COURSE SYLLABUS

Econ 3545
Environmental Economics
Spring 1991

COURSE OUTLINE AND READING LIST:

Instructor: Raymond Prince
Office: Econ 13
Phone: 2-3000
Office Hours: 10:45-12 Tu and Th 11:30-3:00 MW (Econ 13)

COURSE OBJECTIVE:
To acquaint the student with the issues and analytical tools of environmental economics. Topics will include ecological foundations of economic systems, pollution problems and policy responses, and issues in environmental policy making.

COURSE FORMAT:

There are three exams – two hour exams and a final. Each exam will assume familiarity with the subjects covered to date in the lectures and readings. The final exam covers material for the entire course.

Your final grade will be based on the following weights:

Hour exams (2) - 33% each
Final exam - 34%
READINGS:
Required Text:
Tietenberg, T. 1988. Environmental and Natural Resource Economics 2nd ed. (Glenville, IL: Scott, Foresman & Co.)

Reserve readings in order of assignment:
Ehrlich, P. and A. Ehrlich, Population, Resources, Environment (San Francisco: Freeman and Co., 1972) (2nd ed.). [Chpts. 6-7].

Additional Sources:
FRAMING THE ISSUES

1. MODERN CONCERNS ABOUT EXCEEDING THE CARRYING CAPACITY OF THE ECO-SYSTEM - Chpts 1, Boulding, Ehrlich and Ehrlich

2. EVIDENCE OF A DECLINE IN THE ECO-SYSTEM'S CARRYING CAPACITY
   A. OVERVIEW - Clark
   B. CHANGING ATMOSPHERE - Graedel and Crutzen
   C. CHANGING CLIMATE - Schneider
   D. THREATS TO WORLD'S WATER - Maurits la Riviere
   E. THREATS TO BIODIVERSITY - Wilson

FIRST EXAM

3. AN ECONOMIC MODEL OF EFFICIENT RESOURCE USE - Chpts 2, 6(119-126), 14
   A. USE OF MODELS IN ECONOMIC ANALYSIS
   B. STATIC AND DYNAMIC EFFICIENCY DEFINED
   C. EFFICIENT POLLUTION ABATEMENT

4. CAUSES OF INEFFICIENT RESOURCE USE - Chpts 3, 6(remaining part), Hardin
   A. THE ROLE OF THE PUBLIC AND PRIVATE SECTORS IN MANAGING THE ECO-SYSTEM
   B. ECONOMIC INEFFICIENCY DEFINED
   C. CAUSES OF INEFFICIENT RESOURCE USE
      1. MARKET FAILURE
         a. EXTERNALITIES, IMPERFECT COMPETITION AND UNEMPLOYMENT
         b. TYPES OF GOODS
      2. GOVERNMENT FAILURE
      3. THE PROPERTY RIGHTS EXPLANATION
5. ECOLOGICAL–ECONOMIC MODELS OF ENVIRONMENTAL RESOURCES – Chpt 1(3-10)
   A. EARLY MODELS
   B. DIFFERENTIATING RESOURCES BY THEIR RATES OF REGENERATION

MANAGEMENT OF SPECIFIC ENVIRONMENTAL RESOURCES

PART I – ENVIRONMENTAL POLICIES CONCERNING DEGRADABLE POLLUTANTS

6. AIR POLLUTANTS – Chpts 15, 16, 17

7. WATER POLLUTANTS – Chpt 18

SECOND EXAM

PART II – ENVIRONMENTAL POLICIES CONCERNING DEGRADABLE POLLUTANTS

8. TOXIC SUBSTANCES – Chpt 19

OTHER ISSUES OF SIGNIFICANCE TO NATURAL RESOURCE ECONOMICS

9. POPULATION GROWTH – Chpt 5

10. SUSTAINABILITY – ChptS 21, 22, Ruckelshaus