University of California, San Diego **Fall Quarter 2005**
Department of Economics **Professor T. Groves**

Economics 131: Environmental Economics

Syllabus and Reading List

Course Overview

This course is an introduction to an economics perspective of environmental systems and their problems, with special attention to the use, misuse, and overuse of natural and environmental resources.

The first part of the course will develop appropriate economic concepts, models, and tools for analyzing environmental and natural resource issues and problems. The second part of the course will discuss the efficient use of depletable and renewable natural resources such as oil, gas, water, forests, and fisheries. The third part of the course will explore the particular problems arising from the use of environmental resources such as the air, rivers, lakes, and the oceans as repositories for pollution.

Throughout the course we will consider the separate and complementary roles of markets and governments in allocating and regulating the use of environmental and natural resources.

Lectures and Class Room

The course lectures during the Fall Quarter will be Tuesdays and Thursdays, from 9:30 - 10:50 a.m., in Center Hall 119. Additionally sections will be held at times and places to be announced.

TA's, Sections, and Office Hours

There are two T.A.'s for the course: Mr. Ben Gilbert and Mr. Jacob LaRiviere. They will hold sections and office hours at times to be announced. The sections will be used to go over pre-requisite economics material, questions arising from the lectures, and, especially exam-type questions that will be posed from time to time during the lectures or posted on the UCSD WebCT class website. All instructors' office hours will be posted on the class website. Please take advantage of office hours and also use e-mail to contact any instructor at other times or if you need to make an appointment.

Please use WebCT for all course-related e-mail. E-mail sent to other addresses (e.g. official UCSD accounts) may not receive a timely response and you may be requested to repost your message to our WebCT mailboxes. You must be logged into WebCT to send e-mail to WebCT mailboxes.

Exams and Grading

Your grade for this course will depend on a Mid-Term Exam (35%) to be given in class on October 27 and a Final Exam (65%) to be given on December 8 from 8:00 - 11:00 a.m. The exams will consist of questions similar (but not identical) to the exam-type problems mentioned above.

Textbook and other Readings

The textbook for this course is Tom Tietenberg, *Environmental and Natural Resource Economics* Seventh Edition, Boston:Pearson Addison Wesley, 2005.

This textbook is extremely comprehensive and exhaustive (maybe even exhausting!). A major purpose of the course lectures is to help you navigate the readings. While not all chapters will be assigned, even those chapters that are assigned contain vast amounts of information, not all of which will be emphasized equally. Regular attendance of lectures will make it easier for you to read the assigned chapters more efficiently.

In addition to the textbook various other readings are also assigned. Where available in electronic form they will be made available through the course WebCT site (for copyright reasons).

Course Outline and Reading Assignments

Introduction: Environmental Challenges and the Role of Economics (1 lecture)

Readings:

Environmental and Natural Resource Economics , Chapter 1.

Part I. Economic Concepts, Models, and Tools (3 weeks)

1. Concepts of Valuing the Environment

Readings:

Environmental and Natural Resource Economics, Chapter 2.

2. Methods of Valuing the Environment

Readings:

Environmental and Natural Resource Economics, Chapter 3.

3. Property Rights, Externalities, and Efficiency

Readings:

Environmental and Natural Resource Economics, Chapter 4.

4. Sustainable Economic Development

Readings:

Environmental and Natural Resource Economics, Chapter 5.

October 27th, MIDTERM EXAM 9:30 - 10:50 P.M. (in class)

Part II. Depletable and Renewable Resources (3 weeks)

5. Allocating Depletable and Renewable Resources: An Overview

Readings:
Environmental and Natural Resource Economics, Chapter 7.

6. Depletable, Non-Recyclable Resources: Oil, Gas, etc.

Readings:
Environmental and Natural Resource Economics, Chapter 8.

7. Replenishable, but Depletable Resources: Water

Readings:
Environmental and Natural Resource Economics, Chapter 10.

8. Storable, Renewable Resources: Forests

Readings:
Environmental and Natural Resource Economics, Chapter 12.

9. Renewable Common Property Resources: Fisheries

Readings:
Environmental and Natural Resource Economics, Chapter 13.

10. General Resource Scarcity

Readings:
Environmental and Natural Resource Economics, Chapter 14.

Part III. Pollution Control, Global Warming, and Toxics (3 weeks)

11. Overview

Readings:
Environmental and Natural Resource Economics, Chapter 15.

12. Stationary Source Pollution: Power Plants

Readings:
Environmental and Natural Resource Economics, Chapter 16.

13. Regional and Global Pollution: Global Warming

Readings:
Environmental and Natural Resource Economics, Chapter 17.

14. Mobile Source Pollution: Cars

Readings:
Environmental and Natural Resource Economics, Chapter 18.

15. Water Pollution

Readings:
Environmental and Natural Resource Economics, Chapter 19.

16. Toxic Waste Pollution

Readings:
Environmental and Natural Resource Economics, Chapter 20.

December 8th FINAL EXAM 8:00 - 11:00 A.M.