ECON 7030: MICROECONOMIC THEORY 2

Spring 2001

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Office Hours: 11:00-12:00 on Tuesdays and Thursdays.
If you need to talk to me at other times, you are also welcome. No appointment is needed

Course Description: This is the second graduate course in microeconomic theory. It consists of three main parts. Part 1 studies choice under uncertainty. We shall discuss how to represent alternatives that have uncertain outcomes and establish the expected utility theorem, which plays a central role in the theory of decision under certainty. We shall then introduce the concepts of risk and its measurements, compare payoff distributions in terms of returns and risk, and discuss applications of the theory developed. This will complete the discussion of individual choice theory that you started in the previous course on microeconomic theory. Part 2 is about non-cooperative game theory. We shall study in this part the basic elements of games, static games of complete and incomplete information, and dynamic games of complete and incomplete information. This will lay down the foundation to our analysis of individual behavior and interactions in economic situations where there is strategic interdependence. In Part 3, we shall study market equilibrium and market imperfections. We shall start from the perfectly competitive market, and characterize its properties and welfare implications. The assumptions for the perfectly competitive market are then relaxed in several directions: the existence of externalities, the existence of market power, and the existence of imperfect information; and the market outcomes under each of these cases are analyzed. Applications of the theoretical developments will be discussed. Together with ECON 7010 (Microeconomic Theory 1), this course aims to provide students with a solid understanding of the fundamentals of microeconomic analysis as well as of the current developments in the theory.

Course Materials: The textbook is Microeconomic Theory, by Mas-Colell, Whinston, and Green. The covered materials will range from Chapter 6 in Part I to most chapters in Parts II and III of the book. Some selected topics from other parts of the book may also be covered.

Grading: Grades are based on homework and class participation (10%), a midterm exam (40%); and a final exam (50%). You are encouraged to form study groups to discuss homework and lecture materials. Both exams will be in closed-book forms.

Problem Sets: There will be regular assignment of problem sets. Normally, there will be one problem set for each topic. You should start working on the problem set once we have started the topic, and hand in your problem set the next Tuesday following the last class on the topic. For each problem set, the TA will select randomly half of the students and grade their problem sets. A student’s performance on problem sets will be calculated based on his (her) problem sets that are actually graded. However, if a problem set is not turned in on time, this problem set will receive a score of zero. For every other week, the TA will hold a recitation in which the problem sets are discussed. Additional sessions can be added if there is such a need. I want to emphasize that solving these problems is crucial for you to learn the course materials.

Lecture Topics: Below is a tentative plan for the lectures. Changes to the plan will be announced in class during the semester and you are responsible for updating the information.

Topic 1 Choice under Uncertainty
(Week 1-3) Readings: Ch.6. pp. 167-198.


Learning Buyers' Valuation Distributions in Posted-price Selling

Topic 2 Basics of Non-cooperative Games

(Week 4) Readings: Ch.7.


Topic 3 Simultaneous-Move Games

(Week 5-6) Readings: Ch. 8: 8A-8E.


Midterm Exam

Topic 4 Dynamic Games

(Week 7-8) Readings: Ch. 9: 9A-9C


Topic 5 Competitive Markets: Concepts and Partial Equilibrium Analysis

(Week 9) Readings: Ch. 10: 10A-10C.


Topic 6 The Fundamental Welfare Theorems in A Partial Equilibrium Context and Long-(Week 10) Run Competitive Equilibrium (Lecture notes for this topic is combined with the notes in Topic 5.)

Readings: Ch. 10: 10D-10F.


Topic 7 Externalities and Public Goods

(Week 11) Readings: Ch. 11.


Topic 8 Market Power: Static Models of Monopoly and Oligopoly

(Week 12) Readings: Ch. 12: 12A-12C.

Topic 9 Dynamic Models of Imperfect Competition and Entry

(Week 13) Readings: Ch. 12: 12D-12E.


Topic 10 Adverse Selection and Market Signaling

Readings: Ch. 13: 13A-13C.


Final Exam

*Students with disabilities who may need academic accommodations should discuss options with me during the first two weeks of class.