

ECON 358: Environmental Economics

Spring 2005
MWF 12:30-1:20
KUY 307
<http://www2.hawaii.edu/~kburnett>

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Overview Causes and consequences of environmental degradation and the accompanying economic solutions. Topics include techniques for valuing the environment, global climate change, energy, fisheries, forestry, water, biodiversity, and sustainability.

Prerequisites Econ 120, 130, 131, or consent. If you have not taken an introductory level economics course, it is strongly recommended that you review these concepts on your own – see instructor for details.

Required text The Economic Approach to Environmental and Natural Resources
James R. Kahn, 3rd Edition

Assessment	Participation	10%
	Problem sets	10%
	Project	25%
	Midterm exam	25%
	Final exam	30%

Participation in class discussion is expected. Reading the assigned sections in advance greatly enhances discussion. 4-5 problem sets will be assigned throughout the semester. Problem sets are intended to prepare you for the examinations, so although they constitute only 10% of your final grade, it is highly recommended you take these seriously! Everyone will participate in a group project, details to be given later. During the last 2 weeks of the semester, we will hold a mini conference in which groups will present their work. Extra credit opportunities may arise – stay tuned throughout the semester for details.

Important Dates (Approximate dates)	Monday, January 10	First day of instruction
	Wednesday, March 2	Midterm examination
	Monday, March 7	Guest lecture – mandatory
	April 25 – May 4	Project presentations
	Wednesday, May 4	Last day of instruction
	Monday, May 9	Final examination (12-2 PM)

Please arrange your schedules accordingly. No early/late/makeup exams will be given.

- Policies**
1. Problem sets due in class on due dates – late work will not be accepted.
 2. No makeup exams. Put the dates on your calendar today.
 3. Cell phones/electronic devices must be OFF during class. I reserve the right to deduct points from your final score if this policy is abused.

Disability Access

If you feel you need reasonable accommodations because of the impact of a disability, please 1) contact the KOKUA Program (V/T) at 956-7511 or 956-7612 in room 013 of the QLCSS; 2) speak with me privately to discuss your specific needs. I will be happy to work with you and the KOKUA Program to meet your access needs related to your documented disability.

Tentative Course Schedule

(Assigned readings in italics)

Part I.	Principles	
	A. Markets	<i>Chapter 2</i>
	B. Market failure	
	a. Public goods	
	b. Externalities	
	C. Discounting and Present Value	<i>Appendix 2A</i>
	D. Dynamic Efficiency	<i>Appendix 2B</i>
	E. Pollution Solutions	<i>Chapter 3</i>
	a. Pigou vs. Coase	
	b. The Optimal Level of Pollution	
	c. Command and Control	
	d. Incentives	
Part II.	Environmental Valuation	
	A. Value	<i>Chapter 4</i>
	a. Revealed Preference	
	i. Hedonics	
	ii. Travel cost	
	b. Stated Preference	
	i. Contingent Valuation	
	ii. Conjoint analysis	
	c. Benefits Transfer	
	d. Non-WTP	
	B. Environmental Decision Making	<i>Chapter 5</i>
	a. Criteria	
	b. Cost-Benefit Analysis	
	c. Marginal Analysis	
	d. Expected Value Analysis	<i>Appendix 5B</i>
Part III.	Exhaustible Resources	
	A. Ozone, climate change	<i>Chapter 7</i>
	a. Global warming?	
	b. Policy	
	c. Kyoto revisited	

- B. Energy *Chapters 8 and 9*
 - a. Oil
 - b. Costs
 - c. Alternatives
 - d. Policy

Midterm Wednesday March 2

Part IV. Renewable Resources

- A. Forests
 - a. Tropical *Chapter 13*
 - i. Benefits
 - ii. Deforestation
 - iii. Global Public Good
 - b. Temperate *Chapter 12*
 - i. Ecology
 - ii. Management Deforestation
 - iii. Optimal Rotation
- B. Fish *Chapter 11*
 - a. Biology
 - b. Optimal harvest
 - c. Gordon model
 - d. Policy
- C. Water *Chapter 15*
 - a. Consumption
 - b. Pricing
 - c. Policy
- D. Biodiversity *Chapter 14*
 - a. Extinction
 - b. Costs
 - c. Policy

Part V. Growth and the Environment

- A. The Porter Hypothesis *Chapter 6*
- B. Environmental Kuznets Curve
- C. Sustainable Development *Selections of chapters 6, 18,19*