

University of Waterloo
Department of Economics
ECON 361, Cost Benefit Analysis & Project Evaluation
Fall 2019
Course Outline

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Lecture Hours & Location: 1:00pm – 2:20pm, Tuesdays & Thursdays, PHY145

Office Hours: Thursdays, 11:00am- 12:30pm (Other times by appointment only)

Course Description: Cost-benefit analysis provides an analytical framework for conducting economic analysis of public policy. It offers a practical and systematic approach for comparing a proposal's monetized social costs and benefits and thereby assisting governments, regulatory bodies and other agencies in their project evaluation as well as decision making. Applications of CBA is significant in analyses of infrastructure projects, environmental and safety regulations, social and educational programs, healthcare policies, use of natural resources including forests and fisheries and in many other arena.

This course will introduce students to the principles of cost benefit analysis including consideration of welfare economics, the treatment of intangibles, non-efficiency considerations, time discounting, evaluation criteria, uncertainty and risk. At the end of the term, students will not only know how to conduct a CBA, but also understand the limitations and controversies associated with it.

Course Objective:

By the end of this course, successful students will be able to:

- describe the process of CBA and the controversy and limitations associated with it;
- define key concepts leveraged in the CBA process, including:
 - willingness-to-pay,
 - opportunity cost,
 - pareto efficiency,
 - consumer and producer surplus,
 - compensating and equivalent variation, and cash discounting;

- summarize the CBA process flow and its supporting conventional steps;
- describe and assess impacts of decisions in primary and secondary markets that are efficient or inefficient within the CBA process;
- describe various approaches within the CBA process for the valuation of non-market goods;
- explain how uncertainty enters into the CBA process and how to apply the CBA process to mitigate associated risk; and

Prerequisite: ECON201, ECON221

Required Textbook

Boardman, A. Greenberg, D. Vining, A. Weimer, A. (2018). Cost Benefit Analysis: Concept and Practice (5th Edition). Cambridge University Press. A copy of the textbook is placed on reserve in the Dana Porter library

Student Evaluation

Final course grades will be assigned on the basis of performance on the individual assessments shown in the table below.

ASSESSMENT	Weighting
Assignment 1	5 %
Assignment 2	5%
Group Presentation (Present a CBA journal article)	10 %
In-class Quizzes 1,2,3 & 4 (Optional*)	2.5 x 4 =10%
Midterm Exam (Oct. 31)	20%
Final Exam	50%

Note: *Students with 80% (or higher) attendance will have the opportunity to shift the weight of one or more quizzes to the final exam.

Weekly Schedule:

Week	Module	Readings	Activities and Assignments	Due Date
Week 1	Introduction			
Week 2	Module 01: Introduction to CBA	<ul style="list-style-type: none"> Text: Chapter 1 Module 1 slides (or notes) Supporting Article 		
Week 3	Module 02: Use of Basic Tools	<ul style="list-style-type: none"> Text: Chapter 9 Module 2 slides (or notes) Case Study, P233 		
Week 4	Module 03: Efficiency (Part A) Module 04: Efficiency (Part B)	<ul style="list-style-type: none"> Text: Part A - Chapter 2 Module 3 slides (or notes) Text: Part B - Chapter 3 Module 4 slides (or notes) Supporting Article 	Quiz 1 (2.5%) on Module 1 & 2	Tuesday, September 24,
Week 5	Module 05: Primary Markets	<ul style="list-style-type: none"> Text: Chapter 5 & 6 Module 5 slides (or notes) 	Assignment 1 (5%) [Assignment 1 will be available Tuesday, Sept. 10]	Tuesday, October 1, in class
Week 6	Module 06: Secondary Markets	<ul style="list-style-type: none"> Text: Chapter 7 Module 6 slides (or notes) 	Quiz 2 (2.5%) on Module 3, 4 & 5	Thursday, October 10, during class time
<ul style="list-style-type: none"> Thanksgiving Holiday, October 14 & Reading Week, October 15 to October 18 				
Week 7	Module 07: Predicting and Monetizing Impacts Module 08: Valuation Using Observed Behaviour: Indirect Methods	<ul style="list-style-type: none"> Text: Chapter 8 Module 7 slides (or notes) Text: Chapter 15 Module 8 slides (or notes) Supporting Article 	Assignment 2 (5%) [Assignment 2 will be available Tuesday, Oct. 1];	Tuesday, October 24, In class;

Week 8	Module 08 continued		Midterm Exam on Module 1,2,3,4,5 & 6	Thursday, October 31 during class time
Week 9	Module 9: Shadow Prices From Secondary Markets	<ul style="list-style-type: none"> Text: Chapter 17 Module 9 slides (or notes) Supporting Article 	Quiz 3 (2.5%) on Module 7 & 8	Thursday, November 7 during class time
Week 10	Module 10: Risk and Uncertainty & Final CBA Step	<ul style="list-style-type: none"> Text: Chapter 10 (P.267 - P.287) Module 11 slides 		
Week 11	Student Presentation of CBA journal article		Quiz 4 (2.5%) On Module 10	Tuesday, November 19 during class time
Week 12	Student Presentation of CBA journal article			
Week 13	Review			

Our progress with the lecture materials will depend on class ability and interest.

Resources: Lecture slides and Problem sets will be posted to <http://learn.uwaterloo.ca> at 1199 -Fall2019 - ECON 361 Cost benefit Analysis & Projects Evaluation

Important Notices

- The penalty for late assignment is 10% of the assignment per day. Students submitting identical assignments will be highly penalized. **Assignments will not be accepted three days after the deadline.**
- There is no deferred or make-up midterm tests.** If you miss the test due to illness and have a valid medical documentation, then the weight of the test will be shifted to the final exam. Otherwise, a mark of zero will be given to the missed test.
- The final exam will be comprehensive. The date for the final exam is determined by the Registrar's Office. The final exam period for Fall Term 2019 is December 6 to December 21. Students are expected to be available during this time. Travel plans are not acceptable grounds for granting an alternative final examination time.
- To maintain a classroom environment that is conducive to learning, I expect the highest level of courtesy and professional behavior from every student. In particular, be punctual and **turn off all audible ringers on phones and other electronic devices during class.**

Additional Information:

1. Missing the Final Exam Due to Illness

- Missing the final exam is a very serious matter which automatically results in a zero mark for the exam itself and possibly a failing mark for the course. Read the department policy on deferred final exams <https://uwaterloo.ca/economics/current-undergraduates/policies-and-resources/deferred-final-exam-policy>
- No deferred final exam will be provided for students who missed all the exams (including the final exam) in this course.

2. Submissions of Exam Papers

- Late submission of exam papers is not accepted and missed submission will receive zero marks for whatever reason.
- Exam papers must be submitted in whole and on time in the exam room. Exam papers (a) not submitted on time or (b) submitted with missing pages or (c) submitted elsewhere or (e) not received at all will receive zero marks for whatever reason.

3. Fee-Arranged Issues

Students are responsible for administrative matters concerning their course registration including fee arrangements. No make-up work or remedies will be given for losses of access to LEARN and academic consequences arising from administrative issues with the Registrar's Office.

4. Classroom Protocols

- Turn off all handheld devices and put them away for the duration of the lecture. Laptop computers may only be used to view lecture material. Off-task use (e.g., Facebook, texting, other) will result in your device being confiscated for the class and/or being asked to leave the classroom for all or part of the class or course.
- Photographic devices are not permitted in class due to copyright and privacy issues.
- In order to maintain a learning environment in this classroom, the highest level of courtesy and professional behaviour is expected from every student.

University Statements

1. Cross-Listed Courses

Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

2. Academic Integrity

Academic Integrity: In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred,

disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 – Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm>

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 – Student Petitions and Grievances, Section 4, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 – Student Petitions and Grievances (other than regarding a petition) or Policy 71 – Student Discipline if a ground for an appeal can be established. Read Policy 72 – Student Appeals, <http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>

Academic Integrity website (Arts):

http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Academic Integrity Office (University): <http://uwaterloo.ca/academicintegrity/>

3. Accommodation for Students with Disabilities:

The AccessAbility Services (AS) Office, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS Office at the beginning of each academic term.

Mental Health Support

All of us need a support system. The faculty and staff in Arts encourage students to seek out mental health supports if they are needed.

On Campus

- Counselling Services: counselling.services@uwaterloo.ca / 519-888-4567 ext 32655
- **MATES:** one-to-one peer support program offered by Federation of Students (FEDS) and Counselling Services
- Health Services Emergency service: located across the creek from Student Life Centre

Off campus, 24/7

- **Good2Talk:** Free confidential help line for post-secondary students. Phone: 1-866-925-5454
- Grand River Hospital: Emergency care for mental health crisis. Phone: 519-749-433 ext. 6880
- **Here 24/7:** Mental Health and Crisis Service Team. Phone: 1-844-437-3247
- **OK2BME:** set of support services for lesbian, gay, bisexual, transgender or questioning teens in Waterloo. Phone: 519-884-0000 extension 213

Full details can be found online at the Faculty of ARTS [website](#)

Download [UWaterloo and regional mental health resources \(PDF\)](#)

Download the [WatSafe](#) app to your phone to quickly access mental health support information

Territorial Acknowledgement

We acknowledge that we are living and working on the traditional territory of the Attawandaron (also known as Neutral), Anishinaabeg and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land promised to the Six Nations that includes six miles on each side of the Grand River.