

Winter 2017
Professor Layton

PUBPOL 594
Economic Approaches to Environmental Management

Meeting on Mondays and Wednesdays from 10:00 AM to 11:20 PM in SAV 136

Office hours and contact information

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Office Hours: Mondays from 11:30 am to 12:50 pm and by appointment.

This course focuses on the economics of environmental and natural resource use, management, and conservation. The text for the course is *Environmental and Natural Resource Economics*, 10th edition by Tom Tietenberg and Lynne Lewis published by Routledge (Taylor and Francis). We will also have supplemental readings that will be provided during the quarter, primarily via University of Washington electronic resources.

The class format will consist of lectures and discussion, and a final project (presentation and paper). Grading will be based on one exam and the final project, each worth 50% of the final grade. The final project will be discussed in more detail subsequently.

Below is a text reading and lecture schedule. The reading list and schedule is subject to change in order to allow us to spend more or less on time on some topics as is useful, but the exam and project due dates are firm. The dates for the Exam and the final project are:

Exam: **Wednesday March 1**

Project Due Dates

Define project topic and group membership	Wednesday, January 18
Meet in class to formulate your approach	Monday January 23
Provide 1 or 2 background papers to me	Monday, February 27
Posters are due on	March 6

Course Schedule

Week 1 (January 4)

Text Readings

Ch. 1: Visions of the Future

Ch. 2: The Economic Approach: Property Rights, Externalities, and Environmental Problems

Ch. 3: Evaluating Trade-Offs: Benefit-Cost Analysis and Other Decision-Making Metrics

Ch. 4: Valuing the Environment: Methods

Topics covered

Microeconomics review

Benefit-cost analysis review

Discounting review

Public Goods and Externalities Review

Valuation concepts: Consumer Surplus, Compensating Variation and Equivalent Variation

Week 2 (January 9 and January 11)

Text Readings

Ch. 1: Visions of the Future

Ch. 2: The Economic Approach: Property Rights, Externalities, and Environmental Problems

Ch. 3: Evaluating Trade-Offs: Benefit-Cost Analysis and Other Decision-Making Metrics

Ch. 4: Valuing the Environment: Methods

Topics covered

Microeconomics review

Benefit-cost analysis review

Discounting review

Public Goods and Externalities Review

Valuation concepts: Consumer Surplus, Compensating Variation and Equivalent Variation

Week 3 (January 16 and January 18)

NO CLASS ON JANUARY 16 – MLK DAY

Text Readings

Ch. 5 Dynamic Efficiency and Sustainable Development

Topics covered

Optimal use of non-renewable resources

Week 4 (January 23 and January 25)

Monday January 23: Self managed class on group projects

Text Readings

Ch. 6: Depletable Resource Allocation: The Role of Longer Time Horizons, Substitutes, and Extraction Cost

Topics covered

Optimal use of non-renewable resources continued

Week 5 (January 30 and February 1)

Text Readings

Ch. 7: Energy: The Transition from Depletable to Renewable Resources

Ch. 8: Recyclable Resources: Minerals, Paper, Bottles, and E-Waste

Ch. 9: Water: A Confluence of Renewable and Depletable Resources

Ch. 12: Storable, Renewable Resources: Forests

Topics covered

Energy Efficiency Gap

Principles of Water Allocation

Forestry economics

Week 6 (February 6 and February 8)

Text Readings

Ch. 13: Common Pool Resources: Fisheries and other Commercially Valuable Species

Topics covered

Fishing and open-access

Application of the Concepts of Resource Economics to Rhino Poaching

Voluntary Approaches to Forest Conservation in Finland

Potential Costs and Benefits of Steller sea lion conservation

Week 7 (February 13 and February 15)

Text Readings

Ch. 14: Economics of Pollution Control: An Overview
Ch. 15: Stationary-Source Local and Regional Air Pollution
Ch. 17: Mobile-Source Air Pollution
Ch. 18: Water Pollution

Topics covered:

Pollution control using command and control, Quotas, Taxes, Trading
Policy Instrument Choice Under Uncertainty

Week 8 (February 20 and February 22)

NO CLASS ON FEBRUARY 20 – Presidents Day

Text Readings

Ch. 16: Climate change

Topics covered:

Climate Change Economics

Week 9 (February 27 and March 1)

Topics covered:

Climate Change Economics

Exam on Wednesday March 1

Week 10 (March 6 and March 8)

POSTER PRESENTATIONS ON MARCH 6 AND MARCH 8