Economics 456: ECONOMICS OF NATURAL RESOURCES

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Lectures: T 7:00pm-9:40pm, AL-105
Office hours: T 5:00pm-7:00pm

Course Description
Natural resource economics is the field exploring how an economy uses natural resources, the raw inputs to production and amenities endowed by nature. The course will cover both non-renewable and renewable resources. Non-renewables do not grow naturally, meaning the sum of future consumption is bounded by the existing stock (e.g. coal or oil). Renewables have a biological or geological growth rate (e.g. forests or fish stocks), which presents a different problem for appropriate management. In general topics are separate from those of environment economics (ECON455), which focuses on the flow of physical waste from the economy to the environment, though some overlap is inevitable. The approach is based on the principle tools of microeconomics, including consumer and producer behavior, supply and demand, and the theory of public goods and externalities. A strong background in this material is the best preparation for the course. Students should be prepared to challenge any pre-conceptions they have about the field of economics, its view of human behavior, and how it contributes to the design of public policy.

Required text
Available from SDSU Bookstore.

Course Web Page
The class website will be available through the Blackboard server, at http://blackboard.sdsu.edu/. When you enroll in this class at SDSU, you are automatically enrolled in the class Blackboard website. Announcements, readings, and study materials will be made available through Blackboard.

Course requirements and grading
Grades for the course are based on unscheduled (roughly weekly) written exercises, a midterm exam, and a comprehensive final exam. Final grades are determined as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exercises</td>
<td>25%</td>
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<tr>
<td>Class Participation</td>
<td>5%</td>
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<tr>
<td>Exams:</td>
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<td>Midterm Tuesday, Oct 14 (in class)</td>
<td>30%</td>
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<tr>
<td>Final Tuesday, Dec. 16 (7:00pm – 9:00pm)</td>
<td>40%</td>
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100%
Exercises
Twelve (12) exercises will be assigned over the course of the semester. Most will be in the form of an in class “quiz” of material discussed in previous classes or in assigned readings. These will take approximately 5 minutes to complete. Somewhat longer exercises may be administered as “take home” assignments. Exercises are not scheduled, and may be administered at any time during any class meeting except exam days. You should expect roughly one per week. Exercises will be scored as follows:

0 points: no exercise submitted
1 point: exercise submitted, but no coherent response
2 points: partially correct response
3 points: full credit—awarded for clear and correct responses only

The lowest two scores will be dropped for a total of 30 possible points. There are no make-up exercises.

Policy on missed exercises and exams
No early or make-up exercises will be administered. The lowest two scores are dropped; the highest 10 exercise scores for each student are used to calculate a total score.

No early or make-up midterm exams will be administered. If the midterm exam is missed for any reason, the final exam may be taken for the full grading weight of both exams. The final exam is scheduled for Thursday, December 11 at 7:00pm. Please make end-of-semester plans accordingly.

Technology in class
As a courtesy to classmates, please turn off all cellphones at the start of class. Laptop computers may be used to take notes and view class materials only.

Policy on academic dishonesty
Cheating or plagiarism – any attempt to claim others’ work as your own or otherwise gain an unfair academic advantage – will be prosecuted. Cases of academic dishonesty will be immediately referred to the SDSU Center for Student Rights and Responsibilities.

Student Learning Outcomes
Upon satisfactory completion of the course, students will understand:

- The nature of demand for both market and non-market goods
- Private, external, and social cost of resource extraction and their relationship to supply
- The concepts of efficient resource use and sustainability
- The role of economics in designing and promoting natural resource public policy
- The theory and mechanics of benefit-cost analysis
- Methods for valuing non-market benefits
- The role of prices in determining the time path of non-renewable resource extraction
- Energy markets, efficiency, and conservation
- The principles of renewable resource management with biological growth
- Water markets and water rights
- The economics of biodiversity conservation