

BOSTON COLLEGE
Department of Economics

Economics 278

Spring 2003

Environmental Economics

Professor Frank Gollop
Administration Building 488
Office Hours: Monday/Thursday 3:00-4:30 or by appointment

Text: Callan, Scott J. and Janet M. Thomas. Environmental Economics and Management.
(Second Edition) Fort Worth, TX: Dryden, 2000.

Course Requirements:	First Midterm	20%
	Second Midterm	25%
	Economic Analyses (3)	15%
	Final	40%

Three Economic Analyses

Three 150-word essays are due over the course of the semester. Find an article in a newspaper or periodical or on the Internet (dated after January 1, 2003) discussing a current environmental issue. Write a brief analysis (no more than 150 words) of some economic concept or principle stimulated by something stated in the article. I am looking for economic analysis, not a book report describing the content of the article. With your formal training in undergraduate economics, I want you to take the article one-step beyond what the author wrote for a general audience. Submit your analysis with the article attached.

The due dates are February 20, March 20, and April 8.

No extensions will be granted. No essays will be accepted late. They are due at the beginning of class on the due date. Each essay is worth a maximum of five (5) points toward the final grade.

COURSE CALENDAR**THEORY**

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|------|---|----------------|
| I. | Introduction | Jan 14 |
| II. | Terminology of Environmental Analysis | Jan 16 |
| III. | Microeconomic Theory: Traditional Market Analysis | Jan 21-23 |
| IV. | Microeconomic Theory: Market Failure/Public Goods/Externalities | Jan 28 - Feb 4 |

FIRST MIDTERM (45 minutes) Feb 6

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|-----|-----------------------|-----------|
| V. | Traditional Solutions | Feb 6-11 |
| VI. | Economic Solutions | Feb 11-18 |

POLICY

- | | | |
|-------|---|--------|
| VII. | Risk Analysis | Feb 20 |
| VIII. | Benefit-Cost Analysis | |
| | A.Measuring Benefits | Feb 25 |
| | B.Measuring Costs | Feb 27 |
| | C.Decision-Making Using Benefit-Cost Analysis | Mar 11 |

SECOND MIDTERM (75 minutes) Mar 13

APPLICATIONS

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|-----|---------------------------------------|-----------|
| IX. | Air Pollution | |
| | A.Evolution of U.S. Policy | Mar 18 |
| | B.Mobile Sources: Case Study of Autos | Mar 20 |
| | C.Stationary Sources | Mar 25 |
| | D.Case Study of Electric Utilities | Mar 27 |
| | E. Global Warming: Greenhouse Gases | Apr 1 |
| X. | Hazardous Waste | Apr 3-8 |
| XI. | Municipal Solid Waste | Apr 10-15 |

OPEN DISCUSSION

- | | | |
|------|--------------------------|-----------|
| XII. | Topics Selected by Class | Apr 22-29 |
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SYLLABUS

THEORY

- I. Introduction
- II. Terminology of Environmental Analysis
Chapter 1
- III. Microeconomic Theory: Traditional Market Analysis
Chapter 2
- IV. Microeconomic Theory: Market Failure/Public Goods/Externalities
Chapter 3
- V. Traditional Solutions
Chapter 4
Kellogg, Michael, "After Environmentalism," Regulation, Number 1 (1994), pp. 25-34.
- VI. Economic Solutions
Chapter 5

POLICY

- VII. Risk Analysis
Chapter 6 (read for context); Chapter 7
Gray, George M., "Measure Risk, Not Just Emissions," Regulation, 22, No. 4, (1999), pp. 12-15.
- VIII. Benefit-Cost Analysis
 - A. Measuring Benefits
Chapter 8
Brennan, Timothy J., "Discounting the Future: Economics and Ethics," Resources, No. 120 (Summer 1995), pp. 3-6.
 - B. Measuring Costs
Chapter 9
Braconi, Frank, "Environmental Regulation and Housing Affordability," Cityscape, 2 (September 1996), Excerpts distributed in class.
Portney, Paul R. and Winston Harrington, "Health-Based Environmental Standards: Balancing Costs with Benefits," Resources, No. 120 (Summer 1995), pp. 7-10.
 - C. Decision-Making Using Benefit-Cost Analysis
Chapter 10
Viscusi, W. Kip, "Secondhand Smoke," Regulation, 3, (1995), pp. 42-49.

APPLICATIONS

- IX. Air Pollution
- A. Evolution of U.S. Policy
Chapter 11
 - B. Mobile Sources: Case Study of Autos
Chapter 12 (pp. 322-41)
 - C. Stationary Sources
Chapter 12 (pp. 342-69)
 - D. Case Study of Electric Utilities
Maloney, M.T. and Bruce Yandle, "Cleaner Air at Lower Cost: Bubbles and Efficiency," Regulation (May/June 1980), pp. 49-52.
Schmalensee, Richard, Paul Joskow, A. Denny Ellerman, Juan Pablo Montero, and Elizabeth M. Bailey, "An Interim Evaluation of Sulfur Dioxide Emission Trading," Journal of Economic Perspectives, 12 (Summer 1998), pp. 53-68.
Gollop, Frank and Mark Roberts, "Cost-Minimizing Regulation of Sulfur Emissions: Regional Gains in Electric Power," Review of Economics and Statistics (February 1985), Introduction and sections III and IV; section II optional.
 - E. Global Warming: Greenhouse Gases
Chapter 13 (pp. 382-405)
Sedjo, Roger A., "Harvesting the Benefits of Carbon 'Sinks'," Resources, 133 (Fall 1998), pp. 10-13.
Shaw, Jonathan, "The Great Global Experiment," Harvard Magazine (Nov/Dec 2002), pp. 34-43, 87-90.
- X. Hazardous Waste
Chapter 17
- XI. Municipal Solid Waste
Chapter 18