

# AGEC 406 Natural Resource and Environmental Economics 8/21/2017

\*Information within syllabus is subject to change, check blackboard for updates

## Course Information

Course : AGECE/FNR 406-Natural Resource and Environmental Economics  
Number: 40600-001 (10543)

Semester: Fall 2017  
Credits:3

Class: M-W-F 2:30pm-3:20pm

Building: Krannert

Room: G016

## Faculty Information

Instructor Name: Tanner McCarty

Office Location: Krannert 645

Office Hours: T 11:00-1:00, W 3:30-5:00

E-mail address: [mccarty7@purdue.edu](mailto:mccarty7@purdue.edu)

## 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

**Class Website:** Announcements, resources, and assignments are available on the class website on Blackboard Learn. The Blackboard Learn log-in address is [www.itap.purdue.edu/tlt/blackboard](http://www.itap.purdue.edu/tlt/blackboard). There's also a link to Blackboard at the bottom left of the Purdue homepage (in tiny little letters), at [www.purdue.edu](http://www.purdue.edu). Everyone registered for the course should see a link to AGECE 406 on their "My Blackboard" page.

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

An electronic version or different 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.

**Announcements:** The class webpage on Blackboard has an Announcements section. You should check it frequently for information about due dates, upcoming exams, office hours, and other course information.

**Office Hours:** I will hold office on Tuesdays from 11:00-1:00 and on Wednesdays from 3:30-5:00. If these times don't work for you send me an email and we can set up a meeting time that works for both of us. I am also relatively prompt about responding to email if there is any questions you have remotely. I will announce any scheduled changes to office hours both in class and on blackboard.

## Methods of Evaluation:

Homework	30%
Class Exercises	10%
Exams	50%
Hot Seat	10%

## Grading Scale:

A+	97%-100%	A	93%-96%	A-	90%-92%
B+	87%-89%	B	83%-86%	B-	80%-82%
C+	77%-79%	C	73%-76%	C-	70%-72%
D+	67%-69%	D	63%-66%	D-	60%-62%
F	Below 60%				

**Homework:** This class will be divided into two sections. Each section will contain two homework assignments. This makes a total of four equally weighted homework assignments for the semester. These assignments will be both posted and submitted through blackboard. **Late homework will not be accepted.** We will discuss the homework assignment in class the day it is due which would give an unfair advantage to someone who submitted late. 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. 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 (tentative) 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 equally weighted exams will be given during the semester. Exams are designed to test your understanding of concepts and application of the tools for economic analysis introduced in the 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. Unless it is lower than both, in which case the final will be thrown out. It can only help your grade.

**Hotseat:** We'll be using Hotseat in this class. That's a web-based system for asking and answering questions in class. ***You'll need to bring a laptop, tablet, smartphone or cell phone to class each day to use it.*** I will ask roughly 100 in class questions throughout the semester and will consider 75/100 points to be full credit for Hotseat. Anything beyond that will be counted as extra credit with a maximum of 2% added to your final grade if you were to receive 100/100 in Hotseat.

**Makeup and Late Policy:** If you will miss an exam, contact me before to schedule an alternate time. Late homework will not be accepted

**Academic Integrity:** 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.

**CAPS Information:** Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or through its counselors physically located in the Purdue University Student Health Center (PUSH) during business hours.

**Campus Emergencies:** If there is a major campus emergency, course requirements, deadlines and grading percentages may be changed. Information about any changes will be posted on the Announcements page of the class website.

We take these emergencies seriously at Purdue. To report an emergency, call 911. To obtain updates regarding an ongoing emergency, sign up for Purdue Alert text messages, at [www.purdue.edu/ea](http://www.purdue.edu/ea). There are nearly 300 Emergency Telephones outdoors across campus and in parking garages that connect directly to the Purdue police. If you feel threatened or need help, push the button and you will be connected immediately.

If we hear a fire alarm during class we will immediately suspend class, evacuate the building, and proceed outdoors. If we are notified during class of a Shelter in Place requirement for a tornado warning, we will suspend class and shelter in the basement. If we are notified during class of a Shelter in Place requirement for a hazardous materials release, or a civil disturbance, including a shooting or other use of weapons, we will suspend class and shelter in the classroom, shutting the door and turning off the lights. You can review the Emergency Preparedness website for additional information, at [www.purdue.edu/ehps/emergency\\_preparedness](http://www.purdue.edu/ehps/emergency_preparedness) .

**Disability Resource Center:** (DRC) is a resource for students. Students may present a "Letter of Accommodation" from the DRC to me outside of class at any point in the semester (I would recommend sooner rather than later though) and we will work something out. DRC contact info [drc@purdue.edu](mailto:drc@purdue.edu)

Day	Date	Topic	Assignments
M	21-Aug	Syllabus, Ch1: Visions of the Future	Read Ch. 1
W	23-Aug	Ch. 1: Visions of the Future	Read Ch. 2
F	25-Aug	Ch. 2: Valuing the Environment: Concepts	
M	28-Aug	Ch. 2: Valuing the Environment: Concepts	
W	30-Aug	Ch. 2: Valuing the Environment: Concepts	
F	1-Sep	Benefit Cost Example (HW 1)	Read Ch. 3
M	4-Sep	Labor Day: No Class	
W	6-Sep	Ch. 3: Valuing the Environment: Methods	
F	8-Sep	Ch. 3: Valuing the Environment: Methods	
M	11-Sep	Ch. 3: Valuing the Environment: Methods	
W	13-Sep	Go over solutions to HW 1	HW 1 due at 2:30pm
F	15-Sep	Ch. 3: Valuing the Environment: Methods	Read Ch. 4
M	18-Sep	Ch. 4: Property Rights, Externalities, and Environmental Problems	
W	20-Sep	Ch. 4: Property Rights, Externalities, and Environmental Problems	
F	22-Sep	Ch. 4: Property Rights, Externalities, and Environmental Problems	
M	25-Sep	Exercise 1 (Location TBD)	
W	27-Sep	Exercise 1 Debrief, Ch. 4	
F	29-Sep	Ch. 4: Property Rights, Externalities, and Environmental Problems	
M	2-Oct	Exercise 2 (Location TBD)	
W	4-Oct	Exercise 2 Debrief, Ch. 4	
F	6-Oct	Go over solutions to HW 2	HW 2 due at 2:30 pm
M	9-Oct	Fall Break: No Class	
W	11-Oct	Review Session for Exam 1	
F	13-Oct	Exam 1	Exam 1
M	16-Oct	Exam1 Answers and Solutions	Read Ch. 5
W	18-Oct	Ch. 5: Sustainable Development	
F	20-Oct	Ch. 5: Sustainable Development	
M	23-Oct	Ch. 5: Sustainable Development	Read Ch. 7
W	25-Oct	Ch. 7: Natural Resource Economics	Read Ch. 13
F	27-Oct	Ch. 13: Commercially Valuable Biological Resources	
M	30-Oct	Ch. 13: Commercially Valuable Biological Resources	Read Ch. 14
W	1-Nov	Ch. 14: Environmental Economics (Pollution Control)	
F	3-Nov	Ch. 14: Environmental Economics (Pollution Control)	
M	6-Nov	Ch. 14: Environmental Economics (Pollution Control)	
W	8-Nov	Ch. 14: Environmental Economics (Pollution Control)	
F	10-Nov	Ch. 14: Environmental Economics (Pollution Control)	Read Ch. 16
M	13-Nov	Ch. 16: Climate Change	
W	15-Nov	Introduction to Cap and Trade Simulation	HW 3 due at 2:30pm
F	17-Nov	Exercise 3 (Location TBD)	
M	20-Nov	Exercise 4 (Location TBD)	
W	22-Nov	Thanksgiving Break, No Class	
F	24-Nov	Thanksgiving Break, No Class	
M	27-Nov	Cap and Trade-Debrief and Review, Ch. 16	Read Ch. 8
W	29-Nov	Ch. 8: Energy Economics	
F	1-Dec	Discuss Hw 4, Review Session for Exam 2	HW 4 due at 2:30pm
M	4-Dec	Exam 2	Exam 2
W	6-Dec	Exam 2 answers and solutions	
F	8-Dec	(optional Review Session)	

**Right of Revision: This syllabus and information within it are subject to change**