

Economics 475 – Environmental Economics
Georgetown University Department of Economics
Spring 2018 Tu-Th 3:30–4:45 pm Maguire 101

Professor: Arik Levinson

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Environmental economics studies the market failure known as externalities—when consumers or producers don't account for the full social costs of their actions. Examples: when a commuter drives to work in a car that emits carbon monoxide, or when a coal-fired power plant emits sulfur dioxide that causes downwind lakes to become acidic. The field has two parts: (1) placing a monetary value on those intangible, non-traded, environmental amenities like clean air and water, and (2) designing efficient and cost effective public policies to correct those market failures.

This is designed to be a serious economics course, for Georgetown economics majors familiar with calculus, intermediate microeconomics, and econometrics. Requirements include a masters-level textbook (Kolstad), articles published in top academic economics journals, and policy-school-style case studies.

Resources:

1. *Environmental Economics*, 2nd Edition by Charles Kolstad (Oxford U. Press, 2011).
2. Various academic articles and case studies, distributed via Canvas.

Requirements:

1. **Prerequisites.** ECON-101 and ECON-122.
2. **Occasional problem sets.** Students are encouraged to work together on problem sets but must submit them individually.
3. **Case studies.** On the day that each is to be discussed in class, students are to prepare a 1 or 2-page “talking point” memo summarizing key features of the cases under analysis, and answering the decision question posed by the professor. These will be group projects, where group membership is assigned by the instructor.
4. **Midterm exam.**
5. **Final exam.**

Important dates:

- 2/13 Case #1 “Arsenic in Drinking Water”
- 3/1 Midterm Exam
- 3/27 Case #2 “Seattle’s Cash for Trash”
- 4/12 Case #3 “Automotive Fuel Economy Standards”
- 4/26 Case #4 “Mercury and Air Toxics Standards (MATS)”
- 5/7 Final Exam 4-6 pm, location TBA

Grading: There will be two grading schemes. I will use whichever yields the highest score.

- (a) Problem sets 10%; case studies 30%; midterm 25%; final 35%.
- (b) Problem sets 10%; case studies 40%; final 50%. (Midterm dropped.)

Other class policies:

1. No electronics during class. Take notes on paper, not a computer. You'll learn more, distract others less, and can catch up on social media later.
2. Successful completion of the course requires adherence to the standards of conduct outlined by the Georgetown Honor Code (<https://honorcouncil.georgetown.edu>).
3. No late assignments will be accepted, and there will be no makeup midterms. If the midterm exam is missed, grading scheme (b) will be invoked.

Brief outline:

1. Review and introduction.
 - Scan Kolstad chapters 1-4. Read chapter 5.
 - Cost-benefit analysis. Kolstad ch. 6. Gramlich ch. 8. Circular A4 Primer.
2. Measuring environmental benefits.
 - Hedonics
 - Kolstad ch. 7-8
 - Chay and Greenstone “Does Air Quality Matter” 2005
 - Travel cost
 - Kolstad ch. 9
 - Contingent Valuation
 - Kolstad ch. 10
 - Carson *et al.*, “Contingent Valuation and Lost Passive Use” *EER* 2003
 - Read at least one of the following:
 1. Kling et al “From Exxon to BP” *JEP* 2012
 2. Carson “Contingent Valuation” *JEP* 2012
 3. Hausman “Contingent Valuation” *JEP* 2012
 - Happiness
 - Levinson “Valuing Public Goods Using Happiness Data” *JPubE* 2012
3. Regulating Pollution. Kolstad ch. 11-17.
 - Pollution taxes and tradable permits. Kolstad ch. 11-13.
 - Space and time. Kolstad ch. 14.
 - Prices vs Quantities. Kolstad ch 15.
 - Oates, *et al.* “The Net Benefits of Incentive-Based Regulation” *AER* 1989.
 - Fullerton and Kinnaman “Household Responses to Pricing Garbage” *AER* 1996.
 - Voluntary environmental policy. Kolstad ch. 17.
 - Gamber-Rabindran “Did the EPA’s Voluntary Program Reduce Emissions?” 2006.
4. Topics. Energy efficiency, voluntary regulations, regulating automobiles, economic growth and the environment, environmental justice, others as interest dictates.