

# Advanced Microeconomics II: Welfare Economics

## Course Details

Course Code:	ECO603M / Advanced Microeconomics II: Welfare Economics
Prerequisite:	ECO503M
Faculty:	Justin Raymond S. Eloriaga
Term/Time/Room:	Term 3 AY 2019-20 / T 1800-2100 (G01) / Full Online

## Course Description

ECO603M is the second of a two-course Intermediate Microeconomic Theory sequence. This course is designed to formalize and extend the basic concepts of Microeconomic analysis that students were introduced to in their basic Microeconomics course. It concentrates on partial equilibrium analysis of price determination in the market for goods under perfectly competitive markets and imperfectly competitive markets (monopoly, oligopoly and monopolistic competition) and their welfare implications, the process by which a competitive market reaches general equilibrium, the efficiency and welfare implications of a competitive model of market interdependence at general equilibrium, and the limits to optimal market allocation (market failures) due to externalities and public goods. At the intermediate level, the course will provide a more theoretical treatment of these topics that the students have been exposed to in previous basic principles of economics courses.

Similar to the approach in ECO503M, the teaching approach in ECO603M puts emphasis on honing the student's problem-solving skills such as the ability to apply abstract theoretical concepts to simple numerical examples and extract relevant relationships from complex economic systems. Just as in ECO503M, the analysis in this course will involve the use of three modes of inquiry: rigorous use of verbal reasoning and mathematical modeling and graphical modeling. The mathematical approach involves calculus, optimization, and solution of simultaneous equations. While this formalism is essential for a modern treatment of microeconomics, the presentations in class will also emphasize graphical techniques, especially for the building of intuition. Chapter 2 of Nicholson and Snyder (2017), the Mathematical Appendix of Varian (2014), and the Mathematical Appendix of Besanko and Braeutigam (2013) sufficiently provide the mathematical tools and techniques required for this course.

## OBJECTIVES/VALUES

The overall goal of this course is to complete the students' knowledge of the building blocks of modern microeconomic theory by introducing and working with models that were not discussed in ECO503M. In particular, this course is intended to:

1. Provide the students with the analytical framework for evaluating the relationship between market structure, equilibrium, and efficiency.
2. Introduce and explain the concept of general equilibrium in perfectly competitive markets and how it differs from the notion of partial equilibrium that was previously discussed in ECO503M.
3. Introduce and explain the concept of externalities, how private market-based decision making fails to yield efficient outcomes from a general welfare perspective, and how government intervention and regulation can correct for the effects of such externalities.
4. Prepare students for more advanced courses in economics such as Public Finance, Labor Economics, Development Economics, Economics of Information, Financial Economics, Managerial Economics, International Economics / International Trade and Finance, and Industrial Organization where students are expected to have a firm grasp of intermediate microeconomic concepts and theories.
5. Enhance students' problem-solving, critical thinking, and analytical skills by using verbal reasoning, graphs, and mathematics to evaluate economic problems and issues.

## LEARNING OUTCOMES

School of Economics Expected Lasallian Graduate Attributes (ELGAs)	Learning Outcomes
Intellectually Inquisitive	<p>LO1: Identify, describe, and compare various imperfectly competitive market structures, how they are organized, how firms strategically compete in such markets, the process by which these markets reaches partial equilibrium and the partial equilibrium outcomes of these markets, at the mathematical and intuitive levels.</p> <p>LO2: Describe the process by which a perfectly competitive market reaches general equilibrium, the nature of general equilibrium outcomes, and why these outcomes are efficient, at the mathematical and intuitive levels.</p> <p>LO3: Identify and describe the necessary conditions for efficiency and the various reasons why the equilibrium outcomes in imperfectly competitive markets are inefficient while the perfectly competitive general equilibrium outcomes are efficient.</p> <p>LO4: Identify and describe some forms of market externalities and their implications on welfare.</p>
Technically proficient	<p>LO5: Generate the equilibrium outcomes for various market structures and investigate their welfare properties.</p> <p>LO6: Assess when it is appropriate for government to regulate certain markets and identify some possible regulatory approaches.</p> <p>LO7: Design government regulation and assess its impact on welfare.</p>
Agent of positive social change	<p>LO8: Apply microeconomic theory to analyze and critically evaluate the welfare effects of government intervention in various markets through economic policy.</p> <p>LO9: Exhibit willingness to determine and contribute to desirable social outcomes.</p>
Globally Competitive	<p>LO10: Develop capacity to be open to objective and constructive feedback from supervisors and peers.</p> <p>LO11: Develop a capacity for and willingness to engage in self-reflection.</p> <p>LO12: Develop willingness to navigate difficult social situations, diffuse conflict, and engage positively in purposeful debate.</p>

In the process of learning the economic way of thinking, the students are expected to improve their analytical skills, ability to solve problems, and the quality of decision-making. These skills will be tremendously useful to students in future courses in economics and in the job market. Finally, students should be able to express their analyses and appraisals in written form.

Learning Outcome	Student Assessment Methods
LO1: Identify, describe, and compare various imperfectly competitive market structures, how they are organized, how firms strategically compete in such markets, the process by which these markets reaches partial equilibrium and the partial equilibrium outcomes of these markets, at the mathematical and intuitive levels.	Problem Set 1 Problem Set 2
LO2: Describe the process by which a perfectly competitive market reaches general equilibrium, the nature of general equilibrium outcomes, and why these outcomes are efficient, at the mathematical and intuitive levels.	Problem Set 3
LO3: Identify and describe the necessary conditions for efficiency and the various reasons why the equilibrium outcomes in imperfectly competitive markets are inefficient while the perfectly competitive general equilibrium outcomes are efficient.	Problem Set 1 Problem Set 2 Problem Set 3
LO4: Identify and describe some forms of market externalities and their implications on welfare.	Problem Set 1 Problem Set 2 Problem Set 3
LO5: Generate the equilibrium outcomes for various market structures and investigate their welfare properties.	Problem Set 1 Problem Set 2 Problem Set 3
LO6: Assess when it is appropriate for government to regulate certain markets and identify some possible regulatory approaches.	Problem Set 1 Problem Set 2 Problem Set 3
LO7: Design government regulation and assess its impact on welfare.	Problem Set 1 Problem Set 2 Problem Set 3
LO8: Apply microeconomic theory to analyze and critically evaluate the welfare effects of government intervention in various markets through economic policy.	Problem Set 1 Problem Set 2 Problem Set 3
LO9: Exhibit willingness to determine and contribute to desirable social outcomes.	Problem Set 1 Problem Set 3
LO10: Develop capacity to be open to objective and constructive feedback from supervisors and peers.	Problem Set 1 Problem Set 2 Problem Set 3
LO11: Develop a capacity for and willingness to engage in self-reflection.	Problem Set 1 Problem Set 2 Problem Set 3
LO12: Develop willingness to navigate difficult social situations, diffuse conflict, and engage positively in purposeful debate.	Problem Set 1 Problem Set 2 Problem Set 3

LEARNING PLAN:

Learning Outcome	Week	Topic	Learning Activities
		Mathematical Review	Reading assignment (Fourth Hour): Besanko and Braeutigam Mathematical Appendix (pp. 729–758) Nicholson and Snyder, Chapter 2 (pp. 21-58) Varian, Mathematical Appendix
		Models of Imperfect Competition	
LO1 LO3 LO5 LO7 LO8 LO9 LO10 LO11 LO12	1	Models of Monopoly	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Lecture Notes: Monopoly Perloff, Chs. 11(11.1-11.6) and 12 (12.1-12.5) Besanko and Braeutigam, Chs. 11 (11.1-11.6) and 12 (12.1-12.4) Varian Chs. 25, 26 (26.1 to 26.6)
	2	Models of Monopoly	Short Quiz 1 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Lecture Notes: Monopoly Perloff, Chs. 11 (11.1-11.6) and 12 (12.1-12.5) Besanko and Braeutigam, Chs. 11 (11.1-11.6) and 12 (12.1-12.4) Varian Chs. 25, 26 (26.1 to 26.6) Oral presentation of Assignment 1
	3	Models of Monopoly	Short Quiz 2 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Lecture Notes: Monopoly Perloff, Chs. 11 (11.1-11.6) and 12 (12.1-12.5) Besanko and Braeutigam, Chs. 11 (11.1-11.6) and 12 (12.1-12.4) Varian Chs. 25, 26 (26.1 to 26.6)
	4	Models of Monopoly	Short Quiz 3 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Lecture Notes: Monopoly Perloff, Chs. 11 (11.1-11.6) and 12 (12.1-12.5) Besanko and Braeutigam, Chs. 11 (11.1-11.6) and 12 (12.1-12.4) Varian Chs. 25, 26 (26.1 to 26.6) Oral presentation of Assignment 2
	5	Models of Oligopoly	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2

			Lecture Notes: Oligopoly Perloff, Ch. 14 (14.1-14.5) Besanko and Braeutigam, Ch. 13 (13.1-13.4, Ch. 13 Appendix) Varian Ch. 28
LO1 LO3 LO5 LO7 LO8 LO9 LO10 LO11 LO12	6	Models of Oligopoly	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Lecture Notes: Oligopoly Perloff, Ch. 14 (14.1-14.5) Besanko and Braeutigam, Ch. 13 (13.1-13.4, Ch. 13 Appendix) Varian Ch. 28 Coverage: Models of Monopoly
		MIDTERM EXAM 1	
	7	No Classes (EDSA Revolution Anniversary) Models of Oligopoly	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Lecture Notes: Oligopoly Perloff, Chapter 14 (14.1-14.5) Besanko and Braeutigam, Ch. 13 (13.1-13.4, Ch. 13 Appendix) Varian Ch. 28
	8	Monopolistic Competition	Short Quiz 6 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Lecture Notes: Monopolistic Competition Perloff, Ch. 14 (14.6) Besanko and Braeutigam, Ch. 13 (13.5) Varian, Ch. 26 (26.7) Oral presentation of Answers to Assignment 5
		Competitive General Equilibrium and the Efficiency of Competitive Markets	
LO1 LO2 LO3 LO4 LO5 LO6 LO7 LO8 LO9 LO10 LO11	9	Competitive General Equilibrium	Short Quiz 7 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes: General Equilibrium – Perfect Competition Perloff Ch. 10 (10.1-10.4) Besanko and Braeutigam, Ch. 16 (16.1-16.4) Varian, Chs. 32, 33

LO12	10	Competitive General Equilibrium	Short Quiz 8 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes: General Equilibrium – Perfect Competition Perloff Ch. 10 (10.1-10.4) Besanko and Braeutigam, Ch. 16 (16.1-16.4) Varian, Chs. 32, 33 Coverage: Models of Oligopoly
	11	Competitive General Equilibrium	Oral presentation of Answers to Assignment 5 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes: General Equilibrium – Perfect Competition Perloff Ch. 10 (10.1-10.4) Besanko and Braeutigam, Ch. 16 (16.1-16.4) Varian, Chs. 32, 33 Short Quiz 9
	12	Limits of the Market: Externalities	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes: General Equilibrium – Limits to Competitive Markets Perloff Ch. 17 (17.1-17.4) Besanko and Braeutigam, Ch. 17 (17.1-17.2) Varian, Ch. 35 Short Quiz 10
	13	Limits of the Market: Externalities	Oral presentation of Answers to Assignment 6 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes: General Equilibrium – Limits to Competitive Markets Perloff Ch. 17 (17.1-17.4) Besanko and Braeutigam, Ch. 17 (17.1-17.2) Varian, Ch. 35
LO1-LO6; LO8-LO9	14	Submission of Problem Set 3	Coverage: Monopolistic Competition, Competitive General Equilibrium, Limits of the Market
		Grade Consultation Day	

## ASSESSMENT/EVALUATION:

In order to pass this course the student must achieve an overall mark of 2.0. The details of each assessment item are shown below.

Student Assessment Items	Due Date*	Weighting	Learning Outcomes
Problem Set 1	Week 6*	33%	LO1, LO3, LO5, LO8, LO9, LO10
Problem Set 2	Week 10*	33%	LO1, LO3, LO5, LO8, LO9, LO10
Problem Set 3	Week 14*	34%	LO1, LO2 LO3, LO4, LO5, LO6, LO8, LO9, LO10

Grading Scheme	
96 - 100.0	4.0
90 - 95.99	3.5
84 - 89.99	3.0
78 - 83.99	2.5
72 - 77.99	2.0
66 - 71.99	1.5
60 - 65.99	1.0
Below 60	0.0

#### Assessment Item – Problem Sets

Students will be given assignments that tackle the application of the concepts and techniques that are currently being discussed in class or to be discussed soon. Students are expected to have read the appropriate references before tackling each assignment. The references for each assignment are shown in the Schedule of Assignments (second to the last page of the syllabus).

These assignments are a group effort (maximum of 2 students per group) and thus there should only be one set of solutions per group. You can always drop your group mate from any assignment if you believe that he/she did not make any substantial contribution to the assignment. You can also change your group mate for any succeeding assignments. You are not allowed to consult with nor be consulted by your classmates from other groups. A FINAL GRADE OF 0.0 WILL BE GIVEN TO THE STUDENTS WHOSE REPORTS ARE PROVEN TO BE COPIES (IN FULL OR IN PART) OF EACH OTHER.

Be sure to show the theoretical justification or basis for your answer to each question in this assignment. You should start each answer with a brief discussion of the basis for your answer. The basis is usually an economic concept, a definition, or a set of conditions that provides the framework for your answer. Do not just turn in mathematical expressions and numbers! No explanation and basis, No credit.

Your answers should be word processed (MSWord or Pages or LaTeX) on A4-size document with 1 inch margin all around. You can generate equations using the application MathType. MathType is available when you use Google Docs in your Google Drive (install from Add-ons). Graphs can be generated using Mathematica, MSWord or MExcel. NO SECTION OF YOUR UPLOADED ASSIGNMENT MAY BE IN THE FORM OF SCANNED IMAGES WITH THE EXCEPTION OF THE PLEDGE OF ACADEMIC HONESTY. Submissions with handwritten or scanned answers (in part or full) will not be given any credit.

Type, sign and date the Pledge of Academic Honesty (as shown in the Schedule of Assignments) and make it the cover page of your report. Students who fail to sign the Pledge at the time of submission of the report will not be given credit for the assignment.

A hard copy of your assignment should be submitted in class on the due date (see the Schedule of Assignments). This will be collected at the beginning of the class. Submissions after the first 5 minutes of the start of the class will not be accepted nor given credit. Any student may be asked to present and discuss his/her group's solutions in class. The schedule of oral presentation of answers to the assignments is given in the Learning Plan.

Direct any inquiry about an assignment to my teaching assistant.

#### LEARNING RESOURCES:

Lecture Notes in Microeconomic Theory II – Angelo A. Unite, Ph.D

Articles: Aldaba, R., *Assessing Competition in Philippine Markets*, Philippine Institute for Development Studies Discussion Paper Series No. 2008-23, September 2008.

Aldaba, R., *The Impact of Market Reforms on Competition, Structure and Performance of the Philippine Economy*, Paper presented at the “Workshop on Policies to Strengthen Productivity in the Philippines” sponsored by the Asia-Europe Meeting (ASEM) Trust Fund, Asian Institute of Management Policy Center, Foreign Investment Advisory Service, Philippine Institute for Development Studies and the World Bank, held in AIM Policy Center, Makati City, 27 July 2005.

*Competition Reforms in the Philippines: Exploring Options in Bus Transport*, CUTS CREW Policy Options Note, CUTS International, India.

*Competition Reforms in the Philippines: Exploring Options in Rice*, CUTS CREW Policy Options Note, CUTS International, India

Medalla, E., *Understanding the New Philippine Competition Act*, Philippine Institute for Development Studies Discussion Paper Series No. 2017-14, April 2017.

OECD (2016), *OECD Investment Policy Reviews: Philippines 2016*, OECD Investment Policy Reviews, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264254510-en>

Patalinghug, E., W. Manuela Jr., R. Manzano-Lizares, and J. Patalinghug, *Assessment of the Structure, Conduct, and Performance of the Philippine Telecommunications Industry*, paper presented at the International Conference on the “Challenges to Development: Innovation and Change in Regulation and Competition”, Manila, Philippines, October 2003.

Patalinghug, E., *An Analysis of the Philippine Electric Power Industry*, College of Business Administration, University of the Philippines Working Paper, October 2003

Philippine Competition Commission, *The Philippine Competition Act: A Primer*.

Tanchuco, J., *Cost Structure and Implications for Power Sector Reforms*, DLSU-AKI Working Paper Series 2008-04, March 2008.

Villamejor-Mendoza, M., *Competition in Electricity Markets: The Case of the Philippines*, Paper presented at the Asia-Pacific Economic Cooperation (APEC)-International Development Research Centre (IDRC) Conference on Competition Policy Issues on Services Sector held in Lima, Peru on August 17, 2008.

Required: Besanko, D. and R. Braeutigam, *Microeconomics*, 5th Edition, NJ: John Wiley & Sons, Inc., 2013.

Perloff, J., *Microeconomics – Theory and Applications with Calculus*, 4<sup>th</sup> Edition, England: Pearson Education Limited, 2017.

Varian, H., *Intermediate Microeconomics with Calculus*, First Edition, New York: W. W. Norton & Company, Inc., 2014.

Supplementary: Nicholson, W. and C. Snyder, *Microeconomic Theory: Basic Principles and Extensions*, 12th Edition, Boston, MA: Cengage Learning, 2017.

Perloff, J., *Microeconomics*, 7<sup>th</sup> Edition, MA: Pearson Education, Inc., 2015.

**CONTACT AND CONSULTATION HOURS:**



Contact: [justin.eloriaga@dlsu.edu.ph](mailto:justin.eloriaga@dlsu.edu.ph)

Office: L223 (Mezzanine)

Consultation hours: By appointment. It is best that the student sets up an appointment at least one day ahead.

Noted by:

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Department Chair

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Dean