AEDE 5330 -- Benefit-Cost Analysis– Fall 2014
Tuesday and Thursday 12:45 – 2:05 in An Sci 210

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Office Hours: Tuesdays and Thursdays 11:15 am-12:15 pm 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 covers the principles and methods used to apply cost-benefit analysis to real world problems.
Basic theory underpinning cost-benefit analysis is presented and used to analyze real-world case studies
and carry-out analysis. At the end of this course, students should be able to:

- Explain differences in benefit-cost principles and approaches
- Demonstrate the role of economics in informing policymakers and decision making
- Analyze problems using economic foundations to identify costs and benefits
- Carry out simple benefit-cost calculations and analysis

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 calculus and/or be willing to learn as we go.
In addition, at least an intermediate level understanding of Microeconomics is required. Official
prerequisites are: 4310 (531), 4001 (500), or Econ 4001 (501).

Required Textbook
Anthony Boardman, David Greenberg, Aidan Vining and David Weimer, Cost-Benefit Analysis:
Reference Textbooks (not required and excerpts available on Carmen)
Edward Elgar, 2009. (Denoted as HB on reading list)
Richard Just, Darrell Hueth and Andrew Schmitz, The Welfare Economics of Public Policy: A Practical
Eugene Silberberg and Wing Suen, The Structure of Economics: A Mathematical Analysis, McGraw-
Kenneth Train, Discrete Choice Methods with Simulation, second edition, Cambridge University Press,

Grading
Grading will consist of 4 homework assignments (4x7.5% = 30%), a team project (30%) and two in-class
exams (2x20% = 40%). There will be no final exam. The grading scale is:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93.0-100</td>
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<tr>
<td>A-</td>
<td>90.0-92.9</td>
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<tr>
<td>B+</td>
<td>86.7-89.9</td>
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<tr>
<td>B</td>
<td>83.3-86.6</td>
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<tr>
<td>B-</td>
<td>80.0-83.2</td>
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<tr>
<td>C+</td>
<td>76.7-79.9</td>
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<tr>
<td>C</td>
<td>73.3-76.6</td>
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<tr>
<td>C-</td>
<td>70.0-73.2</td>
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<tr>
<td>D+</td>
<td>66.7-69.9</td>
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<tr>
<td>D</td>
<td>60.0-66.6</td>
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<tr>
<td>F</td>
<td>&lt;60.0</td>
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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. More details on the team project will be
provided in early September.

To help students who may not be familiar with programming required for several assignments, significant
portions of the in-class lecture period will be devoted to helping develop and refine intuition and
programming abilities throughout the semester.

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>Dates</th>
<th>Main Topic</th>
<th>HW Assigned</th>
<th>HW Due</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td>28-Aug Introduction and Syllabus</td>
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<tr>
<td>2</td>
<td>2-Sep</td>
<td>4-Sep Overview of Benefit-Cost</td>
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<td>3</td>
<td>9-Sep</td>
<td>11-Sep Pareto Principles and Kaldor Hicks</td>
<td>HW 1 - 9/9/2014</td>
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<td>4</td>
<td>16-Sep</td>
<td>18-Sep Economic Welfare Measures: CV/EV/CS</td>
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<td>HW 1 - 9/18/2014</td>
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<td>5</td>
<td>23-Sep</td>
<td>25-Sep Discounting</td>
<td>HW 2 - 9/23/2014</td>
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<tr>
<td>6</td>
<td>30-Sep</td>
<td>2-Oct Existence Value</td>
<td>HW 2 - 9/30/2014</td>
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<td>7</td>
<td>7-Oct</td>
<td>9-Oct Review and Exam 1 (10/9)</td>
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<td>8</td>
<td>14-Oct</td>
<td>16-Oct Revealed Preference: Hedonics</td>
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<td>10</td>
<td>28-Oct</td>
<td>30-Oct Stated Preference and Contingent Valuation</td>
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<td>HW 3 - 10/30/2014</td>
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<tr>
<td>11</td>
<td>4-Nov</td>
<td>6-Nov Energy and Renewable Resources</td>
<td>HW 4 - 11/4/2014</td>
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<tr>
<td>12</td>
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<td>13-Nov Case Study: Water Quality and Water Access</td>
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<td>13</td>
<td>18-Nov</td>
<td>20-Nov Case Study: Habitat Protection; Exam 2 Review</td>
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<td>HW 4 - 11/18/2013</td>
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<td>14</td>
<td>25-Nov</td>
<td>--- Exam 2 (11/25)</td>
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<td>15</td>
<td>2-Dec</td>
<td>4-Dec Student Presentations</td>
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<tr>
<td>16</td>
<td>9-Dec</td>
<td>--- Student Presentations</td>
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Course Readings (subject to additions)
(* denotes a required reading with potential for class discussion)

**Week 1: Introduction and Syllabus**
*BGVW Chapter 1

**Week 2: Overview of Benefit-Cost**
*BGVW Chapter 1, 2
*Benefit-Cost Analysis in Environmental, Health, and Safety Regulation
HB Chapter 1
Silberberg Chapters 4, 10

**Week 3: Pareto Principles and Kaldor Hicks**
*BGVW Chapters 3, 4, 5
HB Chapter 2
Silberberg Chapter 19
JHS Chapter 2, 3

**Week 4: Economic Welfare Measures: CV/EV/CS**
*BGVW Appendix 3A
JHS Chapter 5.1, 5.2, 6
Silberberg 11.5

**Week 5: Discounting**
*BGVW Chapter 6, 10
HB Chapter 7

**Week 6: Existence Value**
*BGVW Chapter 9

**Week 7: Review and Exam 1**
Week 8: Revealed Preference: Hedonics
* BGVW Chapter 14
* Papers on valuing superfund
HB Chapter 5
Palmquist Handbook Chapter

Week 9: Revealed Preference: RUM Models
* Train Chapter 3
* Zebra Mussel Articles
HB Chapter 4

Week 10: Stated Preference and Contingent Valuation
* BGVW Chapter 15

Week 11: Case Study: Energy and Renewable Resources
TBA

Week 12: Case Study: Water Quality and Water Access
* Tombstone Documents
http://goldwaterinstitute.org/article/tombstone-v-united-states
HB Chapter 10

Week 13: Case Study: Habitat Protection; Exam 2 Review
* HB Chapter 11

Week 14: Exam 2 and Presentations

Week 15: Presentations
Week 16: Presentations