

ADVANCED MICROECONOMIC THEORY I

This course is the first part of a sequence covering the foundations of modern microeconomic theory. The first part of the course studies decision theory, deriving some implications of rational decisions in different settings. The second part considers the equilibrium interaction among rational decision makers. We cover partial and general competitive equilibrium theory. After a brief detour to matching theory, we move to game theory under complete information. In this class, you will see a number of models. The purpose is to use these models *as examples* to show you (1) the most important concepts in modern economics: individual optimization, equilibrium and comparative statics, and (2) how to formally set up and analyze a problem as an economist.

Class Requirements. There will be problem sets weekly. These will be graded coarsely (P+, P, P-). It is strongly recommended that you attempt the problem sets by yourself. You may discuss difficulties with your classmates, the TA, myself (in that order) if you are stuck. I will assume that you also take Econ 700 and Econ 701 and that you will take Econ 711 in the Spring.

There will be 2 in-class midterms and a final exam (all are closed 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 30th, November 4th)
- Participation (5%)
- Problem Sets (5%)
- Final Exam (50%) (TBA)

If a student misses a midterm, the weight of that midterm in the course grade will be added to the weight on the student's final. An exception will be made for University-approved absences (see <http://catalog.unc.edu/policies-procedures/attendance-grading-examination/>); students with this type of absence may request a make-up examination at a time convenient to both student and instructor.

Horner Code. The standard honor code applies. See <https://studentconduct.unc.edu> for details.

Readings. There is no required textbook, but you are recommended to own one of the following books as a reference:

- G. Jehle and P. Reny, *Advanced Microeconomic Theory*, Prentice Hall, 2011.
- J. Levine, *Lecture Notes on Graduate Microeconomics*, Stanford, Unpublished Notes.
- A. Mas-Colell, M. Whinston and J. Green, *Microeconomic Theory*, New York: Oxford, 1995.
- A. Rubinstein, *Lecture Notes on Microeconomic Theory*, Princeton Press, 2013.

Class Logistics. The class is in person. We meet on Tuesday and Thursday 12:30-1:45 pm.

Course materials (assignments and handouts) will be posted on Sakai. There will be weekly review sessions (Friday 9:30-10:45am). Assignments are due in the beginning of the review sessions on the due date.

Contacting Us. My e-mail is lifei@email.unc.edu. My office is Gardner 300B. My zoom office hours are Monday and Wednesday 11:00-12:00pm (appointment via email needed in advance). Your TA for this course is David Sun Kim, his e-mail address is dskim10@ad.unc.edu. He will hold office hours as well.

Syllabus Changes. Exam dates and other aspects of the syllabus may be changed if necessary.

Tentative Agenda

1. Decision Theory
2. Consumer Choice
3. Choice under Uncertainty
4. Midterm I
5. Partial Equilibrium
6. General Equilibrium: Pure Exchange Economy
7. General Equilibrium: Financial Markets
8. Matching
9. Midterm II
10. Games in Normal Form
11. Games in Extensive Form
12. Final