

INTRODUCTION TO ENVIRONMENTAL ECONOMICS

AGEC 3413 (H) and ENSC 3413 (H)
Spring 2015
MW 12:55-1:45 pm Lecture Plant Science 9
TH 11:00-11:50 Drill Agri 332
Fri 12:55-1:45 Drills and Honors Drills Plant Science 9 (to start)

**This syllabus may seem long but please read thoroughly!
The information included will help you succeed in this class.**

This syllabus can be downloaded from Blackboard under the Syllabus folder.

Instructor Information:

Dr. Jennie (Dr. J) Popp
Mr. Tyler Knapp

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Description in Course Catalog:

An issues-oriented course in the economics of the environment. What is involved in society making decisions about environmental quality will be studied. Environmental issues important to the state of Arkansas and the United States will be emphasized. *The syllabus is subject to change.*

Prerequisite: Agec1103 or Econ 2023. Students are responsible to know all prerequisite materials.

Course Objectives:

Each student who successfully completes this course will have developed the skills to apply microeconomic tools and concepts to sustainable resource use, management, and policy. Students will apply the tools learned to case studies during the semester. Each student who successfully completes this course will be able to:

- calculate present values of benefits and costs
- understand concepts of willingness to pay
- define and explain market and social equilibriums
- understand market & non-market valuation techniques
- explain why optimal pollution levels are usually not zero
- explain concepts of standards and market means for pollution control and know when each should be applied
- apply environmental economic theory to issues related to land, water, air, agriculture and sustainable development

Honors Section:

Honors students will be given additional coursework in order to qualify for honors credit. Please ensure you have signed up for the right section of the course/drill for either honors or regular credit.

Office Hours:

Office hours for Dr. J are scheduled for Monday and Wednesday from 10:00am-11:30am. Office hours for Mr. Knapp will be Tuesday and Thursday 11:00am – 12:30pm. You can call or email to schedule an appointment for another time. For both of us, email is the better means for contact.

Contacting Dr. J and Mr. Knapp

Dr. J and Mr. Knapp will attempt to answer calls/emails within 24 hours IF they are received Monday 8:00am to Friday 4:00 pm. Email is not regularly reviewed over the weekends. Please send any questions about a homework/quiz/exam at least two business days before the answer is needed to make sure you receive a response in time. **When emailing Dr. J and Mr. Knapp, please make the subject title of the email AGECE 3413.** Please send ALL emails to BOTH instructors. This will help ensure we see your email quickly and it provides proof (if we both receive it) that you indeed sent the message, in the event that one of us can't locate it. Do not send email through Blackboard. It will not be answered.

Course Home Page and Blackboard:

Material for this course including syllabus, homework, class notes, test reviews and links to suggested reading materials can be found on Blackboard. You can reach Blackboard at <https://learn.uark.edu/>. Once enrolled in AGECE/ENSC 3413, a student can click on "my courses" to gain access to all materials for 3413. Please let me know if you find any errors in this page or have any suggestions to make it more useful.

Textbooks:

Our primary textbook will be Environmental Economics and Management: Theory, Policy and Applications by Scott Callan and Janet Thomas. 6th Edition. Southwestern Cengage Learning. This book is available from the bookstore. However, I have placed multiple copies of older editions of the text in the library. This will work for most assignments. These copies are available for 2 hour check out from Mullins library. These older copies were also found online used at various websites for under \$10 a copy.

Another good source for help is David Anderson's Environmental Economics and Natural Resource Management 4th Edition. Routledge Press.

Students may want to use the following free documents as references and for some assignments:

- "Environmental and Natural Resource Economics" available through Tufts University at <http://www.ase.tufts.edu/gdae/db/ENREregistration.asp>.
- "Guidelines for Preparing Economic Analyses" available at <http://yosemite.epa.gov/ee/epa/eed.nsf/pages/Guidelines.html>.
- "Sustainability and the US EPA" also available by free download at http://www.nap.edu/catalog.php?record_id=13152.

Grading:

Grades will be based on the A,B,C,D,F system.

Exams 1, 2 & 3 70% Quizzes 30%

Grades determined as follows:

A = 90+ B = 80-89 C = 70-79 D = 60-69 F < 60

Calculating Your Grades:

Students are responsible for keeping track of their grades throughout the semester. All grades will be placed on Blackboard within a week of being earned (barring unforeseen circumstances) with the exception of daily quizzes. The lag time is included in case of the need for grade changes. Daily quiz grades will be posted after each exam as a running tally is kept by each exam period.

Challenging Your Grade:

Please verify immediately that the grade listed on Blackboard is the grade you earned. If not, please make Mr. Knapp aware of the error immediately by turning back in the assignment/quiz/exam that shows the correct grade. Corrections must be made within one week of being returned in class. All errors must be brought to our attention in person. Grading questions sent by email will be ignored.

Grades will only be changed in the cases of error. Please do not ask for extra points at the end of the semester. There are ample opportunities to earn a good grade throughout the semester. Such requests will be ignored.

Exams:

Please remove all hats before a quiz or an exam. Please bring a ruler and a #2 pencil to all quizzes/exams. You must use the calculator provided by the instructor for the exam, no exceptions. There will be *three* (3) exams during the regular semester. Students cannot drop any of the three exams given this semester. Make up exams *may* be permitted and taken outside of class hours and *must* be arranged prior to the exam unless it is a medical emergency (personal or close family). Dr. J. may randomly reassign seats on exam and quiz days.

Take Home Problems

Take home problems will be posted on blackboard occasionally to help prepare students for a quiz or an exam. These assignments will not be graded, nor will the correct answers be posted on line. If you would like assistance with these problems or want to verify that your answers are correct, please visit Dr. J or our TA during our office hours.

Quizzes

Quizzes will generally take place each week. In most cases these quizzes will be closed book. Much of the material included in the quizzes will be based on discussion points in class – not on the notes. Students must attend class in addition to regularly visiting Blackboard in order to be prepared. Quizzes will take place in the first part of the class and generally be allocated only 15-20 minutes. Regular lecture will continue afterwards. Do not be late for quizzes. Quizzes cannot be made up. Students can drop two (2) grades in this category. Other quizzes will be added and will be announced the class before only.

Seating:

Students will have the opportunity to explore the classrooms during the first week of class. However the seat you choose on January 23rd will be yours for the rest of the semester. This is necessary for the distribution of returned assignments/quizzes/tests in a timely manner. Choose your seat wisely. Anyone not in attendance that day will have their seat chosen for them (likely in the front row). If you have any special circumstances (e.g, visual, hearing) that require you to sit in a particular area, please let Dr. J. know.

Class Notes and Reading of the Textbook:

An effort will be made to place class notes on Blackboard by 5:00 PM the Friday before the start of the new lecture week. However, there is no guarantee. Even when available, these notes will *not* be complete, they will *not* include notes relevant to some in-class discussions or other non-text readings and thus *cannot* replace note taking in class. Students are strongly encouraged to read all materials before the class as this course moves at a good pace. Powerpoints may include a list of required readings; others will be announced in class.

Study Sessions:

Evening study sessions *may* be held before an exam. These sessions will be announced at least one class period in advance. Students who attend *may* have the opportunity to earn bonus points on the exam.

Use of Computers and Cell Phones During Class:

In general, computers may not be used during class. If you have special circumstances that require you to use a computer you must have it approved by Dr. J at least one class period in advance of using the computer. Dr. J. reserves the right to choose the seats of anyone needing computer usage (most likely front row). In general, cell phones are not allowed to be used in class. Students using a cell phone for ANY purpose in class (other than a designated emergency as described below or another use pre-approved by Dr. J.) will be considered in violation of academic honesty rules and will be reported for sanctions. These computer and cell phone policies have been developed on the recommendations of previous students who found the inappropriate behavior distracting.

Emergency Procedures:

The following information has been provided to us from the Provost's office. *Many types of emergencies can occur on campus; instructions for specific emergencies such as severe weather, active shooter, or fire can be found at emergency.uark.edu.*

Severe Weather (Tornado Warning):

- Follow the directions of the instructor or emergency personnel
- Seek shelter in the basement or interior room or hallway on the lowest floor, putting as many walls as possible between you and the outside
- If you are in a multi-story building, and you cannot get to the lowest floor, pick a hallway in the center of the building
- Stay in the center of the room, away from exterior walls, windows, and doors
- Violence / Active Shooter (CADD):
- **CALL-** 9-1-1
- **AVOID-** If possible, self-evacuate to a safe area outside the building. Follow directions of police officers.
- **DENY-** Barricade the door with desk, chairs, bookcases or any items. Move to a place inside the room where you are not visible. Turn off the lights and remain quiet. Remain there until told by police it's safe.
- **DEFEND-** Use chairs, desks, cell phones or whatever is immediately available to distract and/or defend yourself and others from attack.

In case of a tornado, our classroom and the hallway/stairwell outside of our classroom can serve as shelter. For other scenarios, if we need to vacate the classroom quickly, please be aware that exits include the door to the Plant Science building hallway (the main classroom entry/exit way) as well as the emergency exit by the instructor podium in the front of the classroom. Please let Dr. J know if you have any questions or concerns.

Students With Disabilities:

Students who have received official university approval for special accommodations must present the official paperwork to Dr. J. during the first week of class. Failure to do so in a timely manner can impact our ability to meet the requested accommodations. Please be prompt. **If part of your accommodation includes a different setting for the exam please inform me one week before the exam or I cannot guarantee that your request can be met.** We have limited access to viable locations so time is needed to guarantee the space.

Student Travel:

If you participate in a UA sponsored organization that requires you to travel, you will be excused from class but not from completing the material. Assignments/quizzes deadlines that overlap with scheduled travel (e.g., conferences,

competitions, sporting events) must be completed before leaving for your trip. Travel made for personal reasons can also be approved but same rules for completing assignments holds here as well.

Inappropriate Sharing of Course Materials:

All notes/homeworks/quizzes/exams provided to you this semester are for the expressed usage of this course only. Students found sharing these materials (with individuals/websites/etc.) without written consent from Dr. Popp will be subject to both legal and academic disciplinary action. This is serious stuff! If you have any questions, please check with Dr. Popp before you share.

Academic Dishonesty:

All UA faculty have been encouraged to include the following statement in the syllabus.

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail. Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' which may be found at <http://provost.uark.edu/> Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.

In particular please visit <http://provost.uark.edu/246.php> for sanctions. This is serious stuff! Please do not place yourself or other students in a position to have to face such consequences.

Inclement Weather:

If both the University and Fayetteville school district are open by our class time, class will be held as scheduled. If UA is open but Fayetteville is closed, please check your email regarding attendance. Please use your best judgment before getting on the road. **Students who live off campus will have the opportunity to make up a missed exam in the case of inclement weather. However, to receive full credit on any assignments due that day, the assignment must be posted on blackboard by its due date/time.**

Dropping this Class:

Valid situations can arise that warrant dropping a class. However, please see me before you drop the class so we can properly assess whether this is in your best interest (things may not be as bad as you think!).

Managing Our Scarce Resources:

As environmental economists, we value our scarce resources. There are some on campus who have moved their classes to a complete electronic format. In this class, I will provide to you the syllabus, notes and other handouts in electronic format with the hopes you will use the double sided printers on campus to print them as needed only once. In order to best grade your assignments and exams, most will need to be turned in as a hard copy. **Assignments received in the improper format will be given a zero. Please follow instructions.** If required to turn in a hard copy, please optimize the use of the paper by writing/printing on both sides and minimizing your margin widths. Shred and recycle all papers at the end of the semester.

We Look Forward to Working with You This Semester!

Students taking this course come from a variety of backgrounds. Some have a strong understanding of economics; others have strengths in other sciences, engineering, or policy. The application of environmental economics concepts to real world situations involves an understanding of and collaboration across multiple disciplines. While this can present challenges and draw many out of their comfort zone, it is critical to the development of sound analysis and good policy. It is hoped that all students from all backgrounds will share their thoughts and experiences to enrich the learning process.

Our goal is to make this class a practical, challenging and rewarding experience for everyone.

Course Outline, Reading Assignments, Class Quizzes, Exams, and Reviews *All materials and dates are subject to change. Please attend class for updates.*

Week	Dates	Topic	Readings and <u>Announced</u> Assignments (See end of Syllabus for more information)
1	Jan 12	Introduction and Review of Economics	- Chapters 1 and 2 Callan and Thomas (6th edition) - Elasticity review placed on blackboard
2	Jan 19	MLK Day – no school	- Same course materials as previous week Quiz 1 – in class January 23 - elasticities
	Jan 20	Review of Economics con't	
3	Jan 26	Last day to withdraw from a class without a mark of a “W”	
	Jan 26	Market Failure	- Chapter 3 Callan and Thomas (6th edition) Quiz 2 - in class January 30
4	Feb 2	Market Failure con't	Quiz 3 –in class on February 6
5	Feb 9	Conventional Solutions to Environmental Problems	- Chapter 4 Callan and Thomas (6th edition) Quiz 4 – in class on February 13
6	Feb 16	Conventional Solutions (con't) Economic Solutions to Environmental Problems	- Chapter 4 Callan and Thomas (6th edition) - Chapter 5 Callan and Thomas (6th edition) Quiz 5 – February 20
7	Feb 23	Economic Solutions to Environmental Problems (con't)	- Chapter 5 Callan and Thomas (6th edition) Review Session – February 23 4:00-6:00pm
	Feb 25	Exam 1	Includes all materials covered/discussed in class and on quizzes through February 20
	Feb 27	Risk Assessment* Assessing Benefits*	- Chapter 6 Callan and Thomas (6th edition) - Chapter 7 Callan and Thomas (6th edition) Quiz 6 – February 27
8	Mar 2	Assessing Benefits* con't	- Chapter 7 Callan and Thomas (6th edition) Quiz 7 – March 6
9	Mar 9	Assessing Costs*	- Chapter 8 Callan and Thomas (6th edition) Quiz 8 – March 13
10	Mar 16	Benefit Cost Analysis	- Chapter 9 Callan and Thomas (6th edition) Quiz 9 – March 20
11	Mar 23	Spring Break!	
12	Mar 30	The Case of Air	- Chapters 11-13 Callan and Thomas (6th edition) Quiz 10 – April 3
13	Apr 6	The Case of Water	- Chapters 14-16 Callan and Thomas (6th edition) Review Session - April 6 4:00-6:00pm
	Apr 8	Exam 2	Includes materials covered in class and for the project from Feb 21 through Mar 20
	April 10	The Case of Water	Quiz 11 – April 10
14	Apr 13	The Case of Water (con't)	- Same course materials as previous week Quiz 12 - April 17
	April 17	Last day to withdraw from a single class with a mark of a “W”	
15	Apr 20	The Case of Solid Waste/Toxic Substances	- Chapters 17-19 Callan and Thomas (6th edition) Quiz 13 – April 24
16	Apr 27	Wrap Up	Review Session - April 27 4:00-6:00pm
	Apr 29	Exam 3	Includes materials covered in class and for the project from Mar 20 through Apr 27
	May 1	Dead Day	
	May 8	Quiz 14	Comprehensive

* Topics may be reduced to make room for more case study. As a result the timeline for further topics will shift but dates for exams and quizzes will not change.