

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE
SCHOOL OF ENGINEERING
DEPARTMENT OF INDUSTRIAL AND SYSTEM ENGINEERING
ABET COURSE SYLLABI

ICS2523 MICROECONOMICS

Credits and contact hours:	10 UC Credits /10 hours (2:40 hours lectures; 1:20 hours assistantship and 6 hours individual work hours per week)
Instructor's name:	Finot Alfonso, González Rodrigo, Ortiz Juan, Sauma Enzo, Vera Sonia
Course coordinator's name	Miguel Pérez de Arce
Textbook:	Nicholson, Walter. Microeconomic Theory, 8th/9th edition, Thomson Learning, Inc, 2002. Jehle, Geoffrey A. and Reny, Philip J. Advanced Microeconomic Theory, 2000. Gravelle, Hugh and Rees, Ray. Microeconomics, Third edition, Ed. Pearson Education, 2005.
Course Catalog Description:	<p>This is an intermediate course in microeconomic theory, in which students learn how to apply the fundamental concepts of microeconomics in order to understand the decision making process of market agents. The course is designed for third-year students to give them the basic notions of industrial organization, which allow them to continue the learning process in more advance courses of the area or in practice.</p> <p>The course consists of two 2-hour lectures per week for 16 weeks. In addition, students have a 1-hour teaching-assistant lecture and 3 office hours per week for the same 16 weeks. That is, students should dedicate 6 hour per week for individual study in order to reach the learning outcomes.</p>
Prerequisite Courses:	ICS1513 Introduction To Economics Analysis o EAE105A and ICS1113 Optimization
Co-requisite Courses:	None
Status in the Curriculum:	Required
Course Learning Outcomes:	<ol style="list-style-type: none">1. Use an adequate microeconomic language.2. Understand the basic concepts of microeconomic theory and its limitations.3. Understand the consumers and producers behavior and their interaction in different types of markets, recognizing the degree of economic efficiency of these market structures.4. Understand the decision making process of the market agents in the context of markets with perfect and imperfect competition.

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5. Understand the concepts of the degree of economic efficiency of different market structures and the criteria for economic efficiency.
6. Apply the basic concepts to analyze mathematical models representing the market interaction of consumers and producers in markets with different characteristics.

**Relation of Course to ABET
Criteria:**

- a. Knowledge of mathematics, science and engineering
- b. Design and conduct experiments: analyze and interpret data
- c. Design a system, component, or process
- e. Identify, formulate, and solve engineering problems
- f. Professional and ethical responsibility

Topics covered:

1. Introduction. Economic Models, Evolution of the economic theory, *Ceteris Paribus* assumption.
2. Choice and demand. Preferences and utility, utility maximization and choice, income and substitution effects, demand relationships among goods, market demand and its price elasticity.
3. Production theory. Production functions, costs functions, profit maximization, market supply and its elasticity.
4. Perfect Competition. The partial equilibrium competitive model, applied competitive analysis, general competitive equilibrium, the efficiency of perfect competition.
5. Models of imperfect competition. Monopoly, traditional models of imperfect competition, game theory and pricing, externalities and public goods.

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