

**AEC 445: RESOURCE AND ENVIRONMENTAL ECONOMICS**  
**Texas A&M University-Commerce**  
**School of Agriculture**  
**Spring 2017**

**Syllabus**

**INSTRUCTOR:** Dr. Rafael Bakhtavoryan

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**CLASS SECTION:** 01W

**CLASS MEETING:** Web-based

**OFFICE HOURS:** My scheduled office hours are from 11:00 a.m. to 1:00 p.m., Wednesday, or by appointment (email is the best way of communication for making appointments). Also, I keep an open-door policy. So, feel free to stop by my office and ask questions anytime. In case I am not available or cannot meet with you at that time, send me an email and we will make an appointment.

**REQUIRED READING:**

- Textbook: *Environmental Economics and Management: Theory, Policy, and Applications*, by Scott J. Callan and Janet M. Thomas, Cengage Learning, 6th edition, 2012.
- PowerPoint presentations which will be provided on eCollege

**COURSE DESCRIPTION:** This course explores the approach that economists take toward environmental and resource problems. It examines both the economic roots of environmental problems and their potential solutions. The course focuses on questions a policymaker must face in deciding how and when to regulate, including issues regarding efficiency and distribution.

**COURSE OBJECTIVES:** The objectives of this course are:

1. To apply the basic concepts of demand, supply, market equilibrium, perfectly competitive markets, allocative efficiency, profit maximization and welfare to describe environment-economy interactions.
2. To explain and differentiate among the theories of public goods, externalities and property rights and explain market failures arising from environmental problems by applying these three theories to current environmental policy topics.
3. To describe and apply the fundamentals of cost-benefit analysis as applied to environmental decision-making.
4. To identify and differentiate between different types of Command and Control Instruments (CACs) and Market-Based Instruments (MBIs) and contemporary approaches to environmental policy and examine how they are implemented to address environmental issues to achieve allocative efficiency and cost effectiveness.

**STUDENT LEARNING OUTCOMES:** After studying all materials and resources presented in this course, students will be able to:

1. Master basic economic models of the environmental economics.
2. Develop an understanding of environmental issues and the various mechanisms used to improve upon market outcomes.
3. Use benefit-cost analysis to examine environmental issues.
4. Apply economic thinking to environmental problems and policies.
5. Learn about local and international environmental issues.

**LECTURE TOPICS:**

CHAPTER 1: The Role of Economics in Environmental Management

CHAPTER 2: Modeling the Market Process: A Review of the Basics

CHAPTER 3: Modeling Market Failure

CHAPTER 4: Conventional Solutions to Environmental Problems: The Command-and-Control Approach

CHAPTER 5: Economic Solutions to Environmental Problems: The Market Approach

CHAPTER 6: Environmental Risk Analysis

CHAPTER 7: Assessing Benefits for Environmental Decision Making

CHAPTER 8: Assessing Costs for Environmental Decision Making

CHAPTER 9: Benefit-Cost Analysis in Environmental Decision Making

CHAPTER 10: Air, Water, Solid Waste and Toxic Substances

**GRADING POLICY:** Your grade for the semester will be a weighted average of homework assignments, four equally weighted exams, and a comprehensive final exam.

Homework assignments	10%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Exam 4	15%
Final Exam	30%

**GRADING SYSTEM:** Course grading is done according to the following scale:

<u>Range</u>	<u>Letter Grade</u>
90-100	A
80-89.99	B
70-79.99	C
60-69.99	D
Less than 60	F

**HOMEWORK ASSIGNMENTS (HAs):** Homework assignments are assigned regularly (see the course schedule at the end of the syllabus) and must be completed individually. As a form of experiential learning, HAs help students sharpen their analytical skills. Students must turn in their HAs in Microsoft Word format (or at least in pdf format, although the Word format is encouraged) via eCollege (through Dropbox) according to the course schedule. HAs must be submitted by 11:59 p.m. (Central Time) on the due date. While it is my strong belief that you should be able to do the HAs after reading the chapter, you can ask questions related to HAs by emailing them to me. I will do my best to answer them **only during business hours** by guiding you in the right direction or providing you with hints. No late HAs will be accepted and a grade of zero will be assessed for missed HAs.

**EXAMS:** Exams will be administered through eCollege (see the course schedule at the end of the syllabus for specific exam dates). Exams have to be completed by 11:59 p.m. (Central Time) on the due date. Exams will be timed and you will have 1 hour and 30 minutes to complete the exam. Make sure you have internet access ahead of time and that your laptop battery is fully charged. No make-up exams will be given. If an exam is missed a grade of zero will be assessed for it. Exams have to be completed individually using your own student account and there should be no collaboration or sharing of work with your classmates on the exams. Final exam is **comprehensive** and you will have 2 hours to complete it.

**A ROADMAP FOR SUCCESS IN AEC 445 & MY EXPECTATIONS OF YOU:**

1. Read the assigned readings.
2. Complete and turn in course assignments and exams at the scheduled time.
3. Use the web to actively seek out other economics sources that fit your learning style and help you better understand the material.
4. Be prepared for exams.

**COURSE SCHEDULE:** A tentative course schedule detailing the material that will be covered in each week and the dates of HAs and exams is provided at the end of the syllabus. This course schedule is subject to change and we will make adjustments as needed. Students will be notified of any changes ahead of time.

**eCOLLEGE:** Class-related material and information will be available on eCollege website (<http://www.online.tamuc.org/>). It is your responsibility to check the website and download the appropriate class material. You will need your CWID and password to log in to the course. If you do not know your CWID or have forgotten your password, contact Technology Services at 903.468.6000 or [helpdesk@online.tamuc.org](mailto:helpdesk@online.tamuc.org)

**IMPORTANT DATES:**

**January 17<sup>th</sup>**, Tuesday: First Day of Classes.

**March 13<sup>th</sup>-17<sup>th</sup>**, Spring Break, (No Class).

**May 5<sup>th</sup>**, Friday: Last day of classes.

**STUDENTS WITH DISABILITIES:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

**Office of Student Disability Resources and Services**

**Texas A&M University-Commerce**

**Gee Library**

**Room 132**

**Phone (903) 886-5150 or (903) 886-5835**

**Fax (903) 468-8148**

[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

**COUNSELING CENTER:** A student that faces a crisis or a serious and unforeseeable event that affects his/her class performance must contact the Counseling Center, Student Services Building, Room 204, Phone (903) 886-5145. If important class material or course assignments are missed because of such crisis or event, the student must contact the instructor as soon as possible.

**GENERAL POLICIES FOR CLASSES:** All students enrolled at the University will follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. See Student's Guide Handbook, Rules and Procedures, Code of Student Conduct (<http://www.tamuc.edu/CampusLife/documents/studentGuidebook.pdf>).

**ACADEMIC INTEGRITY:** Students must follow the *Code of Student Conduct* in the *Student Guidebook* (<http://web.tamuc.edu/admissions/studentGuidebook.aspx>). Any form of plagiarism or academic dishonesty will not be tolerated. Academic honesty is defined on *Chapter 13 Students (Academic)* of the *TAMUC Rules and Procedures* (<http://web.tamuc.edu/aboutus/policiesproceduresstandardsstatements/rulesprocedures/>):

“Academic dishonesty” includes, but is not limited to, plagiarism (the appropriation or stealing of the ideas or words of another and passing them off as one’s own), cheating, collusion (the unauthorized collaboration with others), and abuse (destruction, defacing, or removal) of resource material.

**CAMPUS CONCEALED CARRY:** Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to <http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf> and/or consult your event organizer. Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

**TECHNOLOGY REQUIREMENTS:** The following information has been provided to assist you in preparing to use technology successfully in this course.

- Internet access/connection – high speed recommended (not dial-up)
- Word Processor (i.e. MS Word or Word Perfect)

Additionally, the following hardware and software are necessary to use eCollege:

Our campus is optimized to work in a Microsoft Windows environment. This means our courses work best if you are using a Windows operating system (XP or newer) and a recent version of Microsoft Internet Explorer (6.0, 7.0, or 8.0).

Your courses will also work with Macintosh OS X along with a recent version of Safari 2.0 or better. Along with Internet Explorer and Safari, eCollege also supports the Firefox browser (3.0) on both Windows and Mac operating systems.

It is strongly recommended that you perform a “Browser Test” prior to the start of your course. To launch a browser test, login in to eCollege, click on the ‘myCourses’ tab, and then select the “Browser Test” link under Support Services.

**AEC 445: Resource and Environmental Economics**  
**Course Schedule, Spring 2017**  
**Web Based**  
**1/17/2017 through 5/12/2017**

Weeks	Topic/All assignments are due on specific dates listed below by 11:59 p.m. For example, homework assignment 1 is due January 22, by 11:59 p.m., or homework assignment 2 is due January 29, by 11:59 p.m.
Week 1 Jan 17 – Jan 22	Syllabus & eCollege Tutorial, CHAPTER 1: The Role of Economics in Environmental Management, Homework Assignment (HA) 1
Week 2 Jan 23 – Jan 29	CHAPTER 2: Modeling the Market Process: A Review of the Basics, HA 2
Week 3 Jan 30 – Feb 5	CHAPTER 3: Modeling Market Failure, HA 3
Week 4 Feb 6 – Feb 12	<b>EXAM 1. Chapters 1, 2, 3</b>
Week 5 Feb 13 – Feb 19	CHAPTER 4: Conventional Solutions to Environmental Problems: The Command-and-Control Approach, HA 4
Week 6 Feb 20 – Feb 26	CHAPTER 5: Economic Solutions to Environmental Problems: The Market Approach, HA 5
Week 7 Feb 27 – Mar 5	<b>EXAM 2. Chapters 4, 5</b>
Week 8 Mar 6 – Mar 12	CHAPTER 6: Environmental Risk Analysis, HA 6
Week 9 Mar 13 – Mar 19	Spring Break: No Class

Week 10 Mar 20 – Mar 26	CHAPTER 7: Assessing Benefits for Environmental Decision Making, HA 7
Week 11 Mar 27 – Apr 2	<b>EXAM 3. Chapters 6, 7</b>
Week 12 Apr 3 – Apr 9	CHAPTER 8: Assessing Costs for Environmental Decision Making, HA 8
Week 13 Apr 10 – Apr 16	CHAPTER 9: Benefit-Cost Analysis in Environmental Decision Making, HA 9
Week 14 Apr 17 – Apr 23	CHAPTER 10: Air, Water, Solid Waste and Toxic Substances (for this chapter, do not read the textbook, just read the PowerPoint presentation for chapter 10), HA 10
Week 15 Apr 24 – Apr 30	<b>EXAM 4. Chapters 8, 9, 10</b>
Week 16 May 1 – May 7	Study week
Week 17 May 8 – May 11	<b>FINAL EXAM. Chapters 1 through 10</b>

**NOTE:** The instructor reserves the right to make changes to the syllabus and the course schedule as needed. If changes are made, you will be notified of them ahead of time.