

Washington & Lee University  
Economics 255  
Environmental and Natural Resource Economics  
Winter, 2019

Instructor: Joseph Guse  
Contact: HH103, 458-8915, gusej@wlu.edu  
Course website: [home.wlu.edu/~gusej/econ255](http://home.wlu.edu/~gusej/econ255) (while it lasts)  
Lecture: MWF 1:30-2:30, Huntley 324  
Office Hours: Office Hours MTWR 2:30-4:00  
Prerequisites: Introductory Microeconomics.

### 1. COURSE DESCRIPTION

This is an introduction to both environmental and natural resource economics. Throughout the semester we will see how economic principles can bear on public and private decision-making involving the management and use of environmental and natural resources. Topics will include, among others, energy, fisheries, forests, air and water pollution and climate change.

### 2. LEARNING OBJECTIVES

By the end of this course, students be able to

- describe in broad terms the relationship between the natural environment and human society.
- apply basic micro-economic analytical tools to formalize some aspects of that relationship and develop some predictive theoretical models.
- use these models as a framework in which to discuss various government policies.

### 3. TEXT BOOK

Lewis and Tietenberg, Environmental & Natural Resource Economics, 11th edition.

### 4. GRADING

Your grade for the course will based on the following weights.

- Problem Sets (20%). We will have a problem set roughly every other week. You are strongly encouraged to work in groups. However, you must turn in your own write-up. Grading primarily on completion, effort, writing quality and beauty of your diagrams.
- Exams (50%). There will be a midterm and a final exam each worth 25% of your grade.
- Quizzes (10%). There is 50% chance of a quiz for every class. Quizzes will be very brief (less than 5 min.) and based entirely on the reading assignment for that day. Quizzes cannot be made up due to absence, but I will drop your three lowest quiz scores from my final grade tally.
- Policy Brief / OpEd (10%). You will write one short policy brief on a topic of your choosing subject to my approval. In this paper, you should argue one way or other for a particular policy stance using the tools of microeconomic analysis discussed in class. Please aim your discussion at an audience who is not necessarily well-versed in microeconomics. Think of it

as an Op-Ed for the New York Times or a position paper written by a congressional staffer, lobbyist, or non-profit organization. Maximum 3 pages.

- Participation (10%). Based on evidence of engagement such as classroom discussion, wakefulness, office hours, etc.

## 5. HOMEWORK ADVICE AND STYLE GUIDE

Here is a procedure for completing your homework assignments in a way that prepares you for the exams and hopefully results in long-term retention of the economic concepts.

- (1) As soon as a new homework is posted, start working on it. Make an attempt, on your own, on each problem.
- (2) Get together with your study partners and try to hash out complete solutions through dialogue and reconciliation of your various attempts.
- (3) *Once you taken the steps just outlined*, remaining sources of confusion should be addressed in office hours; either come in yourself or send a representative from your study group.
- (4) If necessary, reconvene with your study group and finalize your solutions. Do not copy each others' answers in these study group sessions; you should be teaching each other the economic theory behind your solution. If you cannot explain your answer to your group, you do not fully understand it. Meet in a room that has a chalk board. The Leyburn, Holekamp and Huntley have rooms specifically dedicated to group study.
- (5) Write up your own version, drop a pdf version in the "Box". Name your file "hwX\_USERID.pdf" where 'X' is the problem set number and USERID is your W & L email address (not including the stuff following @). For example, for the 3rd homework assignment, I would turn in a file called "hw3\_gusej.pdf".
- (6) Once the answer key is posted, reconcile your work with it. Do not expect your solutions to be fully corrected by the grader.

You should expect the total time commitment for one problem set to be 4-8 hours depending on how easily the material comes to you.

**5.1. The Check-Plus Standard.** FOR ALL PROBLEMS: Your work should stand alone as an (easily readable) document illustrating the concepts at hand. As a practical matter, this will usually involve writing at least one or two complete sentences of explanation for each problem along with some well-labeled diagrams. I do not want long essays, but I do want to be convinced that you truly understand your answers.

- Every problem is answered.
- Every solution is explained.
- Every diagram is well-labeled.

When you turn in your final document, consider its quality. Ask yourself, if you were working as a consultant, is this something that you would hand over to your client?

## 6. SCHEDULE OF TOPICS

The following is a tentative list of topics we will do our best to cover in lecture. Please read the corresponding chapter **before** coming to class. (LTxx = Lewis and Tietenberg Chapter xx - 11th Edition; if you have a different edition, go by the chapter titles not the numbers.)

Week	Date (Mon)	Monday Topic	Wednesday Topic	Friday Topic
1	Jan 7	Overview LT1	Ext. and Eff. LT2	continued.
2	Jan 14	CB Analysis, PV LT3	continued <b>Problem Set 1 Due</b>	Non-Mkt Val LT4
3	Jan 21	NO CLASS (MLK)	Dynamic Eff. LT5,6	Energy LT7
4	Jan 28	continued	Recycling LT8 <b>Problem Set 2 Due</b>	Water Resources LT9
5	Feb 4	Forestry LT11	continued	Fisheries LT12
6	Feb 11	continued	Review <b>Problem Set 3 Due</b>	Midterm
	Feb 18	WASHINGTON	BREAK	NO CLASS
7	Feb 25	Pollution LT 14	Air Pollution LT15	continued
8	Mar 4	Mobile Sources LT16	continued <b>Problem Set 4 Due</b>	Climate Change LT17
9	Mar 11	continued	continued	continued
10	Mar 18	Water Poll. LT18	continued <b>Problem Set 5 Due</b>	Toxic Waste LT19 <b>Brief Proposal Due</b>
11	Mar 25	Sust'b'y, Trade LT20	continued	slack <b>Brief Draft Due</b>
12	Apr 1	Review LT21	continued	<b>Policy Brief Due</b>
	Apr 8	FINAL	EXAM	WEEK

### 7. OFFICE HOURS POLICY

- (1) You are highly encouraged to drop by during my regular office hours to discuss economics (broadly defined). Please do *not* ask permission or wait outside just because other students may be in the office. Just drop in and join the conversation!
- (2) My regular hours are 2:30-4:00 Monday, Tuesday, Wednesday and Thursday for both Micro and Environmental. Micro students' questions will have priority on Thursdays, Env on Tuesdays. On Mondays and Wednesdays, questions will be answered FCFS.
- (3) If you have a legitimate university sanctioned activity that conflicts with all regular office hours time slots, then I will be very happy to meet with you outside of office hours. Send me an email that explains your scheduling conflict and propose a few times that you can meet. We'll work it out. Keep in mind that I may not be able to satisfy requests for appointments on short notice.

- (4) When you come to office hours with a question about a problem, come prepared. I expect you to have completed the relevant reading assignments. I also expect you to have already struggled with the problem at least a little. Help rendered before any struggle will not lead to effective learning.

## 8. PLAGIARISM POLICY

Here is a brief definition from the University Catalog.

“Plagiarism describes the use of another’s words or ideas without proper acknowledgement. The students of Washington and Lee University have considered plagiarism a violation of the Honor System; therefore, all forms of plagiarism ... are taken very seriously... Plagiarism takes many forms, including the wholesale copying of phrases or texts, or the use of ideas without indicating the source... Examples of possible plagiarism can be found in the Executive Committee’s Plagiarism Pamphlet.”

If you are unfamiliar with what constitutes plagiarism, see <http://www2.wlu.edu/x48224.xml>. Specifically for this course, please keep the following common sense rules in mind.

- (1) Exempted sources. You are fully expected to incorporate ideas from the following sources into your work on homework assignments and exams.
- Your study group partners.
  - Lecture and Office Hours.
  - The primary textbook for the course.

While it is certainly good practice to acknowledge these sources and list names of your study group partners on your assignments, I would not consider your failure to do so to be an act of plagiarism.

- (2) If you get an idea from any other source, you *need* to acknowledge it. Such sources would include but not necessarily be limited to
- Other textbooks.
  - On-line sources.
  - People - such as tutors, your parents, fraternity/sorority members, etc.
  - Answer Keys. Past or present, from this course or others. While I will typically not post an answer key until after the homework problem is due, past answer keys may be circulating and in some cases people turning in their homeworks late will have access to answer keys. I strongly discourage you from referring to an answer key when writing up your answers. (You should read them later.) However if you do refer to an answer key, you must cite it.

Let me be clear... If you use an outside source (other than the specifically exempted items mentioned above) **WITH** acknowledgement, I may deduct points from your homework assignment, but probably would not as long as that source wasn’t some kind of answer key. This could affect your final grade, but overall have very little long term impact on your life. If you use an outside source (other than the specifically exempted items mentioned above) **WITHOUT** acknowledgement, I will refer the case to the EC.

## 9. DISABILITY ACCOMMODATIONS

Washington and Lee University makes reasonable academic accommodations for qualified students with disabilities. All undergraduate accommodations must be approved by the Title IX Coordinator and Director of Disability Resources. Students requesting accommodations for this course should present an official accommodation letter within the first two weeks of the term and schedule a meeting outside of class time to discuss accommodations. It is the students responsibility to present this paperwork in a timely fashion and to follow up about accommodation arrangements. Accommodations for test-taking must be arranged at least a week before the date of the test or exam, including finals.