

University of Chicago Harris School of Public Policy Studies  
PPHA 36930: Environmental Economics: Theory and Applications  
Winter 2019

**Instructor:** Steve Cicala (scicala@uchicago.edu)

**Time and Location:** TuTh 9:30 AM – 10:50 AM

**Instructor Office Hours:** Tu 3:30 PM- 5:00 PM. I am also happy to meet with groups of 4 - 6 students for lunch to discuss class, or any topics in economics.

**Office Hours Location:** Keller 2069.

**Course Description:** This course presents a broad-based treatment of the theory and application of environmental economics. Topics are introduced in the context of real-world environmental policy questions (with special emphasis on energy policy), then translated into microeconomic theory to highlight the salient constraints and fundamental trade-offs faced by policymakers. Topics include property rights, externalities, Pigouvian taxes, command-and-control regulation, cap-and-trade, valuation of environmental quality, cost-benefit analysis, policymaking under uncertainty, and inter-regional competition.

**Prerequisites:** Intermediate microeconomics.

**Required Text:** Kolstad, Charles D., *Environmental Economics*, 2nd Edition: March 31, 2010. ISBN-10: 0199732647

**Optional Text:** Stavins, Robert N. (Editor). *Economics of the Environment: Selected Readings*. Sixth Edition: January 4, 2012. ISBN-10: 0393913406

**Assignments and Grading:** Class participation: 20%, In-class presentation: 20%, Paper prospectuses: 30%, Final paper: 30%.

**Deliverables:** The final paper will be a roughly 15 page study of a single policy issue (your choice) related to environmental economics. Three prospectuses, each focusing on a single dimension of the issue will be due over the course of the quarter, and will ensure the paper is not thrown together at the last minute.

**Dates:**

**Paper Prospectus #1:** History, Institutions, and Politics. Sunday, Jan 27th (12:00AM the 23rd)

**Paper Prospectus #2:** Economics. Sunday, Feb 10th

**Paper Prospectus #3:** Policy Options and/or Outcomes, Feb 24th

**Final Paper:** End of Final's week.

# Course Topics:

## Section 1: Introduction: The Market Does (not) Work

Microeconomics Review: Kolstad, Chapters 1 - 4.

Fullerton and Stavins, "How Economists See the Environment" *Nature*, Vol. 395. Oct 1, 1998. Pg 433 - 434.

Externalities: Kolstad, Chapter 5.

## Section 2: Cost-Benefit Analysis

Kolstad Chapter 6

Arrow, et al. "Is There a Role for Cost-Benefit Analysis in Environmental, Health and Safety Regulation?"

Goulder and Stavins, "An Eye on the Future"

Pindyck, "Uncertainty in Environmental Economics"

Kelman, "Cost-Benefit Analysis: An Ethical Critique" and replies

Graham, "The Evolving Regulatory Role of the U.S. Office of Management and Budget"

## Section 3: Demand for Environmental Quality

Kolstad Chapter 7

Hedonic Methods: Kolstad Chapter 8

Contingent Valuation (Constructed Markets): Kolstad Chapter 10

Portney, "The Contingent Valuation Debate: Why Economists Should Care"

Hanemann, "Valuing the Environment Through Contingent Valuation"

Diamond and Hausman, "Contingent Valuation: Is Some Number Better than No Number?"

## Section 4: Risk and Uncertainty

The Value of a Statistical Life: Kolstad Chapter 8F, 18

Cameron, "Euthanizing the Value of a Statistical Life"

Aldy and Viscusi, "The value of a statistical life: a critical review of market estimates throughout the world"

## Section 5: Eureka! Property Rights and Pigouvian Taxes

Pigouvian Taxes: Kolstad Chapter 12.

Property Rights: Kolstad, Chapter 13.

Coase, "The Problem of Social Cost," *Journal of Legal Studies*, Vol 3, 1960. Pgs 1 - 44.

Stigler, *Memoirs of an Unregulated Economist*, Chapter 5, "Eureka!"

## Section 6: Controlling Quantities

Kolstad Chapter 11

## Section 7: Instrument Choice: Prices versus Quantities

Kolstad Chapters 15 and 16.

Goulder and Parry "Instrument Choice in Environmental Policy"

Stavins, "What Can We Learn from the Grand Policy Experiment? Lessons from SO<sub>2</sub> Allowance Trading"

Metcalf, "Market-Based Policy Options to Control U.S. Greenhouse Gas Emissions"

Keohane, Revesz, and Stavins, "The Choice of Regulatory Instruments in Environmental Policy"

## Section 8: The Race to the Bottom

Inter-regional and International Competition: Kolstad Chapter 19.

The Environmental Kuznets Curve: Kolstad Chapter 20.

Porter and van der Linde, "Toward a New Conception of the Environment-Competitiveness Relationship"

Frankel, "The Environment and Globalization"