

**C.T. Bauer College of Business
University of Houston
Fall 2007**

**FINA 8397
Price Theory I**

Course Syllabus

Instructor: Professor Natalia S. Piqueira
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Office Hours: Tuesdays, 1:00PM - 4:00PM or by appointment

Time: Tuesdays & Thursdays, 8:30AM – 10:00AM

Location: Room 210 MH

Course Objectives

This is a Microeconomic Theory course for graduate students in Finance. We will study the main principles and basic analytical techniques that have been developed in modern economic theory and in the field of rational decision making, including individual behavior, general equilibrium, game theory, and economics of information.

The material covered in this course is essential to a complete and deep understanding of finance, in particular for investors' decision making and their interaction in financial markets.

Another important objective is methodological, related to financial modeling. During your career, there will be many occasions that a formal model partially based on microeconomic theory methods and techniques will be crucial to your research in finance (e.g., general equilibrium for asset pricing, game theory for corporate finance, economics of information for market microstructure). A strong microeconomic theory course in the first semester will help the students with the analytical and technical skills required for formal economic modeling.

Although the nature of the course is mainly theoretical, we will try to cover as many applications as possible (including Finance applications), in an effort to coordinate with the Asset Pricing course (FIN 8338) in the first half of the semester. It is very important that the class interact with the instructor in order to fulfill this objective and to find the right balance between theory and applications.

We will try to cover as much material as possible during the lectures. However, the students should be prepared to have a considerable amount of work out of the class, especially in the form of problem sets and readings.

Textbooks and Additional Readings

- Required (main textbook, available at the bookstore):
 - Microeconomic Theory*
(MWG)
Authors: Andreu Mas-Colell, Michael D. Whinston and Jerry R Green
Publisher: Oxford University Press, 1995
(Available at M.D Anderson Library, on Reserve)

- Recommended (other useful textbooks; to be assigned as supplemental reference for particular sections of the course):
 - *A Course in Microeconomic Theory*
(DK)
Author: David Kreps
Publisher: Princeton University Press, 1990
(Available at M.D Anderson Library, on Reserve)

 - *The Economics of Uncertainty and Information*
Author: Jean-Jacques Laffont
Publisher: MIT Press, 1989

 - *Game Theory*
Authors: Drew Fudenberg and Jean Tirole
Publisher: MIT Press, 1991
(Available at M.D Anderson Library, as an e-book)

 - *Game Theory for Applied Economists*
Author: Robert Gibbons
Publisher: Princeton University Press, 1992
(Available at M.D Anderson Library, on Reserve)

 - *Microeconomics of Market Failures*
Author: Bernard Salanie
Publisher: MIT Press, 2000

 - *Contract Theory*
Authors: Patrick Bolton and Mathias Dewatripont
Publisher: MIT Press, 2005

- Additional Readings (journal articles) will be assigned regularly in the form of problem sets or readings/discussion sessions. The full references will be given in advance.

Grading

- **Homework, class participation and attendance (25%)**: individual problems sets will be assigned regularly (please see the course schedule for details) and they are essential for this course. There will be seven graded homework assignments (Homework 8 is optional) and the grade will be based on the six highest scores. Some questions will be close applications of the concepts covered in class, while others will be more challenging and will require more time of the students (and work in groups, when specified). Occasionally, some material not covered in class will be assigned as problem sets/independent work and the instructor will be available to help the students during office hours. We will have discussion sessions of articles related to the material covered in class (including the original references/articles on some topics) and the students are strongly encouraged to participate with questions, comments and suggestions.
- **Midterm (25%)**: in-class, closed book.
- **Final Exam (50%)**: in-class, closed book.

Course Outline and Weekly Schedule

The weekly schedule and the reading list will be updated regularly. The amount of material to be covered in (only) one semester requires that we focus and cover more extensively topics that are more relevant and interesting for finance students. The students are responsible for the required readings (ideally before the lecture), since the lecture time will be used to clarify the main definitions, to explain the concepts and theorems and to illustrate them with important examples.

- **Weeks 1-2:**
 - Introduction: Economics and Finance
 - Individual Rational Decision Making: Preferences, Utility Representation and Individual Demand (MWG, Chapters 1-3)
 - Production (MWG, Chapter 5)
- **Weeks 3-4: The Competitive Model (MWG, Chapters 15-16):**
 - General Equilibrium
 - Welfare Theorems
- **Weeks 5-6: Choice Under Uncertainty (MWG, Chapter 6):**
 - Expected Utility Theorem
 - Measures of Risk Aversion
 - Stochastic Dominance
- **Week 7: Midterm**

- Weeks 8-9:
 - The Competitive Model Under Uncertainty (MWG, Chapter 19); Measures of Risk Aversion
 - The Competitive Model: Review and applications

- Weeks 10-13: Game Theory and Industrial Organization
 - Game Theory (TBA):
 - Basic Elements of Non-cooperative Games
 - Static Games of Complete Information: Normal-Form Games and Nash Equilibrium
 - Dynamic Games of Complete Information: Sequential Rationality, Backward Induction and Sub-game Perfection
 - Applications: Industrial Organization/Market Power (TBA):
 - Monopoly Pricing
 - Price Discrimination
 - Oligopoly

- Week 14: Introduction to the Economics of Information:
 - Adverse Selection, Signaling and Screening (MWG, Chapter 13)
 - Principal-Agent Problem: Moral Hazard (MWG, Chapter 14)

Last Update: 8/20/2007