

**INTERAMERICAN UNIVERSITY OF PUERTO RICO
METROPOLITAN CAMPUS
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES
SCHOOL OF MANAGEMENT
DOCTORAL PROGRAM**

I. TITLE	MICROECONOMIC THEORY
COURSE	BADM 7220
CREDITS	3
PREREQUISITES	NONE

II. COURSE DESCRIPTION

Theoretical and empirical analysis of consumer behavior, the enterprise and industry in the framework of a free enterprise economy. Aspects such as the following will be analyzed: production theory, production costs, and different marketing structures. Emphasis on empirical evidence derived from the theories discussed.

III. OBJECTIVES

1. TERMINAL AND CAPACITATING OBJECTIVES

- 1.0 To discuss advanced topics on modern microeconomics theory.
 - 1.1 To explain the following concepts: opportunity costs, rational choice, individual preferences, scarcity, and marginal.
 - 1.2 To compare the theory of the interaction of firms I markets, general equilibrium and welfare economics, the basis tools of game theory and the economics of inflation.

- 2.0 .To apply the economic concepts and their empirical applications.
 - 2.1 To explain various theoretical assumptions in translating the theory of individual behavior into aggregate analysis.
 - 2.2 To discuss the partial equilibrium in a particular market and the strengths and weaknesses of market economy

- 3.0 To explain the use of calculus and other mathematical tools to analyze microeconomic decision-making
 - 3.1 To discuss why various theoretical representations of the consumer and producers possess certain mathematical properties
 - 3.2 To apply those mathematical properties I empirical models

IV. CONTENT

A. INTRODUCTION: DEMAND, SUPPLY, MARKET EQUILIBRIUM AND ELASTICITY OF DEMAND

1. Sub - Topic: Consumer' Behavior

- a demand supply an Market equilibrium
- b. Elasticity of Demand
- c The theory of Consumer Behavior
 - 1) Utility Maximization and Choice
 - 2) The Lagrangian Multiplier
 - 3) income and Substitution Effects
 - 4) Hicksian Analysis and Slutsky Equation
- d. Consumer' Surplus

B. PRODUCER BEHAVIOR AND COSTS OF PRODUCTION

1. Sub - Topic: Producer's Behavior

- a. Marginal Productivity
 - 1) The Production Function
 - 2) Cobb-Douglas Production Function
 - 3) The Law of Diminishing Marginal Productivity
- b. Isoquant and Iso-cost Analysis
 - 1) Profit Maximization
- c. The Lagrangian Multiplier Once More
- d. The Marginal Rate of Substitution
- e. Long-Run Expansion Path
- f. Returns to Scale
- g. Empirical Applications Of Cobb-Douglas Production function
 - 1) Solow's Growth Model

2. Sub - Topic: Costs of Production

- a. Definition of Total and Average Costs
- b. Economic Costs: The Concept of Opportunity Costs
 - 1). Explicit Versus Implicit Costs
- c. Economic Profits and Cost minimization
- d. Cost-Minimizing Input Choices
- e. Mathematical and Graphical Analysis of Costs

- f. Integration of Cost and production Analysis
 - 1) Profit Function and Maximization
- g. Costs in the Long run
 - 1) Envelope Curves
 - 2) Economic of Scale

C. MARKET STRUCTURES

1. Sub -Topic: Firms in Perfectly competitive Markets

- a. Profit Maximization Rules
- b. Derivation of Supply Curves
- c. Conditions to Keep Operating, Operating with Losses or Closing the firm.
- d. Long-Run Competitive Equilibrium

2. Sub – Topic: Firms with Market Powers

- a. Monopoly
 - 1) Conditions for Profit Maximization
 - 2) Measures of Market Power
 - Elasticity of Demand
 - Lerner’s Index
- b. Oligopoly: Decision Making with Mutual Interdependence
 - 1) Common and Differing Characteristics of Oligopoly
 - 2) The Problem with Oligopoly Demand
 - 3) Game Theory: Strategic Interactions in Oligopoly markets
 - The Prisoner’s Dilemma
 - The Advertising’s Dilemma
 - Nash ‘s Equilibrium

D. GENERAL EQUILIBRIUM AND WELFARE

- 1. Edgeworth’s Diagram
- 2. General Equilibrium Modeling and factors Prices
- 3. Walras Law

V. ACTIVITIES

- a. Presentation in Power Point of Results of Paper Assigned**

VI.

We expect this to be a small class and the success of the course depends on everyone involved. We expect students to come to class prepared to discuss the reading material and to contribute to class discussions. One of the objectives of the course is to promote the students' ability to apply and manipulate economic theory. Another objective of the course is to improve the students' ability to communicate their ideas and analysis. Consequently, each student will be required to write a term paper on a micro theory topic related to the course. Students will be expected to attempt some original contribution in the paper. This may mean an extension of some existing model, or it may mean the application of a model in one field to a problem in a different field. Students will also be required to present their completed paper to the rest of the class.

A mid-term test will be used to examine students' grasp of micro theory fundamentals. The final exam will test students' understanding of the applications and articles we cover in the later part of the course. The final will be comprehensive in nature.

Mid-term exam ----- 25%

Term paper-----50%

Final Exam----- 25%

Grades

The following maximum grading scale is guaranteed:

90 - 100% = A

80 - 89% = B

70 - 79% = C

60 - 69% = D

Below 60% = F

VII. RESOURCES

Walter Nicholson., (2005) *Microeconomics Theory: Basic Principles and Extensions*, Ninth Edition Thomson South-Western (knowledge of differential calculus is required)

Other Recommended Texts

S. Charles Maurice and Christopher R. Thomas., *Managerial Economics*, 8th Edition, MacGraw-Hill 2004.

READINGS BY TOPICS ASSIGNED

A. Topics and Readings

INTRODUCTION: DEMAND, SUPPLY, MARKET EQUILIBRIUM AND ELASTICITY OF DEMAND

Readings¹

- * Edwin Mansfield and Gary Yohe, *Microeconomics*, chapter **1-2 and 5**
- *Walter Nicholson., *Microeconomics Theory: Basic Principles and Extensions*, Chapters 1 and 2.
- * Maurice and Thomas, *Managerial Economics*, chapters 2 and 3.
- * Angel L. Ruiz, "Class Notes on Demand, Supply, Market Equilibrium, and Elasticity of Demand", 2006 (handout).

CONSUMER BEHAVIOR

Readings

- *Walter Nicholson., *Microeconomics Theory: Basic Principles and Extensions*, chapters 3-6
- * Edwin Mansfield and Gary Yohe, *Microeconomics*, Chapters 3-4,
- * Angel L. Ruiz, "Class Notes on the Theory of Consumer Behavior", **2006** (handout).
- *Maurice and Thomas, *Managerial Economics*, chapter 6.

PRODUCER BEHAVIOR AND COSTS OF PRODUCTION

Readings

- *Walter Nicholson, *Microeconomics Theory: Basic Principles and Extensions*, chapters 7-9
- * Edwin Mansfield and Gary Yohe., *Microeconomics*, Chapters 7 and 8
- *Maurice and Thomas, *Managerial Economics*, chapters 9-10
- * Angel L. Ruiz, "Class Notes on the Theory Production ", 1999 (handout).
- * Angel L. Ruiz, "Class Notes on Costs of Production ", 1999 (handout).
- * Angel L. Ruiz, "Class Notes on Cobb-Douglas Production Function ", 1999 (handout)

MARKET STRUCTURE

¹ Las lecturas con asteriscos son compulsorias.

Readings

*Walter Nicholson, *Microeconomics Theory: Basic Principles and Extensions*, chapters 10-14

* Edwin Mansfield and Gary Yoh, *Microeconomics*, Chapters 9 -12

Edgard K. Browning and Mark A. Zupan. *Microeconomic Theory & Applications*, chapters 8-12 (handout)

*Maurice and Thomas, *Managerial Economics*, chapters 14 and 15

* Angel L. Ruiz, "Class Notes on Market Structures ", 2006 (handout)

STRATEGIC BEHAVIOR (GAME THEORY AND RELATED ASPECTS)

Readings

* Edwin Mansfield and Gary Yoh, *Microeconomics*, Chapter 13

*Walter Nicholson, *Microeconomics Theory: Basic Principles and Extensions*, chapter 15

*Maurice and Thomas, *Managerial Economics*, chapter 15

Edgard K. Browning and Mark A. Zupan. *Microeconomic Theory & Applications*, chapter 13 (handout)

PRICING OF INPUTS

Readings

*Walter Nicholson, *Microeconomics Theory: Basic Principles and Extensions*, chapters 16-17

* Edwin Mansfield and Gary Yoh, *Microeconomics*, Chapters 14-15

Edgard K. Browning and Mark A. Zupan. *Microeconomic Theory & Applications*, chapters 15-17

GENERAL EQUILIBRIUM AND WELFARE

- A. GENERAL EQUILIBRIUM ANALYSIS
- B. EFFICIENCY
- C. WELFARE

D. EXTERNALITIES AND PUBLIC GOODS
E. INFORMATION TECHNOLOGY

Readings

* Walter Nicholson, *Microeconomics Theory: Basic Principles and Extensions*, chapters 18-21

* Edwin Mansfield and Gary Yoh, *Microeconomics*, Chapters 16-19

Edgard K. Browning and Mark A. Zupan. *Microeconomic Theory & Applications*, chapters 18-19 (handout)

VIII. BIBLIOGRAPHY

Milton Friedman, " The Methodology of Positive Economics ", en Daniel M. Hausman (editor), *The Philosophy of Economics*, Cambridge University Press, London-New York, 1984.

Joan Robinson, ' What are the Questions ', *Journal of Economic Literature*, Volume XV December, 1977.

Ernest Nagel, " Assumptions in Economic Theory ", *American Economic Review, Proceedings*, may 1963 (reprinted in Breit y Hochman, *Readings in Microeconomic Theory*, Holt, Rinehart & Wiston, London-New York, 1970.

Hal R. Varian, *Intermediate Economics: A Modern Approach*, Fifth Edition W.W. Norton & company, New York, 1999

Schotter, Andrew., *Microeconomics A modern Approach*, Addison - Wesley, Second Edition, 1997

Edgard K. Browning and Mark A. Zupan. *Microeconomic Theory & Applications*, Addison - Wesley, Sixth Edition, 1999

Eric Rasmusen. *Games and Information: An Introduction to Game Theory*, Blackwell, First Edition: 1990).

J. M. Henderson y Richard E. Quandt, *Microeconomic Theory: A Mathematical Approach*, McGraw-Hill, 1980

Hicks, J. R., *Value and Capital*, Second Edition, Oxford University Press, London-New York,

Hicks, J.R., and R. G. D. Allen (1934)," A Reconsideration of the Theory of Value", *Economica*, 1:52-75, 196-219.

Alpha C. Chiang, *Fundamental Methods of Mathematical Economics*, Third edition, McGraw-Hill, New York, 1984,

- R. Gibbons, *Game Theory For Applied Economists*, Princeton University Press, 1992.
- Eric Rasmusen. *Games and Information: An Introduction to Game Theory*, Blackwell, First Edition: 1990).
- Avinash Dixit and Susan Skeath. *Games and Strategy*_W.W. Norton & company, New York, 1999
- J. Von Neumann, O. Morgenstern, *Theory of Games and Economic Behavior*_. Princeton University Press, 1992
- Rabin, Matthew, 2000, "Risk Aversion and Expected-Utility Theory: A Calibration Theorem," *Econometrica*, Vol. 68, No. 5, pp. 1281-1292.
- Rabin, Matthew and Richard H. Thaler, 2001, "Anomalies: Risk Aversion," *Journal of Economic Perspectives*, Vol. 15, No. 1, pp. 219-232.
- Fudenberg and Jean Tirole, *Game Theory* by Drew, MIT Press; ISBN: 0-262-06141-4.
- Geoffrey A. Jehle and Philip J. Reny (2001) *Advanced Microeconomic Theory* Second Edition, by, , Addison Wesley; ISBN: 0-321-07916-7.
- Andreu Mas-Colell, Michael D. Whinston, Jerry R. Green, (June 1995) *Microeconomic Theory* , Oxford Univ Press; ISBN: 0195073401.
- Elmar Wolfstetter (November 1999) *Topics in Microeconomics : Industrial Organization, Auctions and Incentives* , Cambridge University Press; ISBN: 0521645344.
- Robert Gibbons, (June 1992) *Game Theory for Applied Economists* by, Princeton Univ Pr; ISBN: 0691003955
- Arrow, K. and G. Debreu (1954) "Existence of equilibrium for a competitive economy," *Econometrica*, 265-290.
- Arrow, K. and F. Hahn (1971) *General Competitive Analysis*, New York: Elsevier Science Publishing.
- Debreu, G. (1959) *Theory of Value*, New York: Wiley.
- Samuelson, P. (1947) *Foundations of Economic Analysis*, Cambridge, MA: Harvard University Press.
- Arrow, K. (1965) *Aspects of the Theory of Risk-Bearing*, Helsinki: Yrjo Jahnssonin.
- Pratt, J. (1964) "Risk aversion in the small and in the large," *Econometrica*, 122-136.

Mailath, G. (1998) "Do people play Nash equilibrium? Lessons from evolutionary game theory," *Journal of Economic Literature*, 1347-1374.

Myerson, R. (1999) "Nash equilibrium and the history of economic theory," *Journal of Economic Literature*, 1067-1082.

Rothschild, M. and J. Stiglitz (1976) "Equilibrium in competitive insurance markets: an essay on the economics of imperfect information," *Quarterly Journal of Economics*, 629-649.