

## Economics 4323: Environment & Economic Analysis Spring 2004

### Administrative Information

**Instructor:** Dr. Tisha Emerson

**Office:** HCB 367

**Office hours:** M 10:00am-12:00pm & TTh 8:30am-9:30pm, and by appointment

**Phone:** 254.710.4180

**E-mail:** Tisha\_Nakao@Baylor.edu

**Lecture:** TTh, 12:30-1:50pm, HCB 301



### Course Outline

**Principal Aim of the Course:** This course examines economic issues in the consumption, allocation, and management of environmental resources. Students will learn the economic principles behind the management of the environment. Readings, essays, problems, and class project will give students practice in applying economic tools to environmental problems. The course includes critical discussions of the more controversial issues in environmental economics: environmental valuation, international environmental conflict, and regulation.

**Methodology:** The course is methodological in emphasis. We will use both theoretical and empirical approaches to solve problems in class and students will use similar approaches in problem sets, essays, and exams. The class will also conduct a project on recycling. Through this project, student will gain hands-on research experience.

**Learning:** To fully gain from the class, good learning techniques are to be adopted. These are regular attendance, continuous reading and frequent practice at applying the theory that you have learned. Good preparation includes studying class notes from the previous period prior to attending class. A premium is placed on logical thinking, to use what you have learned to work through a problem that you may not have seen before; rote memorization is not enough. The following policies regarding assignments, attendance and grading are aimed at promoting good learning, and the most effective use of class time. **These policies are administered without exceptions for individual students. This is to insure that ALL students are treated equally.** Further, all students are expected to follow the honor code and to conduct themselves with honest and integrity. If you are not familiar with the honor code, see the Student Handbook ([http://www3.baylor.edu/StudentHandbook/pp\\_constitution.htm](http://www3.baylor.edu/StudentHandbook/pp_constitution.htm)).

**Text:** Callan and Thomas' *Environmental Economics and Management: Theory, Policy, and Applications*, 3rd edition (2003, Dryden Press). The University Bookstore has this text in stock. Each student is expected to acquire a copy of the text. The chapters we will be covering will be mentioned in class, and are indicated on the course outline that follows. Please note that simple definitions and concepts will not be covered in class, but you are expected to learn these materials through your reading. This allows more time for explaining more complex concepts and practicing applying theories learned in class to current issues. Students are expected to read the chapters ahead of time and be prepared to discuss them during class time. Make good use of your text, it is a valuable resource!

**Blackboard.** An additional resource available to students is the class Blackboard site. Blackboard can be accessed from the Baylor University home page <http://www.baylor.edu>. Click on the "Current Students" link, the Blackboard link is located under the "Student Services" section of that page. Through this site students have 24-hour access to a great deal of information on the class. Items available through the site include but are not limited to the course outline and syllabus, project descriptions, and exam answer keys. Also, through e-mail you have greater access to the instructor. E-mailed questions are usually answered within 24 hours as I frequently check my e-mail. Technology is a wonderful thing – make use of this resource!

**Daily Quizzes.** On days where we cover material from the textbook, there will be short quiz covering the assigned reading and/or practice problems for that day (see attached schedule). Quizzes will be given at the very beginning of class. *No make-up quizzes will be given for any reason.*

**Problem Sets and Short Essays.** For each class meeting, work will be assigned. These include reading and written assignments (problems, short essays, etc.). Students are required to prepare the assignments (which are available on the class Blackboard site) *in advance* of the class meeting, and must bring the prepared assignments to class. Students are responsible for the full assignment. *No late assignments will be accepted.*

**Project.** This semester we will be working on a “group” project that studies recycling. However, this is not your usual group project. Each student will be contributing to each portion of the project and will be graded on their contribution. This approach will allow you to have real experience at performing research. I believe this hands on (or learning-by-doing) approach will give you much better insight into the research process than a traditional term paper assignment. Detailed instructions are available on the class Blackboard site.

**Literature Review and Presentation.** There are several components to any research project, including the literature review, modeling, data collection and cleaning, data analysis, and the synthesis of the literature review with the results. Our project will allow you to participate in each phase. You will each be responsible for a portion of the literature review (3 articles minimum). Literature reviews will be due on Thursday, February 12<sup>th</sup> and should be around 5 pages, typed, double-spaced. All literature reviews should include a full list of references. Each student will then have 15 minutes to explain their findings to the class in the form of a short oral presentation. Presentations should appear polished – that means you need to practice them beforehand. It is also important that you practice to be sure that your presentation is of the assigned length. You will not be given extra time, but will be asked to stop promptly when your allotted time is up.

**Survey Construction and Data Collection.** The next phase will involve construction of a survey which we will use to collect data. Students will all have the opportunity to submit questions for consideration for inclusion in the survey. The class will work as a team to develop the final survey instrument. Then each student will be responsible for collecting a portion of the data (completed surveys) and entering that data into a spreadsheet template that I will provide. We will discuss data issues and I will explain how simple data analysis is performed as well as the results of the analysis.

**Synthesis Paper.** Finally, students will write a synthesis explaining the results of the data analysis and how they relate to the class’ literature review. The synthesis will likely be around 5-8 pages, typed, double-spaced and should also include a full reference list.

**Exams.** The midterm and final exams will each consist of several short essay/problem questions like those found in the textbook and in problem sets. The final exam will be cumulative.

**Attendance.** Students are expected to attend *all* scheduled lectures. Students are expected to be on time for class and stay for the entire period. If your schedule does not allow this, *do not take this class*. Students may not leave early unless permission is granted *before* class starts. No tape recording is allowed for any purpose, because part of good learning includes taking one’s own class notes. Furthermore, you should note that the policy of the university requires that students attend at least 75% of all class sessions in order to receive credit for a course. This policy (as all university policies) will be strictly adhered to and thus any student accumulating 8 or more absences will receive a failing grade for the course **regardless** of their performance on written assignments, exams, and class project.

**Grading.** Grades are based on a midterm, final, written assignments, daily quizzes, and project. *Students are required to submit all written assignments, project related assignments, and take all exams. Late work will not be accepted. If you should miss the midterm you must provide written, credible evidence from a professional explaining why you did not take the exam. An example is a doctor’s letter or a police report explaining the circumstances surrounding your absence. You must also provide a phone number for the person who wrote the explanation for me to contact (and I will call). If you satisfactorily meet these conditions, you will be allowed to take a make-up exam. Absent written and telephone explanations, you will receive a zero for the exam. No matter what the reason, there will be no excuse accepted for missing the final exam; a student missing the final exam will receive a grade of zero.* There are a total of 500 points possible throughout the semester distributed as follows: final (125), midterm (100), problem sets (60), essays (30), daily quizzes (60), and class project (literature review (30), presentation (25), survey design (15), data collection (15), synthesis paper (40) for a total of 125).

In general, final grades are assigned following a standard grading scale (e.g. 90-100 A, 80-89 B, etc.). Your final score in the class is calculated as the percentage of the total possible points that you earn (e.g. if you earn 350 points out of the 400 possible, you have earned an 87.5).

## Tentative Schedule of Topics, Assignments and Exams

**Schedule.** There two essays, six problem sets, daily quizzes, a project, a midterm, and a final exam scheduled. The midterm exam is held in class on the date indicated and the problem sets are due on the indicated dates – all dates are given in the **tentative** schedule below. The chapter numbers refer to the text: Callan and Thomas' *Environmental Economics and Management: Theory, Policy, and Applications*, 3rd edition (2003, Dryden Press).

\* Please note that this is a **tentative** schedule and may be adjusted if the progress of the class warrants such a change. If any adjustments are made, these will be announced in class.

### Week by Week\*

#### Week 1

1/13	Introduction to Eco 4323 Ethics Discussion	<i>Ethics readings</i>
1/15	Role of Economics in Environmental Management	<i>Chapter 1</i>

#### Week 2

1/20	Modeling the Market Process	<i>Chapter 2, pp. 24-38</i>
1/22	Modeling the Market Process continued	<i>Chapter 2, pp. 38-48</i> <b>Ethics Essay due</b>

#### Week 3

1/27	Modeling Market Failure	<i>Chapter 3, pp.50-68</i> <b>Problem Set 1 due</b>
1/29	Modeling Market Failure continued	<i>Chapter 3, pp.68-73</i> <b>Literature Review Sign-up Deadline</b>

#### Week 4

2/3	Command and Control Solutions	<i>Chapter 4, pp.78-88</i> <b>Problem Set 2 due</b>
2/5	Command and Control Solutions continued	<i>Chapter 4, pp. 88-94</i>

#### Week 5

2/10	Economic (Market-based) Solutions	<i>Chapter 5, pp.96-107</i>
2/12	Economic (Market-based) Solutions continued	<i>Chapter 5, pp. 108-117</i> <b>Literature Review due</b>

#### Week 6

2/17	Lecture on Survey Design	<b>Problem Set 3 due</b>
2/19	Literature Review Presentations	

#### Week 7

2/24	Literature Review Presentations continued
2/26	Literature Review Presentations continued

#### Week 8

3/2	Literature Review Presentations continued	<b>Survey Questions due by 5pm</b> <i>Chapters 1-5</i>
3/4	<b>Midterm</b>	

#### Week 9

3/9	Survey Design and Compilation
3/11	Survey Design and Compilation continued

3/15-3/19 **Spring Break**

---

\* tentative

**Week 10**

3/23 Survey Design and Compilation continued  
3/25 Constructing of Dataset

**Week 11**

3/30 Environmental Risk Analysis

4/1 Assessing Benefits

*Chapter 6*

***Taking Sides Essay due***

*Chapter 7, pp. 142-156*

**Week 12**

4/6 Assessing Benefits continued

4/8 Assessing Costs

*Chapter 7, pp. 156-162*

***Problem Set 4 due***

*Chapter 8*

***Completed data templates due***

**Week 13**

4/13 Benefit-Cost Analysis

4/15 Analysis of Data and Discussion of Results

*Chapter 9*

***Problem Set 5 due***

**Week 14**

4/20 Analysis of Data and Discussion of Results continued

4/22 ***Diadeloso***

***Problem Set 6 due***

**Week 15**

4/27 Sustainable Development

4/29 Review

*Chapter 20*

***Synthesis Paper due***

**Week 16**

5/7 ***Final Exam, 2:00-4:00pm***

*Chapters 1-9, 20*