

De La Salle University
Graduate School of Economics
Course Syllabus

Course Code: ECO503M / Advanced Microeconomics
Prerequisite: None
Prerequisite to: None
Faculty: Justin Raymond S. Eloriaga
Term/Time/Room: Term 1 AY 2020-2021 / S 13:00 – 16:00 / Full Online (GX1)

COURSE DESCRIPTION:

ECO503M is a formal introduction to Microeconomics for the Master in Applied Economics program. It concentrates on the theories of consumer decision-making, production and costs, and the partial equilibrium competitive model. At the advanced level, the course will provide a more theoretical and mathematical approach to understanding cornerstone economic principles such as the underpinnings of utility maximization, cost minimization, profit maximization, and partial equilibrium.

Learning Microeconomic Theory requires systematic study in order to master its logic and structure. The analysis will necessarily be mathematical, involving 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. In summary, our analytic approach to Microeconomics is one that uses three modes of inquiry: rigorous use of verbal reasoning and mathematical and graphical modeling.

Calculus is used extensively in this course since the modern approach to economics is indisputably mathematical. There is no fundamental difference between the mathematical approach and non-mathematical approaches. However, the mathematical approach is clearer and more precise inasmuch as we need to state clearly our assumptions before using the language of mathematics and building economic models. The lectures will assume, in particular, familiarity with the material on differentiation of functions of any form, both constrained and unconstrained optimization, and the methodology of comparative statics using calculus. Chapter 2 of Nicholson and Snyder (2012), the Calculus Appendix of Perloff (2014) and the Mathematical Appendix of Besanko and Braeutigam (2010) sufficiently provide the mathematical tools and techniques required for this course.

OBJECTIVES/VALUES:

The overall goal of this course is to build on the students' basic knowledge of the motives that determine consumer and firm behavior in greater detail through an analytic approach that use intuition, logic and mathematics. In particular, this course is intended to:

1. Provide students with the structure and underlying assumptions of the standard models used in microeconomic analysis.
2. Equip students with the basic terminology, tools, and intuition that are essential to the analysis and prediction of the behavior of economic agents in different institutional environments.
3. Enable students to accurately and intuitively communicate economics in oral and written forms.
4. Prepare students for more advanced courses in economics such as Public Finance, Labor Economics, Development Economics, 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
<i>Intellectually Inquisitive</i>	<p>LO1: State and prove the fundamental properties of consumer behavior in modern microeconomic theory.</p> <p>LO2: State and prove the fundamental properties of producer behavior in modern microeconomic theory.</p> <p>LO3: Identify and understand the implications of the assumptions that are necessary for a market to be perfectly competitive.</p> <p>LO4: Identify the economic factors that influence the number and size of firms in a perfectly competitive market.</p>
<i>Technically proficient</i>	<p>LO5: Construct, describe, and modify utility representations of an individual consumer's preferences.</p> <p>LO6: Solve the consumer optimization problems and then assess how changes in the economic agent's environment affect such solutions.</p> <p>LO7: Construct, describe, and modify production and cost functions.</p> <p>LO8: Solve the producer optimization problems and then assess how changes in the economic agent's environment affect such solutions.</p> <p>LO9: Compare and differentiate the short-run and long-run partial equilibrium outcomes in perfectly competitive markets, and assess how changes in market conditions affect these outcomes.</p>
<i>Agent of positive social change</i>	<p>LO10: Apply microeconomic models or concepts to analyze real-world problems facing consumers and producers.</p> <p>LO11: Solve and assess the welfare effects of economic policy.</p>
<i>Globally competitive</i>	<p>LO12: Explain intuitively the standard models used in microeconomic analysis.</p> <p>LO13: Develop initiative, strong work ethics and prioritization of workload.</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: State and prove the fundamental properties of consumer behavior in modern microeconomic theory.	<p>Questions in Assignments 1 and 2</p> <p>Midterm Examination</p> <p>Final Examination</p>

LO2: State and prove the fundamental properties of producer behavior in modern microeconomic theory.	Questions in Assignment 2 Final Examination
LO3: Identify and understand the implications of the assumptions that are necessary for a market to be perfectly competitive.	Questions in Assignment 2 Final Examination
LO4: Identify the economic factors that influence the number and size of firms in a perfectly competitive market.	Questions in Assignment 2 Final Examination
LO5: Construct, describe, and modify utility representations of an individual consumer's preferences.	Questions in Assignment 1 Midterm Examination
LO6: Solve the consumer optimization problems and then assess how changes in the economic agent's environment affect such solutions.	Questions in Assignments 1 and 2 Midterm Examination Final Examination
LO7: Construct, describe, and modify production and cost functions.	Questions in Assignment 2 Final Examination
LO8: Solve the producer optimization problems and then assess how changes in the economic agent's environment affect such solutions.	Questions in Assignment 2 Final Examination
LO9: Compare and differentiate the short-run and long-run partial equilibrium outcomes in perfectly competitive markets, and assess how changes in market conditions affect these outcomes.	Questions in Assignment 2 Final Examination
LO10: Apply microeconomic models or concepts to analyze real-world problems facing consumers and producers.	Questions in Assignments 1 and 2 Midterm Examination Final Examination
LO11: Solve and assess the welfare effects of economic policy.	Questions in Assignments 1 and 2 Midterm Examination Final Examination
LO12: Explain intuitively the standard models used in microeconomic analysis.	Assignments 1 and 2
LO13: Develop initiative, strong work ethics and prioritization of workload.	Assignments 1 and 2 Midterm Examination Final Examination

LEARNING PLAN:

Learning Outcome	Week	Topic	Learning Activities
		Mathematical Review	Reading assignment (Fourth Hour): Nicholson and Snyder, Chs. 1, 2 (pp. 21-63) Besanko and Braeutigam, Mathematical Appendix (pp. 729-748)
	1	Introduction	
		Theory of Consumer Behavior	
LO1 LO2 LO5	1	Preferences and Utility	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Varian, Chs. 3, 4 Nicholson and Snyder, Ch. 3 Besanko and Braeutigam, Ch. 3
LO1 LO2 LO6 LO10 LO12 LO13	2	Utility Maximization, Choice, and Demand	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Varian, Chs. 2, 5, 6 Nicholson and Snyder, Ch. 4 Besanko and Braeutigam, Ch. 4
LO6	3	Income and Substitution Effects	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Varian, Ch. 8 Nicholson and Snyder, Ch. 4 Besanko and Braeutigam, Ch. 4 Nicholson and Snyder, Ch. 5
LO10 LO12 LO13	4	Demand Relationships among Goods	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Nicholson and Snyder, Ch. 6 Besanko and Braeutigam, Ch. 5

	5	Demand Relationships among Goods Measurement of Welfare and Consumer Surplus	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Nicholson and Snyder, Ch. 6 Besanko and Braeutigam, Ch.5 Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 1 Assignment 1 Lecture Notes Section I Varian, Ch. 14 (14.1 to 14.9) Nicholson and Snyder, Ch. 6 Besanko and Braeutigam, Ch.5 Dumagan and Mount (1997) Manalo-Macua (2007) Sakai et al. (2017)
LO5 LO6 LO7 LO10 LO11 LO12 LO13	6	<i>Midterm Examination</i>	
		Theory of the Firm	
LO7	7	Production Functions	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Assignment 2 Lecture Notes Section II Varian, Ch. 19 Nicholson and Snyder, Ch. 9 Besanko and Braeutigam, Ch.6
LO7 LO10 LO12 LO13	8	Production Functions	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Assignment 2 Lecture Notes Section II Varian, Chs. 21, 22 Nicholson and Snyder, Ch. 10 Besanko and Braeutigam, Ch. 7, 8
LO8	9	Cost Functions	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Assignment 2 Lecture Notes Section II Varian, Chs. 21, 22 Nicholson and Snyder, Ch. 10 Besanko and Braeutigam, Ch. 7, 8

LO2 LO6 LO7 LO8 LO10 LO11 LO13	10	Cost Functions	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 2 Assignment 2 Lecture Notes Section II Varian, Chs. 21, 22 Nicholson and Snyder, Ch. 10 Besanko and Braeutigam, Ch. 7 and 8
		Competitive Markets: The Partial Equilibrium Competitive Model	
LO3 LO4 LO9 LO10 LO12 LO13	11	Partial Equilibrium Competitive Model	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Assignment 2 Lecture Notes Section III Varian, Chs. 23, 24, 20 Nicholson and Snyder, Chs. 11, 12 Besanko and Braeutigam, Ch. 9
LO10 LO12 LO13	12	Partial Equilibrium Competitive Model	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Assignment 2 Lecture Notes Section III Varian, Chs. 23, 24, 20 Nicholson and Snyder, Chs. 11, 12 Besanko and Braeutigam, Ch. 9
	13	Partial Equilibrium Competitive Model	Lecture, Recitation, Discussion (In-class) Workout of assigned problems, Reading assignment (Fourth Hour): Problem Set 3 Lecture Notes Section III Varian, Chs. 23, 24, 20 Nicholson and Snyder, Ch. 11, 12 Besanko and Braeutigam, Ch. 9
LO3 LO4 LO6 LO7 LO8 LO9 LO10 LO11 LO13	14	<i>Final Examination</i>	
		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
1. Assignments			
Assignment 1	Week 5	25%	LO1, LO5, LO10, LO12, LO13
Assignment 2	Week 13	25%	LO1, LO5, LO6, LO10, LO11, LO12, LO13
2. Examinations			
Midterm Examination	Week 6	25%	LO1, LO5, LO6, LO7, LO10, LO11, LO13
Final Examination	Week 14	25%	LO3, LO4, LO6, LO7, LO8, LO9, LO10, LO11, LO13

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 1 – Assignments

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 (last two pages of this 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 or Letter size document with 1 inch margin all around. You can generate equations using the application *MathType* or you may use Microsoft Word's built-in equation editor as well. Graphs can be generated using *Mathematica, MSWord or MSeXcel*. *Your answers shall be submitted in PDF file format.*

A hard copy of your assignment should be submitted in class on the due date (see the Schedule of Assignments on the last page of the syllabus). 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.

Assessment Item 2 – Examinations

Students must answer a midterm and a final examination.

Each exam will include problems like those in the assignments and the practice problem sets and will emphasize your problem solving and communication skills. Therefore, an excellent preparation for the examinations is to solve the relevant practice problem sets.

Practice Problem Sets: Students will be provided with five topical Practice Problem Sets to supplement the lecture on the topics up for discussion. These problem sets will require skills in algebra and calculus as well as some graphing skills. Learning-By-Doing is an important part of the learning the materials in this course. The crucial test of your understanding is solving problems. Because you will only develop a firm grasp of the subject matter by solving problems, you should do as many problems as you can. Some of the problems are relatively easy, while others will require considerable thought. The more difficult problems are worth the effort since they ensure your mastery of Microeconomics. Do not get discouraged if you get stuck on a problem. This is to be expected. Problems will become easier if you stick to it. Consult the relevant part of the required textbooks or your lecture notes. You will see that if you read the material properly, you will know how to solve most of the problems you meet. Although it is not required that the solutions to these problems be submitted, you are expected to have answered them prior to the relevant lectures as they will form the basis of professor-student interaction during the lectures. Solving these problem sets will improve your comprehension of the lecture material and performance on the exams and ensure success in the course. *Do not just focus on the numerical solution when answering each question in the problem sets. Your overall solution must include a brief discussion of the economic basis and the basic steps associated with arriving at the solution.* The more problems you do the easier you will find the exams. This does not mean, however, that you should memorize answers. Obviously, it is not a good idea to wait until a few days before the exam; rather you should begin working on the solutions to the relevant problem sets so that you can effectively prepare for the examinations.

Be sure to show the theoretical justification or basis for your answer to each question in any examination. You should start each answer with 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.

A make-up for any missed midterm exam will be given provided that the student submits documentation indicating that his/her absence is officially approved by the University.

Academic Honesty: Students are expected to know and abide by the University's Guidelines on Academic Honesty that can be found at <https://www.dlsu.edu.ph/wp-content/uploads/pdf/osa/student-handbook.pdf>.

LEARNING RESOURCES:

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

Practice Problem Sets: Problem Set 1 – Consumer Theory
 Problem Set 2 – Theory of the Firm
 Problem Set 3 – Partial Equilibrium Competitive Market

Articles:

Austria, M. and J. Pagaduan, Assessing the impact of the Philippine sin tax reform Law on the demand for cigarettes, DLSU-AKI Working Paper Series 2018-03-051, March 2018.

Ballesteros, M., The dynamics of housing demand in the Philippines: Income and lifecycle effects, Philippine Institute for Development Studies Research Paper Series No. 2002-01.

Dumagan, J. and T. Mount, 1997, Approximating compensated income from ordinary demand functions, *Economics Letters* 55, 191-201.

Koirala, K., A. Mishra, and S. Mohanty, Determinants of rice productivity and technical efficiency in the Philippines, Paper presented at the Southern Agricultural Economics Association (SAEA) Annual Meeting, Dallas, TX, February 1-4, 2014.

Manalo-Macua, W., 2007, Distributional implications of power sector reforms in the Philippines, *The Philippine Review of Economics* 44(1), 65-97.

Rufino, C., 2006, Estimating the degree Cost functions of the Philippines public and private Higher education institutions, *Asia Pacific Education Review* 7(1), 1-9.

Sakai, Y., J. Estudillo, N. Fuwa, Y. Higuchi, and Y. Sawada, 2017, Do natural disasters affect the poor disproportionately? Price change and welfare impact in the aftermath of typhoon Milenyo in the rural Philippines, *World Development* 94, 16-26.

Yorobe, J. and C. Quicoy, 2006, Economic impact of Bt corn in the Philippines, *The Philippine Agricultural Scientist* 89(3), 258-267.

Textbooks:

Required: Besanko, D. and R. Braeutigam, Microeconomics, 5th Edition, NJ: John Wiley & Sons, Inc., 2013.
 Nicholson, W. and C. Snyder, Microeconomic Theory: Basic Principles and Extensions, 12th Edition, Boston, MA: Cengage Learning, 2017.
 Varian, H., Intermediate Microeconomics with Calculus, First Edition, New York: W. W. Norton & Company, Inc., 2014.

Supplementary: Perloff, J., Microeconomics, 6th Edition, MA: Addison–Wesley, 2012.

All course materials including my lecture notes, reference materials, problem sets, assignments, and the syllabus through your CANVAS account or through the group GDrive. You must regularly open your CANVAS account to ensure that you receive my intermittent course-related announcements and reminders.

CONTACT AND CONSULTATION HOURS:

Contact: justin.loriaga@dlsu.edu.ph
 Office: L223 (Mezzanine)
 Consultation hours: H (18:30 – 19:30)
 By appointment. It is best that the student sets up an appointment at least one day ahead.

SCHEDULE OF ASSIGNMENTS:

Assignment Number	Topics Covered	References
<u>ASSIGNMENT 1</u> <i>Week 6 – Or Otherwise Stated</i>	- Utility Functions - Indifference Curves - Marginal Rate of Substitution - Budget Line - Optimization - Marshallian Demand Functions	- Lecture Notes: Theory of Consumer Behavior Parts 1 to 2 - Nicholson and Snyder: Ch. 3 - Perloff: Chs. 2.2, 3 - Besanko and Brauetigam: Chs. 2, 3
	- Indirect Utility Function - Roy’s Identity - Expenditure Minimization - Hicksian Demand Functions	- Lecture Notes: Theory of Consumer Behavior Parts 2 to 3.5 - Nicholson and Snyder: Chs. 4, 5 - Perloff: Ch. 4

	<ul style="list-style-type: none"> - Shephard's Lemma, Properties of Marshallian Demand Functions (i.e. homogeneity, income and substitution effects, etc.) - The Slutsky Equation 	<ul style="list-style-type: none"> - Besanko and Brauetigam: Chs. 4, 5, Appendix of Ch. 8
	<ul style="list-style-type: none"> - Marshallian and Compensated Demand Elasticities - Elasticity-based Properties of Marshallian Demand Functions (Homogeneity, Engel Aggregation, Cournot Aggregation) - Welfare Change and Consumer Surplus (Compensating Variation, Equivalent Variation, Change in Marshallian Consumer Surplus) 	<ul style="list-style-type: none"> - Lecture Notes: Theory of Consumer Behavior Parts 3.5 to 4 - Nicholson and Snyder: Chs. 5, 6 - Perloff: Chs. 2.5, 5 - Besanko and Brauetigam: Chs. 2, 5
ASSIGNMENT 2		
<i>Week 13 – Or Otherwise Stated</i>	<ul style="list-style-type: none"> - Production Functions - Isoquants - Marginal Rate of Technical Substitution - Returns to Scale - Elasticity of Substitution 	<ul style="list-style-type: none"> - Lecture Notes: Theory of the Firm Part 1 - Nicholson and Snyder: Ch. 9 - Perloff: Ch. 6 - Besanko and Brauetigam: Ch. 6
	<ul style="list-style-type: none"> - Cost Functions - Cost Minimization - Conditional Demand for Inputs and Shepard's Lemma - Short-Run and Long-Run Analysis 	<ul style="list-style-type: none"> - Lecture Notes: Theory of the Firm Part 2 - Nicholson and Snyder: Ch. 10 - Perloff: Ch. 7 - Besanko and Brauetigam: Chs. 7, 8
	<ul style="list-style-type: none"> - Perfect Competition - Supply Functions, Equilibrium - Short-Run and Long-Run Analysis - Profit Function - Unconditional Demand for Inputs - Profit Maximization 	<ul style="list-style-type: none"> - Lecture Notes: Partial Equilibrium Competitive Market - Lecture Notes: Perfect Competition, Profit Maximization - Nicholson and Snyder: Chs. 11, 12 - Perloff: Chs. 2.2, 8 - Besanko and Brauetigam: Ch. 9

WORKLOAD ALLOCATION

Time Spent in Class	3 hours per week × 13 weeks	39 hours
Time Allocated for Course Readings and Personal Study	1 hour per week × 13 weeks	13 hours
Time Allocated preparing for the Midterm Examination	1.5 hours per week × 6 weeks	9 hours
Time Allocated preparing for the Final Examination	1.5 hours per week × 6 weeks	9 hours
Time Allocated answering Problem Sets and Exercises	3.5 hours per week × 13 weeks	47 hours
Total Hours for the Course		~117 hours

Noted by:

Dr. Arlene B. Inocencio
 Department Chair

Dr. Marites M. Tiongco
 Dean