Announcements:

Natural Resource Economics
Economics 122/Env. Studies 179
http://www.econ.ucsb.edu/~deacon/econ122.htm

Robert Deacon                                                                                               Spring 2010

TA & office hrs:       Rebecca Toseland, North Hall 3053, toseland@econ.ucsb.edu
                      Office hours: Mon. 2:00-3:00 and Tues. 2:15-3:15.

Sections:             M 3:00- 3:50 387 101
                      M 4:00- 4:50 SH 1430
                      M 5:00- 5:50 SH 1430

Lectures:             TT 3:30-4:45, GIRV 1004

My office hours:      Tues., 9:00-11:00; 3040 North Hall, deacon@econ.ucsb.edu.
Exams:                Midterm: Tues. April 27 (35%)
                      Final: Thurs., June 10 4:00-7:00 (45%); review during first hour.
                      (Homework problems count for the other 20%)
                      See the lecture schedule below for times of exam review sessions.

Course Description:
We will examine the operation of markets for natural resources, including minerals, fossil fuels, forest
resources, and fisheries. We will also examine economic issues related to biodiversity and deforestation.
Natural resource abundance is determined by physical processes and a general understanding of these
processes is necessary for correct economic analysis. For this reason the study materials present biological
models for fisheries and forests and incorporate geological concepts in examining minerals. Ownership
rights to natural resources often are not clearly defined. In these cases the interests of some potential
resource users will not be reflected in market outcomes and the scramble to acquire these un-owned assets
may be wasteful. Finally, the use of natural resources is ultimately linked to the release of waste products
into the environment, so there are considerations of environmental degradation. These themes appear at
various points in the course.

Pre-requisites:
Intermediate microeconomics (Econ. 100A & B or Econ. 104A & B) is required. Two sets of concepts are
used repeatedly: welfare economics (concepts of Pareto efficiency, externalities, and property rights) and
intertemporal choice (interest rates, investment decisions, present value). These concepts will be reviewed
briefly in class and in Section II of the readings, but the time spent will be minimal. Students who
completed their intermediate microeconomics courses some time ago should review as needed.

Readings and Other Study Materials:
Readings for this course are available online, with links provided in this syllabus. It is important to read the
material for a given section of the course prior to lecture. I have prepared .pdf files with the slides I use in
lectures. Some of these give mathematical formulas, derivations, and models to be used in the course. Links
to these materials also appear in the syllabus. I recommend that you print these materials and bring them to
class to help you follow the lecture material and to assist in taking notes. These slides are considered part of
the reading material for this course and cover some topics not treated in the readings. Much of this material
will be included on exams. Please review these slides before the corresponding lecture.
**Exams, Homework Problems and Grading:**

**Exams.** Exam dates and weights used in grading are listed above. Both exams will consist of **objective questions and problems** (T/F, multiple choice, solve a problem and fill in the blank, etc.). Old exams with sample answers are available on line as study aids (links follow); unlike the exams for this quarter, these sample exams require written explanations. ([Midterm Exam Winter 2008](#), [Final Exam Winter 2008](#)). **No make-up exams will be given.** Students who miss the midterm may substitute a term paper in its place. Please see me for term paper guidelines if you choose this option.

Numerical grades will be assigned to your exams and home work problems and these correspond to letter grades. Here is the [grading scale](#) used.

**Homework problems.** Homework problems are available online ([homework problems](#)) and will be collected and graded during the quarter. These are mandatory and performance on them constitutes 20% of the course grade. Homework problems will also give you practice answering the types of questions you will find on exams. If homework problems are submitted late, 5 points (out of 20) will be deducted for each day late including weekend days. I will drop your lowest homework grade when computing your grade for the course. Here is file containing some [data for Homework problem #2](#) that will be useful.

### TOPIC OUTLINE, READINGS AND SLIDES

(Approximate schedule of lectures.)

**I. Basic Facts and Concepts**

[Introductory Slides](#)


**II. Welfare Economics, Benefit Cost Analysis and Intertemporal Choice**

[Review slides](#)


Chapters 2 and 4. ([Tietenberg Chaps 2 & 4](#))  
Note: For further depth, review relevant sections of your intermediate microeconomics text, e.g., H. Varian, *Intermediate Microeconomics*.

**III. Forest Resources**

[Forest slides](#)


IV. Fisheries

(Fisheries slides)


V. Non-renewable Resources

(NRResources slides)


VI. Biodiversity and Species Extinction

(Biodiversity Slides, Noah’s Ark)


VIII. Concluding comments

(Concluding slides)