Advanced Microeconomics I

RIEM · Southwestern University of Finance & Economics

Fall 2023 - M. Pak

1   Contact Information:

- Instructor: Maxwell Pak
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- Teaching assistant: TBA
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- Course Schedule: Section 1 - Wed 1:55-4:30 @H502
  Section 2 - Wed 6:30-9:05 @H401

- Course Website: mpak.xyz/am1.php

2   Course Introduction:

This is the first course in microeconomic theory for graduate students. Students taking this course should be comfortable with materials from undergraduate microecnomics and basic mathematical tools for graduate students.

This half of the course presents the core concepts in consumer theory and producer theory that will serve as a foundation for a student's graduate study in economics. Despite the current trend viewing economics as a positive science whose analysis and conclusions should be independent of any ethical considerations, economics as a discipline grew out of moral philosophy that contemplates what is right and wrong and how and why one ought to behave. Thus, questions such as how a society should organize its productive capacities, allocate its resources, and redistribute its wealth are all well within the purview of economics. As such, it is hoped that students completing this course will have acquired not only a thorough understanding of the modern consumer theory and producer theory but also be able to apply the theories to rigorously evaluate the policies that have been proposed to solve the current issues facing China. In particular, in light of the recent "common prosperity" policy initiative, the course will give due attention to the frameworks for conducting welfare

analysis at individual level and aggregate level, and for analyzing the behaviors of non-profit maximizing firms.

The second half of the course will cover the general equilibrium theory, in which we study interrelated markets simultaneously, taking into account their cross effects and feedback effects. We will define a notion of competitive equilibrium in such a setting and study its positive properties and welfare effects.

3   Course Requirements:

The textbook for the course is *Microeconomic Theory* by Mas-Colell, Whinston, and Green.

There will be six problem sets, a midterm, and a final. The grading scheme for the course is

$$0.20 \text{ PS} + 0.40 \text{ MT} + 0.40 \text{ Final}$$

Problem sets should be turned in on A4-size papers and **stapled** together. Late problem sets will receive 20 percent deduction for each day they are late, provided that the solution has not been posted. Late problem sets will not be accepted after the solution has been posted.

The dates for the midterm and the final will be announced when they are finalized. Please note that a make-up midterm will not be given. If a student misses the midterm for a legitimate reason (prior approval by the instructor and/or a serious illness on the day of the exam documented by the student health center), the weight of the midterm will be shifted to the final exam.

Please note that academic integrity is taken very seriously. Students must understand and strictly follow the academic honor code of Southwestern University of Finance and Economics. In particular, students must be academically honest in all their course work and not tolerate academic dishonesty of others.

4   Tentative Course Outline

The following is a tentative list of topics that will be covered in the course. The topics may be adjusted as the course progresses. Corresponding MWG chapters are given in parenthesis.

Part I: Classical consumer and producer theories, choice under uncertainty

1. Classical Demand Theory (MWG 3.A - 3.G, and 3.I)

   - Preference relations
   - Utility
   - Utility maximization
   - Expenditure minimization
   - Duality
   - Welfare analysis

2. Aggregate Demand (MWG 4.A-4.D)

   - Aggregate demand and aggregate wealth
   - Aggregate demand and the weak axiom
   - Representative consumer and social welfare function

3. Producer Theory (MWG, Chapter 5.A-5.G)

   - Production Sets
   - Profit maximization and cost minimization
   - Single output production
   - Aggregation of supply
   - Efficient production
   - Non-profit maximizing firms

4. Choice under uncertainty (MWG 6.A-E)

   - Lotteries
   - Expected utility theory
   - Utility for money and risk aversion
   - Stochastic dominance
   - State-dependent utility

II. General Equilibrium

1. Introductory models (MWG 15.B-D)

   - 2x2 exchange economy
   - Robinson Crusoe economy
   - 2x2 Production model

2. General equilibrium: Arrow-Debreu economy (MWG 16.B-D, M.G)

   - Equilibrium in Arrow-Debreu economy
   - First fundamental theorem of welfare in Arrow-Debreu economy
   - Second fundamental theorem of welfare in Arrow-Debreu economy

3. General equilibrium: Arrow-Debreu Economy (MWG 17.C, M.I)

   - Kakutani's fixed point theorem
   - Existence of Walrasian equilibrium in Arrow-Debreu economy

4. General equilibrium: Arrow-Debreu economy (MWG 17.D,F,G,H)

   - Uniqueness
   - Comparative Statics
   - Tatonnement stability