

ECON370 - ADVANCED MICROECONOMICS - FALL 2006  
SABANCI UNIVERSITY, FACULTY OF ARTS AND SOCIAL SCIENCES

COURSE INFORMATION

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**Class:** F 12:40 - 15:30 FASS 1099,

COURSE OBJECTIVES

The goal of this course is to introduce students to, and obtain their acquaintance with the formal methods of microeconomics theory. This is a fundamental course in which you ought to learn to understand microeconomics and its related fields. We shall derive most of the results from primitives and associate these results with practical applications.

BACKGROUND

You are expected to be familiar and fluent with introductory calculus and ECON 201 and 204. In this course we shall be reading and writing the proofs of selected theorems; this is often a useful exercise for understanding a theorem's content and intuition.

TEXTS

We will not follow a particular book word for word, yet, the below listed books do cover the same material with lots of examples. None is required, but each book will be available in the reserve of the IC. Further sources will be announced in lectures.

- *Intermediate Microeconomics: A Modern Approach*, Hal Varian; this is maybe the most commonly used microeconomics text book in the world. It is a very good book that you want to keep for your own library. The level of it regarding this course is almost suitable, but sometimes it is not as formal as the desired.
- *A Course in Microeconomic Theory*, David M. Kreps; this is an advanced undergraduate/graduate textbook, good in particular for uncertainty and information economics.
- *Advanced Microeconomic Theory*, G. A. Jehle and P. J. Reny; this is one of the most popular (and new) graduate microeconomics textbooks, it is formal and is intended for the first year in graduate economics studies. It requires more technical knowledge than our course, but going over it with the knowledge you have acquired in this course may help you a lot in getting a clear vision for the subjects at hand. You might want to buy it for your own library.

GRADING

**Homeworks:** (%10 of grade)

**Quizzes:** (%10 of grade) There will be a short quiz (almost) every week.

**Midterms:** There will be two midterms in class. The first will be shorter (%15 of grade) and the second one longer (%25 of grade).

**Final:** (%40 of grade) The final will be comprehensive.

## COURSE CONTENT

The following list gives the list of topics to be covered (subject to time limitation). You will be responsible for the lecture material, hence, **attendance is essential**. And now the list:

- Individual choice, and derivation of preferences and utility functions;
- The Theory of Demand, the properties of demand *functions*;
- Aggregation of demand;
- Pure Exchange Economies: The Competitive (general or Walrasian) equilibrium and The Core
  - Introduction to the Walrasian equilibrium, and its formal definition;
  - Introduction to welfare concepts: Pareto optimality, individual rationality and the core;
  - Existence of competitive equilibria: The Walrasian auctioneer interpretation;
  - Important Properties: Two fundamental theorems of welfare economics, and their policy implications;
  - Debreu–Scarf limit result to render an equivalent interpretation for the Walrasian equilibrium;
  - The use of Walrasian equilibrium in modern macroeconomics.
- Topics from cooperative game theory: Networks and Matchings.
- Choice under uncertainty:
  - the von Neumann–Morgenstern Expected Utility Theorem;
  - Monetary lotteries: Attitudes towards risk, and lots of examples - portfolio construction, insurance, ...
- Economics of information:
  - Hidden action (moral hazard) and hidden information (adverse selection) models; mixed models;
  - Auctions;
  - Introduction to mechanism design: The Revelation Principle;
  - Examples in the theory of industrial organization and labor economics.

## POLICIES

### Homeworks and Quizzes:

1. Homeworks should be turned in at the beginning of class on the assigned date. As the answer key will be posted to the web shortly after lecture on the assigned date, *no late homeworks will be accepted*.
2. All homeworks should be typed, except for mathematical formulae, computations, algebra, which must be neatly and clearly written. The grader is the final judge of what is legible and may request specific students to type their work.
3. Collective and cooperative work on homeworks is encouraged. However, any homework **must** be written up separately by the owner of it. Additionally, any homework **must** contain the list of the fellow students with whom the work was done.
4. Quizzes may bear on past homework questions.
5. A student who is not present in the lecture in which a quiz is administered will be given a grade of 0 for that corresponding quiz. This is strict; no exceptions.
6. There are NO MAKE-UPS for the midterms. Make-up for the final exam is granted only in case of a valid and documented reason.
7. Absence in both midterms implies an automatic F. If you miss a midterm, the weight of that midterm is transferred to the next exam(s).

### Scholarly Conduct:

1. The definition for scholastic dishonesty is given in the rules and regulations of the Sabanci University.
2. In the case of scholastic dishonesty, no credits will be given for that particular work. Cheating during written work will result in an F for the course. All incidents of scholastic dishonesty will be reported to FASS.