

**Econ 332**  
**Economics of Natural Resources**  
**Fall 2008**  
**TR 2:15-3:25pm Linfield 301**

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**Required Readings:** weekly readings (links or article available via electronic syllabus <http://www.montana.edu/econ/hfretwell/index.html>).

This syllabus represents a contract between you and the instructor. Your continued enrollment in this course will be interpreted as your acceptance of this contract.

**OBJECTIVE:** Introduce students to economic tools that will help analyze natural resource use and environmental issues.

**HOMEWORK:** Problem sets and writing assignments will be handed out periodically throughout the semester. They will be analytical exercises to make you think through the ideas and models discussed in class. Problem sets will be collected at the beginning of class. **Late problem sets will not be graded**, no credit will be given for them. **Late writing assignments will lose 1 point for each day late.**

*Homework: 20% of grade*

**PARTICIPATION:** Class attendance and participation are expected. Much of this course is based on discussion and the development of ideas. Your participation is important. It is necessary for you to come to class prepared and ready to discuss the topics of the week.

*Participation: 20% of grade*

**RESEARCH PROJECT:** A research project is required. It will have four parts: 1) topic forum; 2) question development/outline; 3) class presentation; 4) research paper. You will work in groups of 3 to 5 on a specific natural resource policy question. Your research must identify a particular natural resource or environmental issue, analyze the difference between the existing and optimal outcomes, evaluate the current institutional structure, and suggest possible reforms for improvement.

*Topic Forum September 18 (5 points - 2½ paper, 2½ in class discussion)*

*Question Development Oct 23 (10 points - lose 1 point for each day late)*

*Presentations Dec 2 & 9(45 points)*

*Paper due Dec. 11 (40 points - lose 1 point for each day late)*

*Research project: 20% of grade*

**EXAMS:** There will be one mid-term exam and one comprehensive final exam. Exams will cover information from the readings and class discussion. The mid-term exam will be worth 20% of your grade, the final will make-up 20%. You are required to take both exams. **Make-up exams will not be given** without a valid excuse and **must be scheduled PRIOR to the exam date.**

*Exams: 40% of grade*

**Research Project:**

**Topic Forum (Sept 18):** A portion of one class period will be reserved for students to present potential economic questions about natural resource issues. **Every student must present at least one potential question** and turn in **one paragraph** summarizing the natural resource issue. The topic may be a local, national, or global resource problem in current or historical time. Each class member will prioritize their interest in the list of class topics. Groups will be assigned.

**Research Question (Oct. 23):** The group will pose their research project in the form of a question and outline. Each group will type a one page proposal posing the question and outlining the project. *What is the problem?*

*Who are the stakeholders? How does the current outcome diverge from the optimal outcome? What are the existing institutions?*

**Presentation (Dec 2 & 9):** Each group will present their research findings to the class. The presentations will be 10-20 minutes in length, depending upon the number in the group. *The group should pose their initial research question to the class and explain why the question is interesting. The group should define the issue; what is the optimal outcome, who is affected by it and where? The group must explain the existing institutions that manage the resource and how current behavior diverges from behavior that would produce the optimal outcome. Policy solutions should then be identified that could improve the situation noting possible limitations.* Each group member must be part of the presentation. Group members may present different sides of the issue (e.g., a role play of environmentalists and factory owners) or all may act as a single entity. Groups may also assign the audience a specific role (e.g., homeowners downwind of a factory). Be creative and make it interesting and informative

**Paper (Dec 11):** Each group will write a single paper posing their initial question and analyzing the natural resource problem and the institutions under which it is managed as defined above. *The paper must identify the particular natural resource or environmental problem, make note of the optimal outcome and analyze the institutions managing the problem and the divergence between the existing and the optimal outcome. Possible institutional reforms must be recommended that will improve resource management noting the policy limitations.* The paper should be 5 to 7 pages in length with a cover page, double spaced, stapled on the top left corner. References must be cited in a bibliography, Chicago end note style.

**Evaluation:** Project evaluation consists of 5 parts:

- 1) **Topic Forum** (5%): Every student is required to present at least one well defined natural resource problem in the form of a question during the Topic Forum (September 18) and turn in a paragraph stating the question and briefly summarizing the topic.
- 2) **Research Question** (10%): All group members will receive the same grade for the proposal (due October 23) which will be based on my evaluation of the project outline.
- 3) **Presentation** (45%): The audience – the rest of the class including myself – will assess presentations given on December 2 and 9.
- 4) **Paper** (40%): I will assess the written paper (due December 11) based on the required content, understanding of the topic, the economic analysis, and creativity and feasibility of presented solutions.
- 5) **Individual Assessment:** Each group member will be required to evaluate fellow group members. The individual assessments have the potential to raise or lower an individual's grade relative to the group grade. Hence, group member grades may differ.

***Total Research project: 20% of grade***

## Preliminary Course Outline and Assigned Readings

### Part I: Efficiency

- Week 1 2-Sep  
4-Sep **Diamond**, *Collapse*, Viking Press (2005) Chapter 1 (handout)
- Week 2 9-Sep **Hayek** "The Use of Knowledge in Society," *American Economic Review*, 35(1945):519-530  
<http://virtualschool.edu/mon/Economics/HayekUseOfKnowlege.html>  
**Tietenberg and Lewis**, *Environmental and Natural Resource Economics*, Chapter 2 (Web link)
- 11-Sep **Tietenberg** Chapter 2
- Week 3 16-Sep **Goodstein**, *Economics and the Environment*, "Chapter 8, "Measuring the Benefits of Environmental Protection," 9142-168  
18-Sep **Topic Forum**

### Part II: Institutions

- Week 4 23-Sep **Demsetz**, "Toward A Theory of Property Rights Property Rights," *American Economic Review*, 57(1967):347-359  
<http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=4493727&loginpage=Login.asp&site=ehost-live>  
25-Sep **Hardin**, "*The Tragedy of the Commons*," *Science*, 162(1968):1243-1248  
**Coase**, "The Problem of Social Cost," *Journal of Law and Economics*, 3(1960):1-44
- Week 5 30-Sep **Field**, *Natural Resource Economics*, Chapter 13 Fisheries (Web link)  
2-Oct **Fujita**, Hopkins, and Willey. "Creating Incentives to Curb Overfishing"  
*Forum for Applied Research and Public Policy*, 11(1996): 29-35.  
[http://www.environmentaldefense.org/documents/540\\_Oceans\\_Creating%20Incentives.htm](http://www.environmentaldefense.org/documents/540_Oceans_Creating%20Incentives.htm)
- Week 6 7-Oct **Deacon**, "The Simple Analytics of Forest Economics," Chapter 11  
9-Oct **Buchanan** "Politics without Romance," *Journal of Law and Economics*, 3(1960):1-44  
*The Collected Works of James Buchanan*, Liberty Fund (2001): 45-59
- Week 7 14-Oct **Anderson, Smith, and Simmons**, "How and Why to Privatize Federal Lands," *Policy Analysis*, CATO 363(1999)  
<http://www.cato.org/pubs/pas/pa363.pdf>  
**Power**, *Jon Stahl's Journal*  
<http://blogs.onenw.org/jon/archives/2003/10/21/making-sense-out-of-zero-commercial-cut-on-public-forestlands/>

### EXAM

- 16-Oct **EXAM 1**
- Week 8 21-Oct Time for Group Project  
23-Oct **Proposals Due**  
**Meiners and Yandle**, "The Common Law: How it Protects the Environment," *PERC Policy Series*, 13(1998)  
<http://www.perc.org/articles/article653.php>

### Part III: Externalities

- Week 9 28-Oct **Ostrom**, *Governing the Commons*, Cambridge University Press, (1990):1-28.  
30-Oct **Lippke et. al.**, "CORRIM: Life Cycle Environmental Performance," *Journal of Forest Products*, 54(2004):8-19
- Week 10 4-Nov Election Day - No class  
6-Nov **Friedman**, "The Power of Green," *The New York Times*, April 15, 2007  
<http://www.nytimes.com/2007/04/15/magazine/15green.t.html?ex=1334289600&en=77253fdf8f321a95&ei=5088&partner=rssnyt&emc=rss>
- Week 11 11-Nov Veteran's Day - No class  
13-Nov **Libecap**, "Contracting for the Unitization of Oil Fields" *Contracting for Property Rights*, Cambridge University Press, (1989):93-114.
- Week 12 18-Nov **Benjamin**, "Eight Great Myths of Recycling" *PERC Policy Series*, 28(2003)  
<http://www.perc.org/perc.php?subsection=6&id=179>

### Part I: Visions of Resource Use: Past, Present, and Future

- Week 12 20-Nov **Bailey**, "The Progress Explosion: Permanently Escaping the Malthusian Trap," *In Earth Report 2000* ed. Ronald Bailey. New York: McGraw-Hill, 1-21.
- Week 13 25-Nov **Norton**, "Population Growth, Economic Freedom, and the Rule of Law," *PERC Policy Series*, 24(2001)  
<http://www.perc.org/perc.php?subsection=6&id=649>
- 13 27-Nov **Thanksgiving**  
2-Dec **Presentations**  
4-Dec
- Week 14 9-Dec **Presentations**  
11-Dec **Papers Due**  
**Power and Rauber**, "The Price of Everything. *Sierra*," 78(1993): 86-96  
**Hill**, "Markets and Morality," *PERC Viewpoints*, 4(1988):1-6

- FINALS 15 19-Dec **FINAL EXAM 3-3:50 pm**