

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) Policies 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)