

ADVANCED MICROECONOMIC THEORY

This class is the first half of a sequence covering the foundations of modern microeconomic theory at a graduate level. The class covers classic consumer theory, producer theory, choice under uncertainty and general equilibrium theory.

Class Requirements

There will be 10 problem sets. These will be graded coarsely (P+, P, P-). It is strongly recommended that you attempt the problem sets yourself. You may discuss difficulties with your classmates, the TA, myself (in that order) if you are stuck.

Further, there will be 2 in-class midterms and a final exam (all are close-book). The 2nd midterm will only cover material since the first midterm. The final exam is cumulative.

Grades for the class will be based on:

- Midterm (20% each) (In class, on September 26rd, October 24th)
- Problem sets (10%)
- Final Exam (50%) (TBA)

Readings

The required textbook for the class is:

A. Mas-Colell, M. Whinston and J. Green, *Microeconomic Theory*, New York: Oxford, 1995

Other recommended readings:

- G. Jehle and P. Reny, *Advanced Microeconomic Theory*, Prentice Hall, 2011.
- D. Kreps, *Notes On The Theory of Choice*, Westview Press, 1988.
- D. Kreps, *Microeconomic Foundations I*, Princeton Press, 2012.
- A. Rubinstein, *Lecture Notes on Microeconomic Theory*, Princeton Press, 2013.
- H. Varian, *Intermediate Microeconomics: A Modern Approach*, 3rd Edition. New York: W. Norton, 1993.

In your spare time, you may want to read the following books and papers for fun. They may answer some (non-technical) questions arising in your first year.

- Gilboa et. al., "Economic Models as Analogies," *Economic Journal*, forthcoming.
- H. Varian, "What Use is Economic Theory?" *unpublished manuscript*, 1989.
- D. Levine, *Is Behavioral Economics Doomed? The Ordinary versus the Extraordinary*, Open Book Publishers, 2012.

Class Logistics

The class meets on Tuesday and Thursday 3:30-4:45 pm at Gardner Hall **209**. You are expected to attend all classes. There is no lecture on the following dates: Oct. 17th, and Nov. 28th.

Course materials (assignments and handouts) will be circulated via email. There will be weekly review sessions. Assignments are due in review sessions at the beginning of the lecture on the due date.

Contacting Us

My e-mail is lifei@email.unc.edu. My office is Gardner 305B. My office hours are Wednesday 1:30-3:30pm. Your TA for this course is Steven Raymond, his e-mail address is smr9@live.unc.edu. His office hours: TBA.

Tentative Agenda

1. Decision Theory (~1-2 weeks)
 - a. Preference-Based Choice
 - b. Revealed Preference.
2. Consumer Choice and Utility (~1 weeks)
 - a. Consumer Problem.
 - b. Demand Correspondence.
 - c. Utility Representation.
3. Classical Demand Theory (~3 weeks)
 - a. Utility Maximization.
 - b. Expenditure Function.
 - c. Duality.
 - d. Testing Demand Theory.
 - e. Integrability.
 - f. Policy and Welfare Evaluation.
 - g. Aggregation.
4. Producer Theory (~1-2 weeks)
 - a. Production Technology and Production Function.
 - b. Profit Maximization.
 - c. Cost Minimization and Duality Revisited.
5. Choice under Uncertainty (~2 week)
 - a. von Neumann-Morgenstern Utility.
 - b. Utility for Money.
 - c. Risk Aversion.
 - d. Comparing Risky Prospects.
 - e. Non vNM utility.
6. General Competitive Equilibrium (~4 weeks)
 - a. Edgeworth Box.
 - b. Pareto Optimality.
 - c. First Welfare Theorem.
 - d. Second Welfare Theorem.
 - e. Equilibrium Existence in General.

- f. General Equilibrium with Production.
 - g. Dynamic General Equilibrium.
 - h. Arrow-Debreu Equilibrium.
 - i. Inefficiency When Markets are Incomplete. (optional)
 - j. Imperfect Information.
 - k. Lemon Market.
7. Externalities and Public Goods (optional)
- a. Definitions and Examples.
 - b. Solution: Pigouvian Taxation.
 - c. Public Goods.
 - d. Inefficiency of Private Provision of Public Goods.
 - e. Lindahl Equilibrium.