# Course outline and Reading Assignments

<table>
<thead>
<tr>
<th>Dates</th>
<th>Class Plan</th>
<th>Reading</th>
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</table>
A-1 (Fair game: Jan 11) |
| Jan 18, 23 | Summary of welfare economics, efficiency, pareto optimality.              | **Externality Debates:**  
**Haab, Tim. What is the Coase Theorem, really? Posted on Environmental Economics at: http://www.env-econ.net/2006/01/what_is_the_coa.html  
A-2 (Fair game: Jan 30) |
| Jan 25, 30 | Property rights, bundle of rights                                           | **Common Property Debates:**  
**Hardin G. The Tragedy of the Commons. Science 1968(Dec);162:1243-1248.  
**Dietz, Ostrom, Stern. The Struggle to Govern the commons. Science 12 2003(Dec);302:1907-12.  
A-3 (Fair game: Feb 15) |
| Feb 1, 6  | Classes of resources, goods, and services                                  | **What is value? (TWP, marginal, average, market prices, market value). Cow vs. Elk**  
A-4 (Fair game: Feb 22) |
A-4 (Fair game: Feb 22) |
A-5 (Fair game: Feb 27) |
| Feb 27    | Exercises in use of non-market valuation. Value of Life                     | ****  
*Review Hardin G. The Tragedy of the Commons as referenced above.  
*UN, World Population Prospects, 2010 Revision.  
A-6 (Fair game: Mar 6) |
| Feb 28, Mar 1 | Midterm Exam, Testing Center                                             | --**  
NOTE: Reading Journal for A-1 through A-6 to be turned in during class on Mar 6**h |
<table>
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<tr>
<th>Date</th>
<th>Note</th>
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<tbody>
<tr>
<td>Mar 8,13</td>
<td>Global warming, Contribution of economic analysis</td>
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</tbody>
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A-7 (Fair game: Mar 13) |
| Mar 20    | Optimal wilderness or wild lands                                      |
|           | **Loomis JB. Economic Values of Wilderness Recreation and Passive Use: What We Think We Know at the Beginning of the 21st Century. 2000  
A-8 (Fair game: Mar 20) |
*Population Video  
**Guest lecture or other.  
A-9 (Fair game: Mar 20) |
|           | Historical:  
***"The Fog” Eleven Blue Men and Other Narratives of Medical Detection. Little Brown & co. 1953 (Handout)  
A-9 (Fair game: Mar 20) |
|           | Selected examples of modern studies:  
*Ischemic heart disease events triggered by short-term exposure to fine particulate air pollution. Circulation. 2006;114:2443-2448. (Case-crossover, binary data, conditional logistic regression).  
A-10 (Fair game: Mar 29) |
|           | Exposure-response/Marginal cost of exposure:  
* Lung cancer and cardiovascular disease mortality associated with ambient air pollution and cigarette smoke: shape of the exposure-response function. EHP 2011  
**Health benefits of air pollution abatement policy: role of the shape of the concentration-response function. JAWMA 2015  
A-11 (Fair Game: April 3) |
| Apr 5,10,12 | Optimal Control Theory, allocation of depleteable natural resources  
**Individual vs Social Discount rates in Allocating Depleteable Natural Resources over time. Econ Let. 1989;29:257-264. (Handout)  
**Gollier C, Weitzman ML. How should the distant future be discounted when discount rates are uncertain? Eco Let. 2010;107:350-353. (Note for more related see: Weitzman ML. Risk-adjusted gamma discounting. JEEM 2010;60:1-13)  
A-12 (Fair game: Apr 17) |
| Apr 17    | Old Growth Forests/Economic Sources of Environmental Polarization  
NOTE: Reading Journal for A-7 through A-12 to be turned in during class on April 17th.  
A-12 (Fair game: Apr 17) |
| Apr 19    | Environmental Economics, Ethics, Stewardship                        |
| April 22  | Final Exam  
11 am – 2pm (in classroom)  
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|           | --- |
**Readings and reading journal:** You are expected to keep up on the readings and be prepared to discuss them in class. In addition, you will keep a reading journal of assigned readings. There are 12 reading assignments (A-1 through A-12) that involve 1 or more papers and/or reports. The reading journal should consist of a heading stating the assigned reading, the percentage of the reading material that you read, and the date you completed the reading. You will then present a paragraph that summarizes the reading or readings for that assignment followed by one full type-written page that briefly discusses the reading materials and provides comments and thoughts regarding the papers. For assignments with multiple papers, it is important to discuss how the papers were related and your insights gleaned from reading the papers as a group. The first half of the reading journal is due **Mar 6th** and the second half **April 17th** (see table above). A template for the reading journal is provided on BYU Learning Suite. This template has links to most of the readings. In some cases, the readings are provided as handouts also available on BYU Learning Suite.

**In-class quizzes/class reports:** In-class quizzes, test-like questions, short essays, etc. will be given often and factor heavily into your grade. In the table that outlines the class lectures and readings there are dates when quizzes on the reading material are “Fair game.” Quizzes on previous lectures are always fair game, but quizzes directly on the material in the readings will not be given until the day of or following the “fair game” date. An * indicates that I expect you to quickly read the material and understand the basics of the material and ** indicates that I expect you to have read the material carefully and will give quizzes and test questions accordingly.

**Examinations:** There will be one mid-term and a final. The midterm exam cannot be taken late. An early mid-term exam will be given for University approved travel and with prior permission from the professor. The final exam must be taken during the final exam time. No make-up, late, or late-with-fee exams.

**Student learning outcomes.** Learning outcomes for this course are attached to the back of this syllabus. Each program at BYU has developed a set of expected student learning outcomes. These will help you understand the objectives of the curriculum in the program, including this class. To learn the expected student outcomes for the programs in this department and college go to [http://learningoutcomes.byu.edu](http://learningoutcomes.byu.edu) and click on the College of Family, Home and Social Sciences and then this department. We welcome feedback on the expected student learning outcomes. Any comments or suggestions you have can be sent to FHSS@byu.edu

**Statement of the Honor Code:** BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including plagiarism, fabrication or falsification, cheating, and other academic misconduct. ([Complete version of the Academic Honesty Policy available at](http://www.byu.edu/honorcode)).

**Student Rights:** Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor; contact the Equal Employment Office at 801-422-5895 or 1-888-238-1062 (24-hours), or [http://www.ethicspoint.com](http://www.ethicspoint.com); or contact the Honor Code Office at 801-422-2847.

Brigham Young University is committed to providing a working and learning atmosphere which reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete a course successfully, please contact the Services for Students with Disabilities Office (SSD), (422-1767). Reasonable academic accommodations are reviewed for all students who have qualified documented disabilities. Services are coordinated with the student and instructor by the SSD office. If you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through the established grievance policy and procedures by: (1) contacting the Equal Opportunity Office, D-282 ASB, (801) 422-5895; (2) calling the 24/7 hotline (888) 238-1062; or (3) reporting the incident online at [www.ethicspoint.com](http://www.ethicspoint.com).
Econ 440 students will:

1. Utilize economic principles and models to address private and public policy issues related to allocating natural resources and environmental amenities

2. Demonstrate an active understanding of the following elements of economic theory as it relates to natural resource and environmental economics:
   - Welfare economics and concepts of pareto optimality, efficiency, and equity
   - The role of property, property rights, and the bundle of rights concept
   - The role of externalities, common property resources, and public goods
   - Concepts and measures of economic value including non-market valuation

3. Demonstrate a basic knowledge of the role of markets and market failure with regards to the allocation of natural resources and environmental amenities

4. Gain a basic understanding of the effects and relative merits of public environmental policy efforts, including cap-and-trade schemes, Pigovian taxes, regulation, and public ownership and/or management

5. Become knowledgeable about and be able to use economic principles and non-market valuation techniques to address a variety of continuing and contemporary natural resource and environmental issues. These issues may include, but are not exclusive to:
   - Population growth and the environment
   - Global warming
   - Wilderness protection and related public lands issues
   - Air pollution and public health
   - Intergenerational allocation of soil, forest, and other depleteable natural resources
   - Impacts of environmental features on property values