

UNIVERSITY COLLEGE OF THE FRASER VALLEY

COURSE INFORMATION

DEPARTMENT: Economics/Geography DATE: Winter 1994  
Economics 361 Environmental and Natural  
Resource Economics 4  
NAME & NUMBER OF COURSE DESCRIPTIVE TITLE UCFV CREDIT

CATALOGUE DESCRIPTION:

Today, newspaper and television remind us of the imminent danger to society from the "over" exploitation of global resources. The media focus on two related themes that are central to current economic analysis: first, that tension exists between the motives either to exploit or to conserve resources and, second, that the uses of many resources are not effectively regulated by markets. Preventing environmental degradation involves the allocation of scarce resources. These resources are typically rationed by prices, and, as such, the environmental problem is an economic problem (as well as a scientific and ethical one). The tools of economic analysis provide a useful aid in the design of natural resource and environmental policy. The aim of this course is to illustrate the role of economic analysis in informing, analyzing, and evaluating this policy.

COURSE PREREQUISITES: Economics 201 and 202; Math 111/112 or Math 113/114

COURSE COREQUISITES:

HOURS PER TERM FOR EACH STUDENT	Lecture	42 hrs	Student Directed	
	Laboratory	hrs	Learning	hrs
	Seminar	hrs	Other - specify:	
	Field Experience	hrs		hrs
			TOTAL	42 HRS

UCFV CREDIT 1 UCFV CREDIT 2 NON-CREDIT 3  
TRANSFER NON-TRANSFER

TRANSFER STATUS (Equivalent, Unassigned, Other Details)

UBC credits \_\_\_\_\_

SFU credits \_\_\_\_\_

UVIC units \_\_\_\_\_

Other \_\_\_\_\_

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COURSE DESIGNER J.D. TUNSTALL Ph.D.  
DEAN OF ACADEMIC STUDIES

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COURSES FOR WHICH THIS IS A  
 PREREQUISITE:

RELATED COURSES

TEXTBOOKS, REFERENCES, MATERIALS (List reading resources elsewhere)

**TEXTS:**

Primary Text(s):

John M. Hartwick and Nancy D. Olewiler, The Economics of Natural Resource Use, (2nd edition forthcoming), Harper-Collins Publishers.

Tom H. Tietenberg, Environmental and Natural Resource Economics, (3rd edition), Harper-Collins Publishers, 1992.

Supplementary Readings:

Robert Dorfman and Nancy S. Dorfman, Economics of the Environment; Selected Readings, (3rd edition), W. W. Norton & Company, 1993.

Dieter Helm, Economic Policy Towards the Environment, Blackwell Publishers, 1991.

Selected articles from relevant Journals.

**OBJECTIVES:**

This course provides an opportunity for students to understand how to apply the tools of micro-economic analysis to environmental and natural resource issues. It will be useful for students who wish to receive a broad survey of economic policy issues concerning the environment. The course will develop student's analytical and intuitive knowledge of micro-economic analysis. The primary focus will be on helping students apply the theories to real world situations.

**METHODS:**

The lectures will emphasize the major topics and ideas in each chapter. Time will be spent developing the theories and then applying them to current economic problems. Graphs will be used extensively while calculus and algebra will be used sparingly.

**STUDENT EVALUATION PROCEDURE:**

ASSIGNMENTS:	20%
MID-TERM:	30%
FINAL:	50%

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## COURSE CONTENT

### **1. Introduction to the Study of Natural Resource Economics**

Topics Include: The concept of natural resources; Intertemporal decision making; Property rights, welfare economics and the role of the government; Current environmental challenges and resource allocation problems.

### **2. Economics of the Fishery**

Topics Include: Tragedy of the commons and the economic theory of a common property resource (harvesting under open access and socially optimal harvests).

### **3. Regulation of the Fishery**

Topics Include: Optimal taxation of the fishery - Are they efficient and do they provide optimal incentives; Regulation in practice.

### **4. Economics of Forest Utilization**

Topics Include: Optimal forest utilization (harvesting & replanting decisions); Effects of taxation (stumpage) on forestry use; Evaluation of the preservation option - Conservation Reconsidered; Current policies and practices in Canada (B.C.)

### **5. Economics of Pollution**

Topics Include: Externalities in consumption; Externalities in production; Current approach to the control of air pollutants - taxation, subsidies, standards or property rights?

### **6. Pollution Policy in Practice - Benefit-Cost Analysis**

Topics Include: Introduction to benefit-cost analysis - a general framework; Valuing environmental damage and techniques of "non-market" valuation; Applications of benefit-cost analysis and the control of polluting emissions.

### **7. The Global Environment**

Topics Include: International environmental problems; Economics of global warming; Problems associated with global environmental protection.