Outline of Materials for Final Exam in EEP101/ECON125
Spring 2004

What is most important: make sure that you can do your homework.

Materials for the first half: see the outline for midterm (Make sure review the first part since final is accumulative).

Materials for the second part (after midterm)

1. Valuation of environmental benefit
   Detailed text online: chapter 9
   HW4
   (1) Types of benefits: use and non-use benefits
   (2) Methodologies to measure benefits (discuss methodology, advantages, and disadvantages)
      • Hedonic pricing
      • Travel cost
      • Engineering cost method
      • Contingent valuation
   (3) Uncertainty, Expected Benefits

2. Climate change
   Detailed text online: chapter 14, chapter 14A (Climate Change addendum)
   HW5
   (1) Discuss climate change and solve numerical problem
   (2) Discuss problem and potential effects of global warming and models of economic effects of climate change
   (3) The Impacts of Climate Change on Agriculture (two-crop model)
   (4) The Kyoto Protocol and obstacles to Kyoto Protocol and carbon trading
   (5) Mechanisms to obtain additional CO2 emissions by purchasing permits or providing CDMs

3. Water resource economics
   Detailed text online: chapter 16, chapter 16A, chapter 17, and chapter 17A
   Lecture notes
   HW4
   (1) Describe the system of water rights in the U.S. and how it evolved
   (2) Solve numerical problem of heterogeneous demand for water and effects of water trading market
   (3) Irrigation as a technology adoption model application

4. Pesticides economics
   Detailed text online: chapter 18
   HW5
   (1) Overview and history of pesticide usage in US
   (2) Numerical application of pesticide decision
   (3) Discuss externalities associated with pesticide usage, types of risks involved (groundwater, environmental amenity, consumers, farmers, etc.) and p
   (4) olicies pursued to affect/regulate usage of pesticides
   (5) Pesticides in a Damage Control Framework

5. Biodiversity, bio-tech and IPR
   Detailed text online: chapter 19
   PowerPoint presentation: lecture 19
   HW5
(1) Understand why biodiversity might be a public goods and an externality problem. Discuss how its benefits are distributed globally and the implication of this for its preservation.

(2) Discuss several alternative designs for encouraging biodiversity preservation. Focus on the difficulties of designing a compensation scheme for biodiversity owner in less developed countries.

(3) Technology Transfer from the Public to the Private Sector

(4) Public Institutions of Intellectual Property Rights in the Developing World

6. Environmental Services

Detailed text online: chapter 20
PowerPoint presentation: chapter 20

HW5

(1) Categories of environmental services: what are some examples of environmental services?

(2) Examine how externality analysis can be used to justify a payment for environmental services program.

(3) Discuss the use of valuation techniques for assessing the value of environmental services

(4) Maximizing environmental benefit versus maximizing acreage (chapter 20c)

(5) Scale effects (chapter 20d)

(6) The Role of Correlation (chapter 20e)