

Queen Mary College, University of London, BSc. (Econ)

Course: ECN 351 ENVIRONMENTAL ECONOMICS

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COURSE PROSPECTUS

1. Aims of the unit

This course aims to highlight some of the major environmental problems that are besetting the world today. It attempts to analyse these problems from a scientific point of view as well as from an economic point of view.

Economists need to be aware of the scientific analyses of environmental problems. The course aims to show how such an awareness is a precondition of rational economic decision making in respect of environmental issues.

2. Learning Outcomes

On completion of the course, the students should understand the nature and the origins of the explosion in human population which has occurred in the past two centuries, and they should be aware of the difficulties that will arise if the population continues to grow at the current rate. They should understand the circumstances which are conducive to a so-called process of demographic transition in which levels of human fertility are greatly reduced, and they should be familiar with the impediments which hinder such processes.

The growing population places increasing demands upon scarce resources and it taxes the capacity of the environment to absorb the waste products of industrial and agricultural activity. The students will hear of some of the problems that can arise from the over-exploitation of the sea and the land. They will also learn of the hazards of atmospheric pollution and of the threats to the welfare of human and animal populations that are posed by toxic chemicals of industrial origin.

In studying the economic aspects of these problems, the students will become aware of the incentives which encourage us to spoil the natural environment. They will be shown the relevance of the concepts of economic externalities and of market failures. They will also be confronted with the problems of making inter-temporal and inter-personal comparisons of welfare which arise wherever policies are proposed for limiting or reversing the processes of environmental degradation.

3. Topics to be Studied

1. Population Dynamics and Demographic Transitions: Economic Incentives for Family Limitation,
2. The Exploitation of Natural Resources and the Problems of Open Access Fisheries,

3. The Physics of the Atmosphere and the Anthropogenic Emission of Greenhouse Gasses,
4. CFC Gasses, Ozone Depletion and the Montreal Protocol,
5. Cost–Benefit Analysis and the Problems of Inter-personal and Inter-temporal Comparisons of Welfare,
6. The Kyoto Protocol: Difficulties in Reaching International Agreement in Relation to Global Environmental Problems,
7. The Supply of Energy: Fossil Fuels, Nuclear Fuels and Alternative Sources of Energy,
8. The Problem of Pollution Control: the Theorem of Coase and the Neo-classical Economic Analysis of Pollution Costs.

4. Arrangements for Teaching and Assessment

The course is taught in the fifth semester. The lectures are given each week (Tuesdays, 3pm) and the students must attend a one-hour seminar class each week in which topics are presented by individuals and discussed by the class. The topics for presentation can be selected from a list which is to be found on the web site of the course; but students are also encouraged to make their own proposals for the class topics.

The students must deliver an essay at the end of the course which will be marked and which will count towards their final assessment for the course. The assessed essay will count for 25 percent of the marks and the examination for the remaining 75 percent.

5. Readings

The primary texts for the course, of which students are urged to obtain copies, are

Pearce, D.W. and R.K. Turner, (1990), *Economics of Natural Resources and the Environment*, London: Harvester Wheatsheaf,

McMichael, A. J., (1993), *Planetary Overload*, Cambridge University Press (Chatto).

These books provide background reading. The topics of the lectures are treated in a series of texts which are available on the course web site under the rubric of *Lectures on the Environment*. The address of the web site is

⟨qmw.ac.uk.\economics\staff\ugte133⟩

The site also contains numerous adjunct texts, organised under major headings, from which the students can draw further information, some of which relates to current affairs.

Students are encouraged to make extensive use of the internet as well as of the Library in searching for materials in support of the lectures and in pursuit of their chosen topics for presentation in the classes and for submission as their assessed essays.