COURSE OUTLINE

I. Catalog Description

EC 439 Seminar in Water Resource Economics (4)

Intensive study of water allocation, water pollution, statute law governing water use and pollution, and economic implications of control and non-control. Will analyze impact on quality of life, income, employment, and growth. 4 seminars. Prerequisite: EC 201 or EC 202.

II. Required Background or Experience

EC 201 or EC 202.

III. Expected Outcomes

Students in EC 439 will:

a) characterize the nature of water resources in California, the Southwest, the U.S. and globally,

b) identify and examine existing water use laws in California, the Southwest, the U.S. and globally,

c) apply basic microeconomic principles to analyze the economic effects of current water statutes on water usage,

d) define and describe existing water pollution problems,

e) identify and summarize the economic impacts of water pollution, and

f) examine economic solutions to water allocation and pollution problems.

IV. Text and Readings

Readings:


Freeman, A. M. Air and Water Pollution Control: A Benefit-Cost Assessment (New York: John Wiley and Sons, 1982).


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References:

American Economic Review
Journal of Economic Inquiry
Land Economics
Natural Resources Journal
Regional Science Journal
Review of Regional and Economic Development
Western Regional Science Journal
Western Water

V.  Minimum Student Materials

Textbooks, notebooks, and access to library reference materials and personal computers.

VI.  Minimum College Facilities
Classroom suitable for seminar discussions equipped for audio-visual and computer presentations, i.e. "smart classroom".

VII. **Course Outline**

A. **Nature of Water Resource**
   1. California
   2. Southwest
   3. United States
   4. International

B. **Existing Water Use Laws**
   1. Southwest
   2. California
   3. Rest of United States
   4. International Considerations

C. **Economic Impact of the Current Water Statutes on Water Usage**
   1. Impact on Domestic Use
   2. Impact on Agriculture
   3. Impact on Industry
   4. Impact on Employment and Growth
   5. Impact on Income and Quality of Life
   6. Impact on International Sharing

D. **Water Pollution Problems**
   1. Groundwater Pollution
2. Rivers and Streams Pollution

3. Acid Rain

E. Impact of Water Pollution

1. Agriculture
2. Industry
3. Quality of Life
4. Growth and Employment

F. Economic Solutions to Allocation and Pollution Problems Associated with Water

1. Market Solutions via Pricing Policy
2. Molding of Market Solutions and Statute Laws
3. Implications of Failure of Existing Solutions
4. Impact of Solutions on Employment, Income and Growth

G. Summary

1. Relation of Water Pricing to Water Pollution Problems
2. Implications of Polluted Water for United States and the International Sector

VIII. Instructional Methods

There are four methods of instruction:

a) assigned readings,
b) presentation of lecture, audio-visual, and written material by the professor,
c) demonstration of how to prepare a written report on a water resource economics topic to guide students in writing their term papers, and
d) student leadership and participation in seminar discussions on selected topics.
IX. Evaluation of Outcomes

There are three evaluation methods. The student will:

a) write two take-home examinations concerning the development of a water resource policy issue to be no more than 10 pages in length,
b) prepare a term paper on a water resource economic policy topic to be no more than 15 pages in length, and
c) contribute to seminar discussions.