

**AEC 351: Natural Resource Economics and Policy**

<b>Instructor:</b>	Jaeho Jung Department of Applied Economics 320 Ballard Extension Hall jungjae@oregonstate.edu
<b>Final examination:</b>	Thursday, December 9 2019
<b>Online Office hours:</b>	TBA Weekly office hours will be held by Jaeho using the zoom video conferencing service ( <a href="https://is.oregonstate.edu/zoom/getting-started#computer">https://is.oregonstate.edu/zoom/getting-started#computer</a> ). You can see the details and instructions to join the meeting.
<b>Credits:</b>	3
<b>Prerequisites:</b>	MTH 111 and one of the following: AEC 250, AREC 250, ECON 201 or ECON 201H
<b>Course format:</b>	Ecampus
<b>Catalogue description:</b>	Application of principles of economics to identify the causes, consequences, and ways of dealing with natural resource problems, including problems associated with fisheries, forests, water resources, and land. Conceptual topics and policy applications. Emphasis is on developing students' skill in applying an economic way of thinking about natural resource management. (Bacc Core Course)
<b>Course description:</b>	Human wellbeing depends on natural resources. Contemporary public policy debates increasingly concern central themes of natural resource economics, including resource stewardship, sustainability, and conservation. This course introduces undergraduate students to a selection of fundamental analytical models used by economists to study natural resource use and conservation. Emphasis is placed on applying these models to analyze selected natural resource allocation problems. Natural resource policy case studies are drawn primarily from the United States. Study of these topics provides insights into economic aspects of natural resource use worldwide.

<b>Baccalaureate Core:</b>	Natural Resource Economics and Policy (AEC 351) fulfills the Contemporary Global Issues component of the Baccalaureate Core Synthesis requirement.
<b>Measurable student learning outcomes:</b>	<p>On completion of the course, students will achieve the following learning outcomes. A subset of these outcomes concern themes of the Contemporary Global Issues component of the Baccalaureate Core Synthesis requirement as they relate to society's use and conservation of natural resources:</p> <ol style="list-style-type: none"><li>1. Analyze the origins, historical contexts, and implications of contemporary global issues.</li><li>2. Explain the complex nature and interdependence of contemporary global issues using a multi-disciplinary approach.</li><li>3. Articulate in writing a critical perspective on contemporary global issues using evidence as support.</li></ol> <p>Additional learning outcomes will be measured through a student's ability to:</p> <ol style="list-style-type: none"><li>4. Use basic economic concepts to interpret natural resource allocation processes or public policies.</li><li>5. Manipulate a selection of basic analytical models of production from natural resources and understand their key theoretical predictions.</li><li>6. Demonstrate familiarity with a selection of current topics in natural resource economics and policy.</li></ol>
<b>Course materials:</b>	<p>The following textbook is <b><u>required</u></b>:</p> <p>Field, Barry C. 2016. Natural Resource Economics: An Introduction. 3rd ed. Long Grove, Illinois: Waveland Press.</p> <p>Assigned readings will be made available either through Valley Library course reserves, Canvas, or through OSU's electronic journal subscriptions.</p>
<b>Student evaluation:</b>	<p>Evaluation will be based on Participation (10%) Homework (30%), Two quizzes (worth 15% each), and a final examination (30%).</p>

<b>Participation:</b>	Students are expected to review all lectures, complete all assigned reading, and complete all assignments and tests. Active and informed participation during lecture is required.																								
<b>Homework:</b>	Homework assignments are designed to help students review concepts introduced in lecture, develop problem solving skills, and prepare for quizzes and the final examination.																								
<b>Quizzes:</b>	Quiz 1 is tentatively scheduled for week 5 (October 28 – November 1). Quiz 2 is tentatively scheduled for week 9 (November 25 – November 29). Quiz windows will be finalized and posted to Canvas.																								
<b>Final examination:</b>	The comprehensive final examination will be made available on Canvas the week of December 9 2019 (finals week)																								
<b>Quiz and homework grade policy:</b>	Each student's lowest quiz grade will be set aside, and the higher grade will be applied to the quiz portion of the overall course grade. Each student's two (2) lowest homework grades will be set aside, and the average score of the remaining homework grades will be applied to the homework portion of the overall course grade.																								
<b>Make-up tests and late assignments<sup>1</sup>:</b>	<b>Final exam:</b> Requests to take the final examination early or late will not be granted. Please contact Instructor Jaeho Jung as soon as possible through canvas if you anticipate not being able to take the final at any point during the week of December 9. <b>Quiz:</b> Requests to take a quiz early or late will similarly not be granted. The grade for a missed quiz will be recorded as a zero. <b>Assignment:</b> Late assignments will not be accepted for any reason. A zero grade will be recorded for a missed assignment. <b>Note</b> that the quiz and homework grade policy apply to missed quizzes and late or missing assignments (respectively), but not the final examination (see the policy above).																								
<b>Course grades:</b>	Overall letter grades will be awarded as follows (out of 100 possible points):  <table> <tr> <td>A :</td> <td>≥ 93.0</td> <td>B :</td> <td>83-86.9</td> <td>C :</td> <td>73-76.9</td> <td>D :</td> <td>63-66.9</td> </tr> <tr> <td>A- :</td> <td>90-92.9</td> <td>B- :</td> <td>80-82.9</td> <td>C- :</td> <td>70-72.9</td> <td>D- :</td> <td>60-62.9</td> </tr> <tr> <td>B+ :</td> <td>87-89.9</td> <td>C+ :</td> <td>77-79.9</td> <td>D+ :</td> <td>67-68.9</td> <td>F :</td> <td>≤ 60</td> </tr> </table>	A :	≥ 93.0	B :	83-86.9	C :	73-76.9	D :	63-66.9	A- :	90-92.9	B- :	80-82.9	C- :	70-72.9	D- :	60-62.9	B+ :	87-89.9	C+ :	77-79.9	D+ :	67-68.9	F :	≤ 60
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<sup>1</sup> Instructor Jaeho Jung reserves the right, but is not obligated, to modify all or part of this policy on a case-by-case the event of extraordinary circumstances.

<b>Commitment to diversity:</b>	<p>The Department of Applied Economics (AEC) is a part of Oregon State University's College of Agricultural Sciences (CAS). Both AEC and CAS are committed to inclusiveness and celebrate diversity. Diversity encompasses (while not being limited to) differences in age, physical appearance, ethnicity, national origin, gender identity, mental ability, religion, socioeconomic background, veteran status, sexual orientation, and marginalized groups<sup>2</sup>. Commitment to inclusiveness is practiced by CAS personnel through continued learning about diversity and a constant effort to exhibit awareness of diversity in research, teaching, and administration. Students in CAS courses come from a broad range of backgrounds, and our faculty, staff, and graduate teaching assistants are committed to promoting their success at the university. Professor Kling and GTA Wang invite all participants in AEC 351 to contribute to shared success by joining us in a positive learning environment, in which members mutually share respect and awareness.</p>
<b>Conduct:</b>	<p>Students are expected to follow Oregon State University's Student Conduct and Community Standards, which may be found online at: <a href="http://studentlife.oregonstate.edu/studentconduct/">http://studentlife.oregonstate.edu/studentconduct/</a></p>
<b>Selected economic concepts covered:</b>	<p>The following is a partial list of major economic concepts introduced or reviewed in this course: Bioeconomics Market power Decision making over time Opportunity cost Discounting Strategic behavior Ecosystem services Tradeable permit markets Individual firm supply aggregation Uncertainty</p>
<b>Course readings:</b>	<p>The following is a partial list of readings that will be assigned or referenced in AEC 351. Additional supplementary readings may also be added to Canvas:</p> <p>Baumeister, Christiane and Lutz Kilian. 2016. "Understanding the Decline in the Price of Oil since June 2014" <i>Journal of the Association of Environmental and Resource Economists</i> 3(1): 131- 158.</p> <p>Field, Barry C. 2016. <i>Natural Resource Economics: An Introduction</i>. 3rd ed. Long Grove, Illinois: Waveland Press. (required textbook)</p>

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<sup>2</sup> Adapted from OSU CPHSS Diversity Statement.

Fry, Matthew, Adam Briggie, and Jordan Kincaid. 2015. "Fracking and environmental (in)justice in a Texas city." *Ecological Economics* 117: 97-107.

Gorte, Ross. 2013. *The rising cost of wildfire protection*. Headwaters Economics.

Kilian, Lutz. 2016. "The impact of the shale oil revolution on US oil and gasoline prices." *Review of Environmental Economics and Policy* 10(2): 185-205.

Loomis, John, and Michelle Haefele. "Quantifying market and nonmarket benefits and costs of hydraulic fracturing in the United States: a summary of the literature." *Ecological Economics* 138 (2017): 160-167.

Maugeri, Leonardo. 2009. "Understanding oil price behavior through an analysis of a crisis." *Review of Environmental Economics and Policy* 3(2):147–166.