Natural Resource Economics

Course # ECON 3006

Credits 6

Prerequisites and/or Corequisites: Principles of Microeconomics or an equivalent course.

Course Description

Natural Resource Economics applies microeconomic concepts and tools to issues arising from the growth, use, depletion, and degradation of natural systems and their components, including land, energy, air, water, and biodiversity. The course explores how economic objectives can align with sustainability and environmental goals, and how markets can be harnessed to improve environmental quality and preserve natural resources. We begin with a review of microeconomic concepts related to market function and failure, then examine market-based, regulatory, and community-based approaches to achieving economic efficiency and sustainability. A significant focus is placed on the economics of climate change, covering both mitigation strategies to reduce greenhouse gas emissions and adaptation approaches to cope with climate impacts. Students will learn to apply economic analysis to evaluate real-world environmental policy problems, particularly those relevant to mountainous regions of Central Asia. The course also addresses the limitations of economic analysis in providing policy guidance on natural resource issues, especially in the context of long-term, global challenges like climate change. Throughout, we evaluate approaches in terms of efficient allocation, sustainable scale, and just distribution.

Course Learning Outcomes

Upon the completing this course, students should be able to:

- Describe the economic aspects of natural resource issues, including those relate to climate change

- Apply analytical tools (rhetorical, graphical, and mathematical) to describe the extent to which these issues constitute the failure of market systems

- Explain the difficulties arising in using economic analysis in natural resource and climate policy design

- Recognize a number of real-world environmental policy problems, particularly those in the context of mountainous regions of Central Asia and evaluate in depth solutions to such problem using economic analysis.

Course Assessment and Grading

Item	Weight
4 quizzes	30%

Midterm	30%
Final Exam	35%
Participation	5%