I. Catalog Description

EC 531  Advanced Seminar in Natural Resource Economics (4)


II. Required Background or Experience

EC 401 and EC 406. Unconditional standing required.

III. Expected Outcomes

Student in EC 531 will:

a) characterize the past and future trends in resource use so as to evaluate the current state of resource scarcity,

b) develop an in-depth comprehension of the economic theory and policy alternatives pertaining to resource issues,

c) review methodologies and empirical assessments of resource policy effects for the U.S. as well as other countries,

d) compare and contrast renewable and nonrenewable resource management objectives, policies, and technologies,

e) examine traditional and proposed alternatives for future resource management decision-making,

f) summarize multiple-use and sustainable systems management approaches to resource management, and

g) investigate global natural resource management concerns and solutions to global management of natural resources.
IV. Text and Readings

Texts:


Kahn, J. R. The Economic Approach to Environmental and Natural Resources (Mason, OH: South-Western, 2005).

Readings:


References:

Agricultural Economics
Agricultural Economics Research
American Economic Review
American Journal of Agricultural Economics
Econometrica
Economic Inquiry
Journal of Agricultural Economics
Journal of Agricultural Economics Research
Journal of Economic Issues
Journal of Economic Literature
Journal of Environmental Economics and Management
Journal of Farm Economics
Land Economics
Natural Resources Journal
Quarterly Journal of Economics
Water Resources Research

V. Minimum Student Materials

Textbooks, notebooks, and access to reference materials and computing facilities.
VI. **Minimum College Facilities**

Classroom equipped with blackboards/whiteboards, overhead projector, and personal computers, both PC and Mac, with "big screen" monitor for demonstration of interactive lessons/applications of course concepts. Pull-down screen for use of audio-visual equipment, ie. overheads, newsreels.

VII. **Course Outline**

**A. The Economics of Natural Resources**

1. Review of Critical Issues
2. Sustained Growth vs Exhaustible Resources
3. Forecasting Future Needs and Likely Technological Change
4. Achievement of Efficient Resource Allocations
5. Intertemporal Equity Considerations

**B. Renewable Resource Management: Selected Methods and Case Studies**

1. Bioeconomics and Fisheries Management
2. Multiple Use Management of Public Forestlands
3. Economics of Natural Preservation vs Development
4. Public Intervention in Water Resource Allocation
5. Policy Responses to Uncertainty

**C. Nonrenewable Resource Management: Basic Framework**

1. Intertemporal Objectives
2. Optimal Resource Depletion Policies
3. Market Structure and Resource Depletion
4. Implications of Invention and Innovation for Resource Planning
5. Intertemporal Consistency Issues in Depletable Resources
6. Effects of Regulations on Depletable Resources

D. Measuring Nonrenewable Resource Usage, Supply and Scarcity: Selected Methods and Case Studies
1. Models of Energy and Nonfuel-Mineral Demand
4. Cartel Effects on Natural Resource Markets
5. Aggregate Effects of Resource Price Changes

E. International Natural Resource Policies
1. Mixed Economy Resource Management Experiences
2. Centrally-Planned Economy Resource Reports
3. Resources and LDCs
4. Global Resource Management Efforts

F. Sustainable Natural Resource Policy
1. Definition of Sustainable Natural Resource Policy
2. Guidelines for Sustainable Natural Resource Policy
3. Necessary Conditions for a Sustainable Decision-Making

VIII. Instructional Methods

There are four methods of instruction. Students will:
1. participate in seminar discussions pertaining to lecture and required reading materials,
2. prepare a written term paper and an oral presentation of their paper which will be reviewed by the instructor, and
3. complete written examinations on required course materials.

IX. **Evaluation of Outcomes**

There are four methods of evaluations. Students will:

1. participate in the seminar,
2. prepare and present to the class a paper of 5-7 pages on a specific natural resource issue,
3. submit weekly written analysis of at least two pages on professor directed natural resource materials, and
4) write two essay/problem examinations.