

NATURAL RESOURCE AND ENVIRONMENTAL ECONOMICS

AGEC/FNR 406

Fall 2016

MWF 2:30-3:20PM in KRAN G016

Instructor Office Hours: Mon. 3:30-4:30, Thurs. 11-12 (or by appointment) Phone: 765-494-4324

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OVERVIEW

Economic activity and the natural environment are inseparable. Private decisions and public policies entail tradeoffs between economic and environmental outcomes. Natural resource and environmental economics provides a means to assist us in understanding the causes of environmental problems and developing solutions consistent with society's economic and environmental objectives.

This course provides an introduction to natural resource and environmental economics. Lectures, homework assignments, and in-class discussion/exercises are used to provide insights into economic aspects of a wide range of environmental issues including energy, climate change, pollution control, fisheries management, and other links between the economy and the environment.

Course Objectives:

1. Understand the importance of property rights and institutions (governments, markets, and social norms) in shaping environmental outcomes
2. Know how economic costs and benefits used to make environmental protection and natural resource management decisions are measured
3. Apply basic tools of economic analysis to evaluate public policies or make private decisions

COURSE MATERIALS

Much of the course material is available online, including the syllabus, continuously updated class schedule with links to the slides presented in class, supporting materials (spreadsheets, etc.) used in class, and homework assignments. The *required* text that will be used extensively in the course is:

Tietenberg and Lewis. Environmental Economics and Policy, 6th edition. Reading, MA: Addison-Wesley, 2010. ISBN-10: 0-321-59949-7.

An electronic version or previous edition of the text is acceptable, but it is each student's responsibility to verify if there is missing or updated content that needs to be retrieved from the 6th edition. Two copies of the course text are on 2-hour reserve in the Parrish Library of Management and Economics on the second floor of the Krannert Building.

COURSE WEBSITE

The course website is accessible through the Purdue University *Blackboard Learn* (hereafter, Blackboard) system at: <https://mycourses.purdue.edu/>. All course materials (besides the textbook), schedule updates/changes, and announcements throughout the semester will be posted on Blackboard. *BoilerCast* recordings of each classroom meeting will also be posted to the Echo360 link on the class Blackboard website in case you miss class or wish to use the lectures to study for exams or work on homework assignments.

Important: I will send messages to the class using the Blackboard announcements and email utilities throughout the semester and in the event of any schedule change. Please make sure that you check your university email account and the Blackboard website *at least daily* throughout the semester for any updates or changes.

PREREQUISITE

The pre-requisite for this class is AGECE 203 *or* AGECE 204 *or* EC 251. You must have completed the pre-requisite or an equivalent "principles of microeconomics" course to take the class.

ATTENDANCE & ETIQUETTE

Students are expected to attend every class. Course notes and readings available online are *not a substitute for attending class and participating* in computer or web-based exercises that are part of the course.

Absolutely no use of mobile phones is allowed during class time and all phones should be turned off when entering the classroom. This means no texting, emailing, playing games, listening to music, or taking/placing calls during class. This is a distraction to others around you and there is no reason to be in class if you are not going to pay attention. If you know you will need to leave early on a given day, please sit in the front row as near to the classroom exit as possible so that you minimize the disturbance of others if you must leave before class ends. Similarly, if you arrive late take a seat as close as possible to the entrance to the room so that you are not walking across the entire classroom once class is already underway.

In this course, each voice in the classroom has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. AGECE/FNR 406 embraces Purdue's commitment to diversity, and welcomes individuals of all ages, backgrounds, citizenships, disability, sex, education, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experience, political views, races, religions, sexual orientations, socioeconomic statuses, and work experiences. Please report any incidents of hate or bias in this course to your instructor so they can be addressed promptly, or report them anonymously: <https://www2.itap.purdue.edu/SSTA/reporthb/>.

ADDITIONAL HELP & RESOURCES

I encourage students to come see me individually or in small groups during office hours (or by appointment) if you have questions about the class material, readings, homework assignments, or other topics relevant to the course. I want you all to learn the course material and be successful in this class and beyond, and I will work *with* you to help you succeed. If you don't understand something or find yourself falling behind in the class, I cannot help you if you do not take the initiative to come meet with me. In this class, as in life, you are the only one responsible for your own success or failure. This is not an easy course, but I will give you the resources you need to be successful. Those resources are your lecture notes (PowerPoint slides *and* handwritten notes that cover problems from the whiteboard or document camera), textbook, exercise worksheets and homework assignments. You will need to use *all* of these course materials to be at the top of the grade distribution at the end of the semester.

GRADING POLICY (*All dates are tentative, see dynamic online schedule for current dates/deadlines*)
Final grades will be assigned according to the following +/- scale:

Grade	GPA Value	Percentage
A+	4.0	97.0-100
A	4.0	93.0-96.9
A-	3.7	90.0-92.9
B+	3.3	87.0-89.9
B	3.0	83.0-86.9
B-	2.7	80.0-82.9
C+	2.3	77.0-79.9
C	2.0	73.0-76.9
C-	1.7	70.0-72.9
D+	1.3	67.0-69.9
D	1.0	63.0-66.9
D-	0.7	60.0-62.9
F	0.0	< 60.0

NOTE:
75.0 = lowest passing score for the Pass/No Pass grade option

The final course grade is computed based on the total points earned from:

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| 1) Class time exercises (4 @ 10 points each), Sep. 26, Oct. 3, Nov. 18, Nov. 21 | 10% |
| 2) Homework assignments (4 @ 40 points each): Sep. 16, Oct. 7, Nov. 16, Nov. 28 (tentative) | 40% |
| 3) Exams (2 @ 100 points each): Exam 1 on Oct. 14, Exam 2 on Dec. 2 during class time | 50% |

Cumulative Final Exam (Optional) averaged with lowest exam score in final grade calculation: TBD

HOMEWORKS

Four (4) homework assignments will be assigned during the semester. Each will contribute equally to your final grade in the course based on the Grading Policy stated above. The purpose of the homework assignments is to help you master key concepts and learn how to apply the analytical tools that are used in environmental and natural resource economics. You may discuss homework assignments with your classmates, but you must write-up and submit your own answers for each assignment. Plagiarism will not be tolerated.

These assignments will all be posted on Blackboard. Tentative due dates are indicated above and any changes to due dates will be posted on the online course schedule. Specific instructions will be included with each individual assignment. **Late homework will not be accepted.** Start assignments early so that computer problems or Blackboard service outages on the night or weekend before the due date do not prevent you from completing the assignment on time. By not waiting until the last minute, you will also have time to seek help outside of class if you are having trouble with the homework questions. Missing class on the due date of an assignment is *not* an excuse to turn in homework late, even if you are ill. All assignments **must be submitted online** inside of Blackboard by **class time (2:30PM) on the due date**, unless otherwise stated.

Homework assignments should be prepared with the same care and attention to detail that you would use when writing a professional memo, email or report for your boss or a client. Answers must be written in complete and comprehensible sentences. The use of word processing and spreadsheet software is strongly encouraged. When your responses require mathematical calculations to be made, you must show your work to be eligible to receive full credit. Written responses to homework questions based on calculations must correspond to the calculations.

CLASS TIME EXERCISES

Four (4) times during the semester we will take an entire class period to conduct an experiment or exercise. These classes will be conducted entirely online or in an ITaP computer lab (TBD). Details on individual sessions will be provided in class and any required links will be posted on the class schedule inside of Blackboard. Checking to make sure things are working before class if you will not be using a computer in a campus computer lab is always a good idea and each student's individual responsibility. More details on how this will work will be provided before the first such exercise. Several of these exercises will be online economic experiments using this website: <http://veconlab.econ.virginia.edu/login.htm>.

These exercises cannot be completed early or late, and missed exercises cannot be made up. If you have a documented absence deemed excusable (i.e. religious observance or *official* university activities) on a day when a class time exercise takes place, you will need to meet with me about this highly unusual circumstance.

EXAMS

Two (2) exams will be given during the semester, as indicated on the course schedule posted on Blackboard. The first exam will be given on the week after October Break. The second exam will be given during the last class period before Dead Week. Each exam will contribute equally to your final grade based on the Grading Policy. Exams are designed to test your understanding of concepts and application of the tools for economic analysis introduced in the class. Exams include multiple choice and analytical questions that emphasize knowledge of core concepts and problem solving. Students should expect the analytical questions to reflect the kinds of questions on the homework assignments and problems solved in class.

An optional final exam will be given during the scheduled final exam period and will be cumulative. If a student takes the optional final, the score received on the cumulative final will be averaged with their lowest score on either Exam 1 or Exam 2 when the final grade is calculated.

SPECIAL ACCOMODATIONS

If you have a disability that requires special academic accommodation, please make an appointment to speak with me within the first three weeks of the semester. It is important that we talk about this at the beginning of the semester. Please note that university policy requires all students with disabilities to be registered with the Disability Resource Center (<http://www.purdue.edu/drc/>) in the Office of the Dean of Students (<http://www.purdue.edu/odos/>) before classroom accommodations can be provided. Please make an appointment with me soon to discuss and address your needs.

ACADEMIC DISHONESTY

All Purdue University students are bound by the [Purdue University Code of Honor](#). University policy on academic misconduct is clear - academic dishonesty in any form is strictly prohibited. Instances of academic dishonesty will be referred to the [Office of the Student Rights and Responsibilities](#) for disciplinary action. Penalties are severe and will mean failure on the exam, quiz, or homework in question, and may mean failure in the course and/or expulsion from the University. The *risks associated with academic dishonesty far outweigh the benefits*. Academic dishonesty includes citing someone else's work as your own, using unauthorized "crib sheets" during exams, or sharing your answers with someone else. If you are unsure whether an action you are considering constitutes academic dishonesty, seek clarification from your instructor. Other information regarding your rights and responsibilities are contained in the [Purdue University Student Conduct Code](#).

CAMPUS EMERGENCY OR OTHER UNFORSEEN CIRCUMSTANCE

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. There are several ways to get information about such changes in this course in the event of an emergency: (1) check for university-wide announcements online at www.purdue.edu, @purdueemergency, or @LifeAtPurdue; (2) check the course webpage on Blackboard; or (3) send your professor an email using bgramig@purdue.edu. **REMEMBER, WHEN YOU HEAR:** (1) **ALL HAZARDS SIRENS** outside immediately seek shelter ("Shelter-In-Place") in a safe location within closest building; (2) **FIRE ALARMS** immediately evacuate the building and move to a safe location

TENTATIVE CLASS SCHEDULE (Blackboard will always supersede this tentative schedule)

August 25	Chapter 1: Visions of the Future
Aug 27-Sep. 7	Chapter 2: Valuing the Environment: Concepts
September 9-19	Chapter 3: Valuing the Environment: Methods
Sep 21-Oct 7	Chapter 4: Property Rights, Externalities, and Environmental Problems
October 10	Fall Break
October 12	Exam Review session: Student questions and professor's answers
October 14	Exam 1 (in-class)
October 17-21	Chapter 5: Sustainable Development
October 24	Chapter 7: Natural Resource (and Energy) Economics
Oct 26- 28	Chapter 13: Common-Pool Resources: Fisheries
Oct 31-Nov 7	Chapter 14: Environmental Economics (Pollution Control)
November 9-28	Chapter 16: Climate Change
November 30	Exam 2 Review session: Student questions and professor's answers
December 2	Exam 2 (in-class)
December 5-7	Course wrap-up
December 9	(Optional) Cumulative Final review: Student questions and professor's answers
TBD	Final exam during scheduled final exam day/time of Finals Week