

## **Econ 3466: Environmental Economics** **Spring 2015**

**Class time and Location:** Tuesday and Thursday 5:00-6:15pm, OAK111

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### **Course Description:**

The purpose of this course is to expose you to a wide range of environmental issues and analyze them from an economic perspective. The course is divided into two parts. The first part will cover market failure, cost benefit analyses, air and water pollution, environmental valuation methods and the use of regulation and market-based mechanisms to control pollution. The second part of the course will focus on issues related to natural resources exploitation and problems on environmental justice. After completing this course, you are expected to be able to understand the basic environmental policy instruments and use economic tools to analyze real-world environmental problems and policies.

### **Prerequisites:**

Course prerequisites include both ECON 2201 and 2202. We will have a review on the microeconomics. However, the review will be very brief. You need to have a strong micro-background to finish economic analysis projects.

### **Text Book and Readings:**

[1] Tom Tietenberg and Lynne Lewis, *Environmental & Natural Resource Economics* (9th Edition), Pearson, Addison-Wesley, 2011.

For reference purposes, other books for additional reading include:

[2] Ward, Frank A. *Environmental and Natural Resource Economics*. Pearson Prentice Hall, 2006.

[3] Robert N. Stavins (Editor). *Economics of the Environment: Selected Readings*. Harvard University Press, 2005

I will also post additional materials to the Huskyct. Please check your Huskyct regularly.

### **Projects, Exams and Grading**

Class attendance is important to keep a record of your lecture notes and understand the materials. One of the best things to master this material is to read lots of case studies. You are encouraged to read journals and newspapers. There will be an economic analysis project (see guideline at the end of this syllabus). As shown in the following course outline, there will be two in-class exams and one comprehensive final exam. I will provide exercise problems for you to prepare for the exam. You can study in groups on the exercises, but keep in mind that your own *unassisted* exam performance will determine your grade with the highest weight. The weights of your grade are allocated as the following:

Assignment and class participation	5%
First exam	15%
Second exam	20%
Project	30%
Final exam	30%

### **Questions and Appointments**

If you have any questions, either stop by during my office hours (**Th 3:30pm-4:30pm**), or contact me by email ([ling.huang@uconn.edu](mailto:ling.huang@uconn.edu)) to arrange an appointment. My office is in **Oak 329**.

## **Course Outline (subject to change)**

<b><u>Date</u></b>	<b><u>Topics</u></b>
<b><u>Week 1:</u></b>	Week of Jan. 19, 2015 Syllabus; Microeconomics review
<b><u>Week 2:</u></b>	Week of Jan. 26, 2015 Microeconomics review continued Externalities and market failure
<b><u>Week 3:</u></b>	Week of Feb. 2, 2015 Cost benefit analysis and static efficiency Policy instruments for pollution control
<b><u>Week 4:</u></b>	Week of Feb. 9, 2015 Air pollution In-class Exercise
<b><u>Week 5:</u></b>	Week of Feb. 16, 2015 <b>Exam 1 (Tuesday Feb. 17, 2015)</b> Water pollution
<b><u>Week 6:</u></b>	Week of Feb. 23, 2015 Environmental valuation: Revealed Preference Environmental valuation: Stated Preference
<b><u>Week 7:</u></b>	Week of Mar. 2, 2015 Case studies for Contingent Valuation Cost estimation
<b><u>Week 8:</u></b>	Week of Mar. 9, 2015 Discounting and dynamic efficiency Tragedy of the commons

- Week 9:** Week of Mar. 16, 2015  
Spring Recess
- Week 10:** Week of Mar. 23, 2015  
Exercise  
Resource rents: agricultural and water market
- Week 11:** Week of Mar. 30, 2015  
**Exam 2 (Tuesday Mar. 31, 2015)**  
Renewable resources: Fisheries
- Week 12:** Week of Apr. 6, 2015  
Renewable resources: Forest  
Non-renewable resources
- Week 13:** Week of Apr. 13, 2015  
Land use and environmental amenity  
Environmental justice
- Week 14:** Week of Apr. 20, 2015  
Project Presentation
- Week 15:** Week of Apr. 27, 2015  
Project Presentation
- Week 16:** Week of May 4, 2015  
**COMPREHENSIVE FINAL EXAM (Time: TBA)**

# **Guidelines for Economic Analysis Project**

**Due: Friday, April 17<sup>th</sup>**

This project includes 1) a brief report analyzing the economics of the policy question, and 2) project presentation at the end of the semester.

Imagine now you are a consulting analyst to evaluate the environmental policies. For the topic, you can either select one of the following policies or decide your own. Keep in mind that the purpose of the project is to provide the ECONOMIC evaluation of environmental policies using the tools we learned from the course. The report should be no more than 5 double spaced pages. You need to have an abstract (around 100 words) that lays out your key findings.

The potential topics include:

1. In 2003, EPA launched the NOx Budget Trading Program that is similar in spirit to the successful sulfur dioxide emissions trading program. Analyze the economics of this program.

<http://www.epa.gov/airmarkt/progsregs/nox/sip.html>

2. Since 2005, Bering Sea and Aleutian Islands (BSAI) crab fisheries have been managed under the Crab Rationalization Program with a core component of Individual fishing quota system. Evaluate the success of the rationalization program in restoring economic efficiency to Alaskan crab fisheries.

<http://www.fakr.noaa.gov/sustainablefisheries/crab/crfaq.htm>

3. Analyze the economics of the Bush administration proposal to allow drilling in the Alaskan National Wildlife Refuge (ANWR).

<http://edition.cnn.com/2008/POLITICS/07/14/bush.offshore/index.html>

4. In February 2003, London began charging a 10 £ congestion toll for most motor vehicles traveling in central London. Analyze the economics of this congestion toll. You may want to compare the economic properties of this toll to other alternative congestion policies.

5. Follow the example in the class to design a contingent valuation.

You are expected to present the project individually. The presentation can include, but not restricted to, the main objective of your project, the model you use, and the main findings. You can and should use slides containing subsections, bullets, and other tools to make the key points immediately clear to your audience.