COURSE NAME: Natural Resource Economics

COURSE NUMBER: 11:373:362

INSTRUCTOR: Edmund Tavernier
TIME: *online*
CREDITS: 3

PREREQUISTES: 11:373:101 or 11:373:121 or 01:220:102

Course Outline

Important: Read this syllabus thoroughly and carefully. You are responsible for all the material contained therein.

Course Description:

This course will focus on some key topics in natural resource economics from a policy perspective. In particular the topics examine market and nonmarket decision making and their policy implications. The goal is to provide an understanding of the economic phenomena at play at the nexus of society and the environment, and allow students to solve allocation problems under different social objectives.

The economic tools developed are applied to renewable resources, exhaustible resources, water, pollution, marine resources, climate change, conservation planning, and other contemporary economic problems.

Learning Goals (satisfies SCL – Government & Regulatory Analysis):

The course aims to achieve the attainment of learning goals through these specific objectives. By the end of the course students will be able to:

- Evaluate resource management decision.
- Develop an understanding of the role and application of economics in natural resource management.
- Analyze resource management and their relationships to issues such as: property rights, externalities,
  market structure, and discount rates
- Apply economic principles to policy-driven markets, such as cap and trade
- Gain a basic understanding of the economic analysis tools and valuation techniques used in natural resource economics and management.

Textbook:

Environmental and Natural resources Economics: Theory, Policy and the Sustainable Society
Author: Steven C. Hackett, 4th Edition ISBN-978-0-7656-2494-9
Publisher: M. E. Sharpe

(You may be able to use the 3rd edition, but will be held **responsible** for all the possible changes)

Lecture Topics:

The following is a list of lecture topics, content areas, and the time interval they will be covered in this course.

Week I

1. Introduction:

   Fundamental concepts – opportunity cost, scarcity, production possibilities frontier
2. Values:
   Ethics, self-interest, the common good, social order, positive and normative economics
3. Markets:
   Competitive market, market demand and supply, market equilibrium and efficiency, market failure
4. Externalities:
   Positive and negative externalities, role of property rights and Pigouvian taxes in negative externalities

Week II

5. The Economics of Natural Resource Systems Part I:
   Allocation of resources – nonrenewable, recyclable, renewable, and common-pool
6. The Economics of Natural Resource Systems Part II:
   Fishery management, aquaculture
7. An Introduction to Benefit Cost Analysis:
   Benefits, costs, efficiency, present value, models for measuring benefits
8. Political Economy:
   Economic models of political economy - the regulatory process, environmental regulation

Week III

9. Compliance and Deterrence:
   Economics of crime, EPA enforcement, compliance
10. Incentive Regulation:
    Market-based regulation, cap and trade, emissions trading, pollution taxes
11. Global Climate Change:
    Greenhouse gas emissions and global climate change, economic policy instruments, policy implementation

Evaluation:

The final grade will be assessed based on the following: exams -60%; participation in online discussions – 20%; homework – 20%.

Assignments: Students will be assigned to groups to work on homework on certain assignments.

Exams: The exams will compromise of multiple-choice questions. Not studying and hoping to page through the text for answers is a sure way to failure. You will be given sufficient time to complete the exams but will not have sufficient time to page through the text.

Discussions: The discussions will proceed as follows. An article will be posted for discussion. You will be expected to summarize the article and post it on the Discussion Forum. Each student must also comment on the summary of another student. Thus, each student will be expected to have at least two postings to the forum, a summary and a comment. To ensure, however, that you receive at least 80% of your grade for the discussions you should plan on contributing 4 posts per discussion. Greater participation will be rewarded. Your postings must demonstrate a grasp of the issues under discussion.

Assessment: Students will be given a market-driven cap-and-trade policy numerical example to determine the degree to which the learning goals have been met.

Exams are not cumulative, but the content covered are very much related.

For academic integrity policy:

I would like to remind everyone that violations of the university code of academic integrity, including plagiarism and cheating, **will not** be tolerated by the department or the university. Such violations are harmful to everyone and only serve to poison the atmosphere of openness and mutual trust on which an academic department depends. If there any questions regarding the integrity code, please refer to the graduate school pamphlet dealing specifically with these matters. For more details please visit the following:

The policy statement on student conduct:
http://catalogs.rutgers.edu/generated/nb-ug_current/pg21725.html
http://catalogs.rutgers.edu/generated/nb-ug_current/pg21724.html