please drop off the problem set at my office before the scheduled class time, or have a classmate turn in the problem set for you.

There will be approximately 8 problem sets, but you will be able to drop your lowest scoring problem set. The same testing re-grade policy applies to problem sets.

You are welcomed and encouraged to work in groups (of 2-3 people) when completing the problem sets. However, each member of the group must turn in their own copy of the problem set with the answers written in their own words. If you work in a group you must also cite your other group members by listing their names under your own (e.g. "group members: ...").

Important note: If you do not cite group members then any similarities between your answers and another student's answers will be considered cheating and disciplinary action will be taken according to CWRU Academic Integrity Standards.

Class Participation

The format for this course will be a combination of lecture and discussion. Each Unit will include class time that is more lecture-based (to introduce the economic models and methods) and class time that is primarily for discussion (to discuss specific environmental cases and examples). The portion of the class participation grade that comes from discussion will be based on the quality and not quantity of comments.

As extra incentive to read the papers there will be between 2-10 "pop quizzes" during the semester at the start of class on the day that a paper reading is assigned. The quizzes will be very short (5 minutes). If you are late to class, or missing from class on the day of a quiz you will

receive a zero for that quiz. The lowest scoring quiz will be dropped and not included in calculating your final quiz grade. The purpose of the quizzes is to make sure that you read the article and comprehended the major points. Some of the articles will include material that is “above” the level of this class or cover topics that we have yet to get to in the class. I will provide guidance on which parts of the articles to focus on and which parts to skip.

Textbook and Readings

Required Text:

Charles D. Kolstad (2011). *Environmental Economics*, 2nd Edition. New York: Oxford University Press, Inc.

Recommended Texts:

Walter Nicholson and Christopher Snyder (2008). *Microeconomic Theory, Basic Principles and Extensions*, 10th Edition. Canada: South-Western.

Michael W. Klein (1997). *Mathematical Methods for Economics*. New York: Addison-Wesley.

Articles and Academic Papers:

Articles and academic papers will be posted on Blackboard.

Academic Integrity

All students in this course are expected to adhere to university standards of academic integrity. Cheating, plagiarism, and other forms of academic dishonesty will not be tolerated. For example, you may not consult with another person during an exam, turn in written work that was prepared in whole or in part by someone else. It is also dishonest to submit, without the instructor’s consent, the same or similar work for more than one course. Ignorance will not be permitted as an excuse. If you are not sure whether something you plan to submit violates these standards, it is your responsibility to ask for clarification. You may either ask me, or consult credible sources such as:

<http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml>

<http://www.unc.edu/depts/wcweb/handouts/citation.html>

As a reminder, the Case Western Reserve University Academic Integrity Standards can be found:

<http://studentaffairs.case.edu/groups/aiboard/policy.html>

[I thank Prof. Helper for granting me permission to use her Academic Integrity statement].

More comments on academic integrity:

- Cheating is a disservice to those classmates who study hard and play by the rules.
- I am confident that most students wouldn’t cheat on an exam regardless of the circumstances. However, I am an economist and also recognize that there are some students that may be tempted to cheat on exams if it appears that the benefit outweighs the cost.
- To further dissuade academic dishonesty we will be taking a number of precautions that will increase the likelihood of catching anyone who cheats including some measures that will not be obvious unless you happen to be caught.