

Syllabus - COURSE SCHEDULE

Important: **ALL TIMES EASTERN** - Please see the [University Policies](#) section of your Syllabus for details.

Week	Module	Readings	Activities and Assignments	Due Date
Week 1	Module 01: Introduction	<ol style="list-style-type: none"> 1. Text: Chapter 1 2. Module Enrichment 3. Supporting Articles 	Introduce Yourself to Your Team (ungraded)	Friday, January 15, 2016 at 11:59 PM
	Module 02: The CBA Modeling Process		Quiz 1 (2.5%)	Available Friday, January 15, 2016 at 12:01 AM until Friday, January 22, 2016 at 11:59 PM
Week 2	Module 03: Use of Basic Tools	<ol style="list-style-type: none"> 1. Text: Chapter 6 2. Module Enrichment 3. Discussion Article 		
Week 3	Module 04: Efficiency (Part A)	<ol style="list-style-type: none"> 1. Text: Part A - Chapter 2 2. Module Enrichment 3. Supporting Article 	Group Discussion 1 (Group Discussions are worth a total of 10% of your final grade)	The discussion will be available from Friday, January 15, 2016 at 7:00 AM to Friday, January 22, 2016 at 11:59 PM
Week 4	Module 04: Efficiency (Part B)	<ol style="list-style-type: none"> 1. Text: Part B - Chapter 3 2. Module Enrichment 3. Supporting Article 	Quiz 2 (2.5%)	Available Friday, January 29, 2016 at 12:01 AM until Friday, February 5, 2016 at 11:59 PM
Week 5	Module 05: Primary Markets	<ol style="list-style-type: none"> 1. Text: Chapter 4 2. Module Enrichment 3. Supporting Article 	Assignment 1 (10%) Problem Set available Monday, January 18, 2016	Friday, February 5, 2016 at 11:59 PM

Week 6	Module 06: Secondary Markets	<ol style="list-style-type: none"> 1. Text: Chapter 5 2. Module Enrichment 3. Discussion Article 	Group Discussion 2	The discussion will be available from Friday, February 5, 2016 at 7:00 AM to Friday, February 12, 2016 at 11:59 PM
			One Minute Summary 1 (0.5% bonus)	This optional activity will be available from Monday, February 8, 2016 at 7:00 AM to Friday, February 12, 2016 by 11:59 PM

READING WEEK (Sunday, February 14, 2016 to Saturday, February 20, 2016)

Week 7	Module 07: Predicting and Monetizing Impacts	<ol style="list-style-type: none"> 1. Text: Chapter 11 2. Module Enrichment 3. Supporting Article 	Quiz 3 (2.5%)	Available Friday, February 26, 2016 at 12:01 AM until Friday, March 4, 2016 at 11:59 PM
Week 8	Module 08: Valuation Using Observed Behaviour: Indirect Methods	<ol style="list-style-type: none"> 1. Text: Chapter 14 2. Module Enrichment 3. Supporting Article 	Assignment 2 (10%) Written Paper	Friday, March 4, 2016 at 11:59 PM
Week 9	Module 09: Valuation Using Observed Behaviour: Application of Indirect Methods	<ol style="list-style-type: none"> 1. Text: Chapter 14 2. Module Enrichment 3. Discussion Article 	Group Discussion 3	The discussion will be available from Friday, March 4, 2016 at 7:00 AM to Friday, March 11, 2016 at 11:59 PM
Week 10	Module 10: Shadow Prices From Secondary Markets	<ol style="list-style-type: none"> 1. Text: Chapter 16 2. Module Enrichment 3. Supporting Article 	Assignment 3 (10%) Problem Set <i>available Friday, March 4, 2016</i>	Friday, March 18, 2016 at 11:59 PM
Week 11	Module 11: Valuation	<ol style="list-style-type: none"> 1. Text: Chapter 12 pp. 292-307 (start at 	Quiz 4 (2.5%)	Available Thursday, March 24, 2016 at 12:01

	Using Pilot Projects	<p>CBAs of Experiments and Quasi-Experiments and stop at Choosing Prediction Parameters)</p> <p>2. Module Enrichment</p> <p>3. Supporting Article</p>		AM until Friday, April 1, 2016 at 11:59 PM
Week 12	Module 12: Risk and Uncertainty & Final CBA Step	<p>1. Text: Chapter 7 pp. 167-187 (stop at Information and Quasi-Option Value)</p> <p>2. Module Enrichment</p> <p>3. Discussion Article</p>	Group Discussion 4	The discussion will be available from Thursday, March 24, 2016 at 7:00 AM to Friday, April 1, 2016 at 11:59 PM
			One Minute Summary 2 (0.5% bonus)	This optional activity will be available from Monday, March 28, 2016 at 7:00 AM to Friday, April 1, 2016 by 11:59 PM
			Participation Self-Assessment	The self-assessment will be available from Thursday, March 24, 2016 at 7:00 AM to Friday, April 1, 2016 at 11:59 PM
Final Examination			Final Exam (50%)	

Final Examination Arrangements and Schedule

Please carefully review the information about [final examinations for online courses](#), including dates, locations, how to make examination arrangements, writing with a proctor, and deadlines.

If you are taking **any on-campus courses**, you will automatically be scheduled to write your exam on campus. No action is required.

If you are taking **only online courses**, do one of the following:

- » If your **address in QUEST is within 100 km** of an [examination centre](#), you must choose an exam centre in [Quest](#) by **Sunday, January 17, 2016**. This must be done each term.

» If your address in Quest is **more than 100 km from an exam centre, you must arrange for a proctor.** Please review the guidelines and deadlines for [writing with a proctor](#). This must be done each term.

Your online course exam schedule will be available in Quest approximately four weeks before your exam date(s). Instructions on how to find your schedule are posted on the [Quest Help](#) page.

University of Waterloo Senate-approved [examination regulations and related matters](#) can be found on the Registrar's website.

Official Grades and Course Access

Official Grades and Academic Standings are available through [Quest](#).

Your access to this course will continue for the duration of the current term. You will not have access to this course once the next term begins.

Syllabus - CONTACT INFORMATION

News

Your instructor uses the **News** widget of the **Course Home** page to make announcements during the term to communicate new or changing information regarding due dates, instructor absence, etc., as needed. Students are required to check the **News** every week.

To ensure you are viewing the complete list of news items, you may need to click **Show All News Items**.

Discussions

A **General Discussion** topic* has also been made available to allow students to communicate with peers in the course. This discussion is intended for communication between students and is not typically monitored by the instructor. Information regarding assigned discussions can be found in the Activities and Assignments pages of the Syllabus.

Contact Us

Who and Why	Contact Details
<p>Instructor</p> <ul style="list-style-type: none"> » Course-related questions (e.g., course content, deadlines, assignments, etc.) » Questions of a personal nature 	<p>Questions of a personal nature can be directed to your instructor.</p> <p>Instructor: Zara Liaqat zliaqat@uwaterloo.ca</p> <p>Your instructor checks email frequently and will make every effort to reply to your questions within 24–48 hours, Monday to Friday. Please check the News section regularly.</p>
<p>Technical Support, Centre for Extended Learning</p> <ul style="list-style-type: none"> » Technical problems with Waterloo LEARN 	<p>learnhelp@uwaterloo.ca</p> <p>Include your full name, WatIAM user ID, student number, and course name and number.</p>
<p>Learner Support Services, Centre for Extended Learning</p> <ul style="list-style-type: none"> » General inquiries » WatCards (Student ID Cards) » Examination information 	<p>Useful Information for Students in Online Courses</p> <p>extendedlearning@uwaterloo.ca +1 519-888-4002</p> <p>Include your full name, WatIAM user ID, student number, and course name</p>

and number.

*Discussion topics can be accessed by clicking **Connect** and then **Discussions** on the course navigation bar above.

Syllabus- COURSE DESCRIPTION AND OBJECTIVES

Course Description

The objective of this course is to provide a greater understanding of how economic concepts can facilitate the decision making process within both the private and public sector. The course will leverage various micro-economic concepts and introduce new concepts to form the foundation for critical decision making. Cost benefit analysis (CBA) uses economic knowledge in a practical way, applying the theory and processes to real-life problems. The intent of this course is to equip the student with analytical, economic theory and supporting processes which can be leveraged when facing strategic business or government policy decisions – in order to provide decision makers direction on what should be done. This course is also intended to raise awareness to the often controversial issues and criticisms surrounding the CBA process and/or CBA results.

Course Objectives

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
- » analytically review a CBA or CBA journal article and provide an assessment of the corresponding CBA strengths and weaknesses with supporting justification.

This online course was developed by Wendy Roth and Derek Picard, with instructional design and multimedia development support provided by the Centre for Extended Learning.



Syllabus - ABOUT THE COURSE INSTRUCTOR AND AUTHORS

Course Instructor - Zara Liaquat

Zara Liaquat is a sessional lecturer in the Department of Economics at the University of Waterloo. She holds a Master of Arts, Economics, and a Doctor of Philosophy, Economics, from the University of Southern California, USA. She also holds a Bachelor of Science, Honours Economics (Dean's Honours List) from the Lahore University of Management Sciences, Pakistan.



Zara has a broad experience as an instructor of economics. Her teaching portfolio encompasses a wide range of courses including Introductory Macroeconomics, Introduction to International Economics, International Finance, and Economic Development Modeling and Empirical Applications. She considers student learning and engagement in the course as essential constituents of her teaching philosophy. During her experience of simultaneously being a teaching assistant and a student of economics, she fostered the idea that the best way to learn economics is to relate the economic models and theories to the actual functioning of the economy.

Zara's current research and expertise are in the fields of international, labour and development economics. Her Ph.D. dissertation revisits the link between productivity and trade liberalization, and investigates the effect of trade reforms on firm productivity. Her future research goals involve continuing to develop her work on trade liberalization and labour market outcomes as well as conducting policy-oriented research in other areas of the broadly defined discipline of development economics.

Course Author - Wendy Roth

Ms. Wendy Roth is a professional consultant, dividing her time between academic, research, and corporate endeavors. She has extensive experience as an educator in a wide range of economic topics. Her teaching portfolio includes Introductory Micro and Macroeconomics, Cost Benefit Analysis, and the Economics of Education. She also actively tutors all levels of math at the primary and secondary school levels. Her education philosophy is one that focuses on learning and applying economic theoretical concepts — in a practical manner. Ms. Roth's research efforts concentrate on the application of economic theory in education funding decision making, education policy, and education in developing nations. From a corporate perspective, Ms. Roth has served over 25 corporate accounts across a wide spectrum of industry verticals, focusing on program/project management; including cost benefit analysis and operational efficiency.



Ms. Roth is currently pursuing her Doctor of Philosophy (PhD), Educational Administration, Education Policy, from the Ontario Institute for Studies and Education (OISE) at the University of Toronto, on a part-time basis. She holds a

Master of Arts, Economics, from the University of Toronto and a Master of Education, Administration and Policy, from the Ontario Institute for Studies and Education (OISE) at the University of Toronto. She also holds a Bachelor of Arts, Honours Economics (Dean's Honours List) and a Bachelor of Mathematics, Co-Operative Program from the University of Waterloo.

Course Author - Derek Picard

Derek Picard is a professional consultant specializing in the application and measurement of economic concepts for decision makers in both the public and private sectors. He applies the fundamental principles of economics to issues faced by corporate leaders, government agencies, and industry associations. Mr. Picard holds a graduate degree in economics and an undergraduate degree in econometrics from the University of Waterloo. He is also an Alumni Access Advisory Member at the UW's Research and Technology Park.

Mr. Picard's research has focused on the impact of organizational decisions such as capital investments, policy, and design.



Syllabus - MATERIALS AND RESOURCES

Textbooks, Course Reserves, and Resources

Textbooks

Required

- » Boardman, A. Greenberg, D. Vining, A. Weimer, A. (2010). *Cost Benefit Analysis: Concept and Practice (4th Edition)*. Prentice Hall.

Note: This text is also available electronically at a reduced cost from CourseSmart. For more information, please see [CourseSmart](#).

Recommended

- » McCloskey, Deirdre N. (2000). *Economical Writing (2nd Edition)*. Waveland Press Inc. ISBN = 1-57766-063-3

Note: The optional text is a short, light read on how to effectively communicate economic concepts and ideas to any audience. This text will equip you with tips and tricks that are easy to understand and implement. A critical component to any CBA is effective communications, and as such, I highly suggest this text book as a reference for this course (and for your future economic writing adventures).

For textbook ordering information, please contact the [Waterloo Bookstore](#).

For your convenience, you can compile a list of required and optional course materials through [BookLook](#) using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519 888 4673 or toll-free at +1 866 330 7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

Course Reserves

Course Reserves can be accessed using the **Library Resources** widget on the **Course Home** page.

Resources

- » [Library services for co-op students on work term and distance education students](#)

Syllabus - GRADE BREAKDOWN

Grade Breakdown

Activities and Assignments	Weight (%)
Introduce Yourself to Your Team	Ungraded
Group Discussion Activity	10%
Assignment 1 (Problem Set 1)	10%
Assignment 2 (Written Paper)	10%
Assignment 3 (Problem Set 2)	10%
Quizzes (4 x 2.5%)	10%
Final Exam	50%
One Minute Summaries (x2)	1% bonus (0.5% per summary)

Students will be given the opportunity to secure up to a one bonus mark during the term. This can be attained through two One Minute Summaries, which give you the opportunity to provide feedback about the course and to ask questions about the material. A half mark will be granted for each One Minute Summary that complies with the grading scheme.

Syllabus - COURSE POLICIES

Late Policy

Late assignments will be penalized at 10% per day, with the exception of documented medical illness. **Assignments will not be accepted five (5) days after the due date.** Assignment Dropboxes will close 5 days after the due date.

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Syllabus - UNIVERSITY POLICIES

Submission Times

Please be aware that the University of Waterloo is located in the **Eastern Time Zone** (GMT or UTC-5 during standard time and UTC-4 during daylight saving time) and, as such, the time that your activities and/or assignments are due is based on this zone. If you are outside the Eastern Time Zone and require assistance with converting your time, please try the [Ontario, Canada Time Converter](#).

Accommodation Due to Illness

If your instructor has provided specific procedures for you to follow if you miss assignment due dates, term tests, or a final examination, adhere to those instructions. Otherwise:

Missed Assignments/Tests/Quizzes

Contact the instructor as soon as you realize there will be a problem, and preferably within 48 hours, but no more than 72 hours, have a medical practitioner complete a [Verification of Illness Form](#).

Email a scanned copy of the Verification of Illness Form to your instructor. In your email to the instructor, provide your name, student ID number, and exactly what course activity you missed.

Further information regarding Management of Requests for Accommodation Due to Illness can be found on the [Accommodation due to illness](#) page.

Missed Final Examinations

If you are unable to write a final examination due to illness, seek medical treatment and have a medical practitioner complete a [Verification of Illness Form](#). Email a scanned copy to the Centre for Extended Learning (CEL) at extendedlearning@uwaterloo.ca within 48 hours of your missed exam. Make sure you include your name, student ID number, and the exam(s) missed. You will be **REQUIRED** to hand in the original completed form before you write the make-up examination.

After your completed Verification of Illness Form has been received and processed, you will be emailed your alternate exam date and time. This can take up to 2 business days. If you are within **150 km** of Waterloo you should be prepared to write in Waterloo on the [additional CEL exam dates](#). If you live outside the 150 km radius, CEL will work with you to make suitable arrangements.

Further information about [Examination Accommodation Due to Illness](#) regulations is available in the Undergraduate Calendar.

Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. **If you have not already completed the online**

tutorial regarding academic integrity you should do so as soon as possible. Undergraduate students should see the [Academic Integrity Tutorial](#) and graduate students should see the [Graduate Students and Academic Integrity](#) website.

Proper citations are part of academic integrity. Citations in CEL course materials usually follow CEL style, which is based on APA style. Your course may follow a different style. If you are uncertain which style to use for an assignment, please confirm with your instructor or TA.

For further information on academic integrity, please visit the [Office of Academic Integrity](#).

Discipline

A student is expected to know what constitutes [academic integrity](#) to avoid committing an academic offence, 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 instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

Appeals

A decision made or penalty imposed under [Policy 70 - Student Petitions and Grievances](#), (other than a petition) or [Policy 71 - Student Discipline](#), may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

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. When in doubt please be certain to contact the department’s administrative assistant who will provide further assistance.

Final Grades

In accordance with [Policy 19 - Access To and Release of Student Information](#), the Centre for Extended Learning does not release final examination grades or final course grades to students. Students must go to [Quest](#) to see all final grades. Any grades posted in Waterloo LEARN are unofficial.

AccessAbility Services

[AccessAbility Services](#), located in Needles Hall, 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 accommodation to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term and for each course.

Accessibility Statement

The Centre for Extended Learning strives to meet the needs of all our online learners. Our ongoing efforts to become aligned with the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) are guided by [University of Waterloo AccessAbility Services Policy](#) and the [World Wide Web Consortium's \(W3C\) Web Content Accessibility Guidelines \(WCAG\) 2.0](#). The majority of our online courses are currently delivered via the Desire2Learn Learning Environment. Learn more about [Desire2Learn's Accessibility Standards Compliance](#).

Use of Computing and Network Resources

Please see the [Guidelines on Use of Waterloo Computing and Network Resources](#).

Copyright Information

UWaterloo's Web Pages

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Other Sources

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If there are any questions about this notice, please contact the University of Waterloo, Centre for Extended Learning, Waterloo, Ontario, Canada, N2L 3G1 or extendedlearning@uwaterloo.ca.