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AED Economics
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Email: Klaiber.16@osu.edu

TA Contact
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Office Hours: Wednesdays: 1030-1130 or by appointment.
The best way to reach me is via email. I am also available outside of posted office hours on an appointment basis. Please email me to set up additional meeting times as needed.

Course Description
This course introduces the concepts and development of Environmental and Resource Economics with applications to real world problems. Topics covered will include property rights and land use, sustainability, pollution control, nonrenewable and renewable resource management, climate change, as well as market mechanisms and market shortcomings. At the end of this course you should be able to:

- Discuss the role of economics in environmental and resource challenges
- Describe the limits of markets as mechanisms to manage environmental and resource problems
- Discuss real-world challenges and potential policy responses
- Carry-out basic analysis of economic problems applied to environment and resource issues

All students are expected to participate in class discussions and be prepared to engage in discussions of real-world problems.

Prerequisites
All students are expected to have taken at least one course in microeconomics. I will briefly review key concepts during the first portion of the course.

Helpful Textbooks

Additional readings are listed on the readings list with asterisk (*) and available on Carmen.
Reference Textbooks (not required and excerpts available on Carmen)


Grading

Grading will consist of six homework assignments, two in-class exams, a final and participation. Participation will be based on Carmen quizzes with only the 8 highest counted. There will be approximately 10 Carmen quizzes throughout the semester and each will only be available for 1 week. Each exam will contain a small number of multiple choice questions pulled from these online quizzes.

Grades are based as follows:

<table>
<thead>
<tr>
<th>Components/Number</th>
<th>Each</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Homework Assignments (6):</td>
<td>5%</td>
<td>30%</td>
</tr>
<tr>
<td>In-Class Exams (2):</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>Final Exam:</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes on Carmen:</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Total:</td>
<td></td>
<td>100%</td>
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</table>
The grading scale used for this course is:

- **A**: 93-100
- **A-**: 90-92.9
- **B+:** 87-89.9
- **B**: 83-86.9
- **B-**: 80-82.9
- **C+:** 77-79.9
- **C**: 73-76.9
- **C-**: 70-72.9
- **D+:** 67-69.9
- **D**: 60-66.9
- **F**: <60

**Homework and Exam Policy**

All homework is due at **THE BEGINNING** of class on the due date. **NO** late homework will be accepted without a verifiable excuse that is approved by me (family death, etc). I will not give makeup exams due to illness or other absence. If your absence from class is associated with an instructor approved reason I am willing to move the weight of the missed exam to the remaining exams and final. This will be done on a case by case basis.

All homework must be your own work. However, I fully expect students to work together in discussing problems so long as answers are not copied between students.

**Academic Misconduct**

Copying any part of someone else’s work (homework, quizzes, tests, exams, etc) and handing it in as your own work is academic misconduct and has serious consequences at this university. Collaboration (getting together with other students to discuss **HOW** to solve problems) is encouraged. You must do the work **on your own** and formulate your own responses.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed illustrated by, but not limited to, cases of plagiarism dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

**Disability**

Any student who feels s/he may need an accommodation based on a disability should contact the instructor during the first week of class to discuss specific needs. Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office of Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; [http://www.ods.ohio-state.edu/](http://www.ods.ohio-state.edu/).
## Course Outline (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Topics</th>
<th>Homeworks</th>
<th>Week</th>
<th>Day</th>
<th>Topic</th>
<th>Homeworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>T (8/21)</td>
<td>What is Env. and Resource Econ?</td>
<td></td>
<td>9</td>
<td>T (10/16)</td>
<td>Land Use Issues - Forests</td>
<td>HW 3 Due / HW 4 Assigned</td>
</tr>
<tr>
<td></td>
<td>H (8/23)</td>
<td>Working through a real-world problem</td>
<td></td>
<td></td>
<td>H (10/18)</td>
<td>Renewable Resources</td>
<td></td>
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<tr>
<td>2</td>
<td>T (8/28)</td>
<td>Microeconomics: Demand and Supply</td>
<td>HW 1 Assigned</td>
<td>10</td>
<td>T (10/23)</td>
<td>Exam review</td>
<td>HW4 Due</td>
</tr>
<tr>
<td>3</td>
<td>T (9/4)</td>
<td>Markt Failures</td>
<td></td>
<td>11</td>
<td>T (10/30)</td>
<td>Air Pollution - Permits</td>
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<tr>
<td></td>
<td>H (9/6)</td>
<td>Public Goods</td>
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<td></td>
<td>H (11/1)</td>
<td>Zoning</td>
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<tr>
<td>4</td>
<td>T (9/11)</td>
<td>Discounting</td>
<td>HW 1 Due</td>
<td>12</td>
<td>T (11/6)</td>
<td>Challenges: Population</td>
<td>HW 5 Assigned</td>
</tr>
<tr>
<td>5</td>
<td>T (9/18)</td>
<td>What is Efficiency?</td>
<td></td>
<td>13</td>
<td>T (11/13)</td>
<td>Challenges: Developing Countries</td>
<td>HW 5 Due</td>
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<td></td>
<td>H (9/20)</td>
<td>Non-Renewable Resources</td>
<td>HW 2 Due</td>
<td></td>
<td>H (11/15)</td>
<td>Case Study: Shale Gas</td>
<td>HW 6 Assigned</td>
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<tr>
<td>6</td>
<td>T (9/25)</td>
<td>Exam review</td>
<td></td>
<td>14</td>
<td>T (11/20)</td>
<td>Case Study: Economic Valuation</td>
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<td></td>
<td>H (9/27)</td>
<td>Exam 1</td>
<td></td>
<td></td>
<td>H (11/22)</td>
<td>No Class - Thanksgiving</td>
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<tr>
<td>7</td>
<td>T (10/2)</td>
<td>Sustainability and Recycling</td>
<td>HW 3 Assigned</td>
<td>15</td>
<td>T (11/27)</td>
<td>Case Study and Concept Review</td>
<td>HW 6 Due</td>
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<tr>
<td></td>
<td>H (10/4)</td>
<td>Water as a Resource</td>
<td></td>
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<td>H (11/29)</td>
<td>Case Study and Concept Review</td>
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<tr>
<td>8</td>
<td>T (10/9)</td>
<td>Land Use and Infrastructure</td>
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<td>16</td>
<td>T (12/4)</td>
<td>Course review</td>
<td></td>
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<td></td>
<td>H (10/11)</td>
<td>No Class - Fall Break</td>
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<td></td>
<td>FINAL</td>
<td>F (12/7)</td>
<td>Final Exam - 8am to 945am</td>
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Course Readings (subject to additions)
(* denotes a recommended reading with potential for class discussion)

Week 1: Course Introduction
*TL - Chapter 1

Week 2: Microeconomics Review
Any intro textbook to microeconomics
O'Sullivan (pp 429-432; 443-449)

Week 3: Problems with Markets
*TL - Chapter 2

Week 4: Determining Value
*TL - Chapters 3, 4

Week 5: Scarce Resources
*TL - Chapters 5, 6

Week 6: Exam 1
Exam Review and Exam

Week 7: Sustainability and Water
*TL - Chapters 7, 8, 9
Heimlich et al.
O'Connor (pp 19-29)

Week 8: Land Use
*TL - Chapter 10
*O'Sullivan (pp 226-235)
Hartshorn (pp 210-223)
Geist (pp 41-70)
Week 9: Land Use and Fisheries
*TL - Chapters 11, 12
*Ramankutty (pp 9-39)

Week 10: Exam 2
Exam Review and Exam 2

Week 11: Pollution and Hazardous Waste
*TL - Chapters 14, 15

Week 12: Emerging Challenges
*TL - Chapter 16
*O'Sullivan (pp 175-180)
*O'Sullivan (pp 196-218)
*O'Sullivan (pp 235-243)
Nechyba and Walsh

Week 13: Emerging Challenges
*Pachauri (pp 71-90)
Lambin et al.

Week 14 and 15: Case Studies
Carmen documents

Week 16: Course Review