

RUTGERS UNIVERSITY

School of Environmental and Biological Sciences, SEBS

Department of Agricultural Food and Resource Economics, DAFRE

Semester: Fall
Course name: Natural Resource Economics
Course #: 11:373:362
Time: *Meets online*
Credits: 3
Prerequisites: 11:373:101 or 11:373:121 or 01:220:102
Professor: Dr. Edmund M. Tavernier
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Office hours: By appointment

Statement on Diversity

This course aims to satisfy the learning needs of all students from all backgrounds by providing a welcoming environment that respects a diversity of perspectives. I realize that students may need different levels of support and have structured the online course to draw from each other's strengths by embedding elements that promote interaction, collaboration, self-reflection, critical reasoning, and evidence-based respectful arguments. I celebrate diversity and believe that much is gained and the educational experience enriched by students working together. If you have a documented learning difference that may prevent you from fully realizing your abilities, please contact me as soon as possible to discuss any accommodations that may enable you to successfully complete this course. Also reach out to the Office of Disability Services at (848) 202-3111.

Course Outline

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

Course Description:

The topics in this course examine market and nonmarket decision making and their policy implications. The goal is to provide you with an understanding of the economic phenomena at play at the nexus of society and the environment and allow you 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 and 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 (**GVT 5**)

- 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-10: 0321

Publisher: M. E. Sharpe

(You may be able to use the 3rd edition, but will be held **responsible** for all the possible changes in the 4th ed.)

Lecture Topics:

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

Week I - III

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

Week IV- VI

4. Externalities:

Positive and negative externalities, role of property rights and Pigouvian taxes in negative externalities

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

Week VII - IX

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

9. Compliance and Deterrence:

Economics of crime, EPA enforcement, compliance

Week X - XV

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

12. Introduction to the concept of sustainability:

Introduction, definition, sustainable development

13. Recognizing interdependencies and thinking long term:

Discounting and policy making

Evaluation:

The final grade will be assessed based on the following: exams -60%; participation in online discussions – 20%; homework – 20%. There will be opportunities to earn a maximum of 5 extra points.

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

Exams/Quizzes: The tests compromise multiple-choice questions. You will be given sufficient time to complete the tests but will not have sufficient time to page through the text. Quizzes are not cumulative, but the content covered is very much related.

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.

Extra Points: You may be given the opportunity to gain extra points. That opportunity may come from recent events in the news or the textbook.

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

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