Course

Econ 3545 Environmental Economics, University of Colorado at Boulder, Summer 1999

Instructor

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Course Introduction

This course introduces applications of economic principles to analysis of environmental issues and policies. The course is organized in three parts.

Part I: Basic Concepts and Theory

This part introduces basic economic concepts and discusses failure of market to allocate socially optimal quantities of public goods and goods with externalities. It also develops a simple model of pollution control. This part discusses the role of government for correcting market failure and reasons why a government may fail in this task.

Part II: Benefit-Cost Analysis

This part introduces benefit-cost analysis of environmental projects and discusses few techniques of estimating benefits and costs.

Part III: Pollution-Control Policy Approaches

This part analyzes few approaches of pollution control - liability laws, vesting of private property rights, emission standards, emissions charges, and tradable discharge permits - for efficiency/cost effectiveness, enforceability, and incentive to innovation of improved methods of pollution control. Finally, it discusses some U.S. water and air pollution control policies.

The course extensively uses graphical analyses. Econ 2010 or Econ 1000 is a prerequisite for the course.

Textbook

Lecture Notes

Lecture notes are available on my web site. These notes do not include graphs; therefore, you need to complement them with your class notes. Also, I am likely to add to or exclude materials from the notes, especially in the first two parts of the course. You would be responsible for everything covered in the class.

Grading Policy

Class grade will depend upon your performance in three exams and your class attendance, as below.

Exam 1 on Part I materials: 30% of class grade
Exam 2 on Part II materials: 30% of class grade
Exam 3 on Part III materials: 30% of class grade
Class attendance: 10% of class grade

Course Outline and Tentative Schedule

1. July 6-15: Part I - Basic Concepts and Theory (Chapters 1 through 5 and 9)
   - A Simple Model of Pollution Control, Efficient Level of Emissions, Criteria for Evaluation of Environmental Policies

   **EXAM 1 ON PART I: JULY 19, 1999 FRIDAY**

2. July 16 and 20 to 27: Part II - Benefit-Cost Analysis (Chapters 6 through 8)
   - Techniques of Benefit Estimation
Estimation of Health Damages, Estimation of Production Damages, Estimation of Materials Damages; Wage Rate Differential, Property Value Differential, Travel Cost Method; Contingent Valuation Method

Techniques of Cost Estimation

With/Without Principle, Social Opportunity Costs versus Accounting Costs; Cost of a Single Facility Project/Local Regulation/Industry-wide Regulation

Steps of Benefit-Cost Analysis and Issues

EXAM 2 ON PART II: JULY 28, 1999 THURSDAY

3. July 29 to Aug 5: Part III-Policy-Control Policy Approaches (Chapters 10 through 15)

   Liability Laws, Private Property Rights, Technology/Emission Standards, Emission Charges, Tradable Discharge Permits, Federal Water and Air Pollution Control Policies

EXAM 3 ON PART III: AUG 6, 1999 FRIDAY